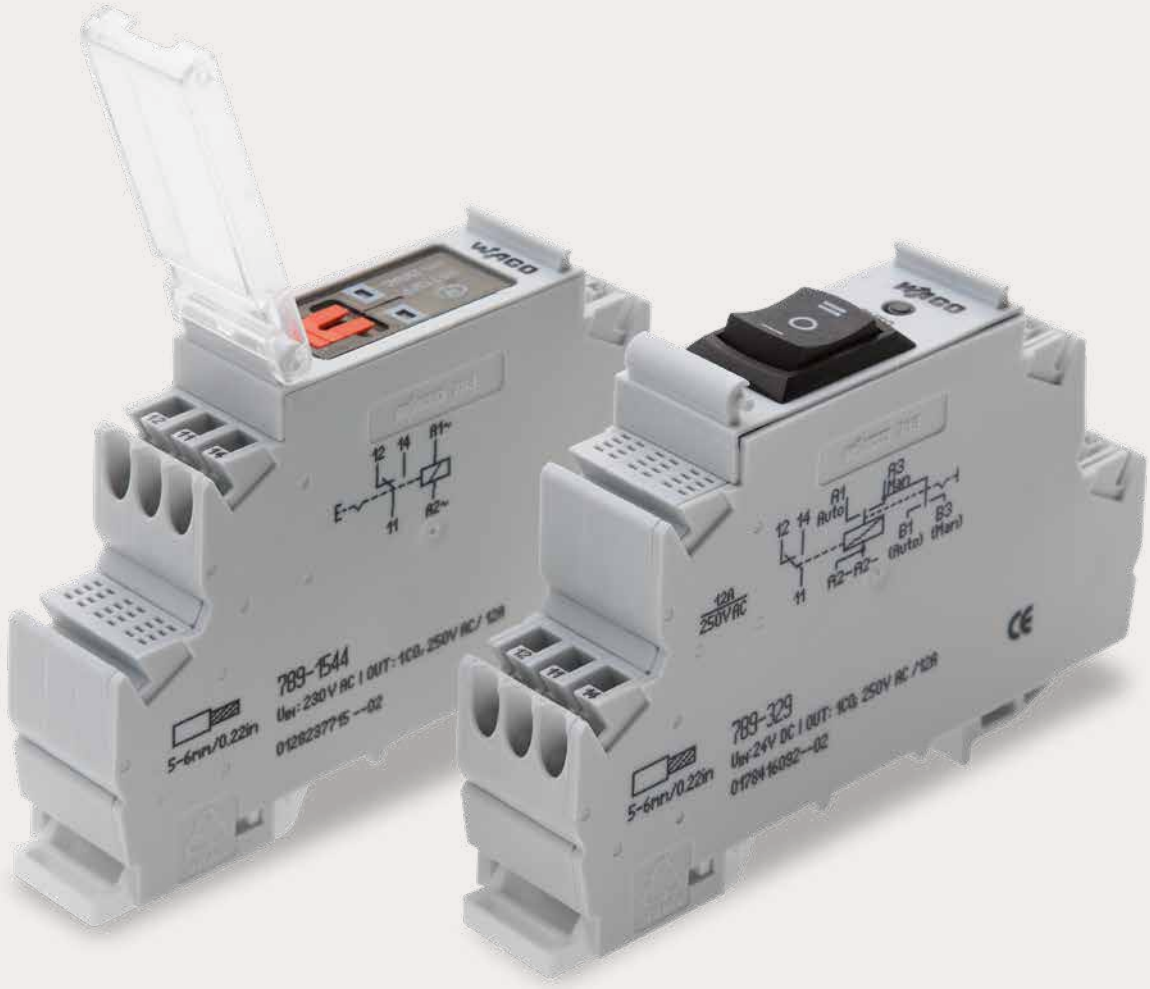


WAGO Relay Modules

WAGO Relay Modules

		Page
	**Relay Modules, 857 Series**	
	Relay Modules	12
	Timer Relay Modules	22
	Accessories	26
	**Relay Modules, 788 Series**	
	Relay Modules	30
	Accessories	50
	**Relay Modules, 858 Series**	
	Relay Modules	66
	Accessories	76
	**Relay Modules, 859 Series**	
	Relay Modules	80
	Accessories	90
	**Relay Modules, 2042 Series**	
	Relay Modules	92
	Accessories	110
	**Relay Modules in a DIN-Rail Mount Enclosure, 789 Series**	
	Relay Modules	112
	Latching Relay Module	127
	Accessories	128
	**Relay Modules, 288 Series**	130
	**Relay Modules, 286 Series**	
	Relay Modules	138
	Accessories	147

WAGO Relay Modules
Selection Guide

1

Nominal Input Voltage U_{inom}	Limiting Continuous Current	Make Contact	Break Contact	Changeover Contact	Approvals									Contact Material	For Railway Applications	Specialty function	Item Number	Page
					EN 50121-3-2	EN 50155	EN 61373	EN 50205	EN 61810-3	EN 61812-1	GL	UL 508	ATEX	IEC Ex					
5 VDC	5 A			1			■				■	■			$AgSnO_2$			**859-302**	80
5 VDC	5 A			1			■				■	■			AgNi + Au			**859-312**	81
12 VDC	5 A			1			■				■	■			$AgSnO_2$			**859-303**	80
12 VDC	5 A			1			■				■	■			$AgSnO_2$			**859-353**	82
12 VDC	5 A			4			■					■			AgCe		With manual operation	**858-303**	66
12 VDC	6 A			1			■					■	■	■	$AgSnO_2$			**857-303**	12
12 VDC	8 A			2			■					■			AgNi 90/10			**788-311**	32
12 VDC	16 A			1			■					■			AgNi 90/10			**788-303**	30
12 VDC	16 A			1			■					■			$AgSnO_2$		For lamp loads	**788-353**	38
24 VDC	0.3 A			2					■			■			AgNi + Au		Force-guided contacts	**788-906**	42
24 VDC	5 A	1													$AgSnO_2$			**286-364**	138
24 VDC	5 A	1													AgNi 0.15			**288-364**	130
24 VDC	5 A	4			■		■								AgNi	■		**2042-3024**	104
24 VDC	5 A	2	2			■	■								AgNi	■		**2042-3084**	106
24 VDC	5 A	3	1			■	■								AgNi	■		**2042-3074**	105
24 VDC	5 A		1												AgNi 0.15			**288-368**	131
24 VDC	5 A		1												AgNi			**286-368**	139
24 VDC	5 A			1			■				■	■			$AgSnO_2$			**859-304**	80
24 VDC	5 A			1			■				■	■			$AgSnO_2$	■		**859-390**	84
24 VDC	5 A			1			■				■				$AgSnO_2$	■		**859-398**	87
24 VDC	5 A			1			■				■	■			AgNi + Au			**859-314**	81
24 VDC	5 A			1			■				■	■			AgNi + Au	■		**859-392**	85
24 VDC	5 A			2											AgNi 10 +Au		Force-guided contacts	**288-437**	135
24 VDC	5 A			4			■				■	■			AgCe		With manual operation	**858-304**	66
24 VDC	5 A			4			■					■			AgCe + Au		With manual operation	**858-314**	67
24 VDC	5 A			4			■					■			AgCe	■	With manual operation	**858-354**	70
24 VDC	5 A			4			■					■			AgCe + Au	■	With manual operation	**858-355**	71
24 VDC	6 A	1			■		■								$AgSnO_2$	■		**2042-3004**	92
24 VDC	6 A	1	1												$AgSnO_2$			**286-320**	144
24 VDC	6 A	2													$AgSnO_2$			**286-328**	145
24 VDC	6 A		1		■		■								$AgSnO_2$	■		**2042-3054**	93
24 VDC	6 A			1			■				■	■	■	■	$AgSnO_2$			**857-304**	12
24 VDC	6 A			1			■				■	■	■	■	AgNi + Au			**857-314**	13
24 VDC	6 A			1	■		■			■		■			$AgSnO_2$	■	Multifunctional/multi-time	**857-640**	22
24 VDC	6 A			1	■		■			■		■			$AgSnO_2$	■	Multifunctional/multi-time	**857-642**	23
24 VDC	6 A			1	■		■			■		■			$AgSnO_2$	■	Multifunctional/multi-time	**857-604**	24
24 VDC	6 A			1											AgNi 0.15		Bistable	**286-380**	146
24 VDC	6 A			1											AgNi 0.15		Bistable	**286-381**	147
24 VDC	6 A			1											AgNi 90/10			**288-304**	132
24 VDC	6 A			1											AgNi 0.15		Bistable	**288-380**	134
24 VDC	6 A			2											AgNi 0.15			**288-312**	133
24 VDC	6 A			2				■	■			■			AgNi		Force-guided contacts	**788-384**	41
24 VDC	6 A			4								■			AgNi 90/10		With manual operation	**858-390**	72
24 VDC	7 A			1											AgNi 0.15			**286-304**	140
24 VDC	7 A			2											AgNi 0.15			**286-312**	142
24 VDC	8 A	2			■		■								AgNi	■		**2042-3014**	98
24 VDC	8 A	1	1		■		■								AgNi	■		**2042-3064**	100
24 VDC	8 A			2			■					■			AgNi 90/10			**788-312**	32
24 VDC	8 A			2			■					■			AgNi + Au			**788-412**	33
24 VDC	8 A			2			■					■			AgNi		With manual operation	**788-346**	45
24 VDC	8 A			2			■								AgNi	■	With manual operation	**788-390**	48
24 VDC	8 A			2											AgNi 90/10			**789-312**	114
24 VDC	8 A			2											AgNi		With manual operation	**789-1346**	120

WAGO Relay Modules
Selection Guide

Nominal Input Voltage U_{nom}	Limiting Continuous Current	Make Contact	Break Contact	Changeover Contact	Approvals										Contact Material	For Railway Applications	Specialty function	Item Number	Page
					EN 50121-3-2	EN 50155	EN 61373	EN 50205	EN 61810-3	EN 61812-1	GL	UL 508	ATEX	IEC Ex					
24 VDC	8 A			2		■	■								AgNi	■		**2042-3044**	99
24 VDC	10 A			1	■		■								AgNi	■		**2042-3034**	96
24 VDC	12 A			1											AgNi 90/10			**789-304**	112
24 VDC	12 A			1											AgNi		With manual operation	**789-1341**	118
24 VDC	12 A			1					■						$AgSnO_2$		For lamp loads; Manual/OFF/Auto switch	**789-326**	125
24 VDC	12 A			1											$AgSnO_2$		For lamp loads; Manual/OFF/Auto switch	**789-329**	126
24 VDC	12 A			2								■			AgNi		With manual operation	**858-324**	74
24 VDC	16 A	1					■					■			$AgSnO_2$		For lamp loads	**788-356**	39
24 VDC	16 A	1					■								$AgSnO_2$		For lamp loads	**788-357**	40
24 VDC	16 A	1													$AgSnO_2$		For lamp loads; Manual/OFF/Auto switch	**789-323**	122
24 VDC	16 A	1							■						$AgSnO_2$		For lamp loads; Manual/OFF/Auto switch	**789-324**	123
24 VDC	16 A	1													$AgSnO_2$		For lamp loads; Manual/OFF/Auto switch	**789-325**	125
24 VDC	16 A	1													$AgSnO_2$			**789-571**	127
24 VDC	16 A			1			■					■			AgNi 90/10			**788-304**	30
24 VDC	16 A			1			■					■			AgNi + Au			**788-404**	31
24 VDC	16 A			1			■					■			$AgSnO_2$		For lamp loads	**788-354**	38
24 VDC	16 A			1			■					■			AgNi		With manual operation	**788-341**	44
24 VDC	16 A			1			■								AgNi		With manual operation	**788-391**	49
36 VDC	5 A			1			■								AgNi + Au	■		**859-386**	85
48 VDC	5 A			1			■				■	■			$AgSnO_2$			**859-305**	80
48 VDC	5 A			1			■				■				$AgSnO_2$	■		**859-397**	87
48 VDC	5 A			4			■					■			AgCe		With manual operation	**858-305**	66
48 VDC	6 A			1			■					■			$AgSnO_2$			**857-305**	12
48 VDC	8 A			2			■					■			AgNi 90/10			**788-313**	32
48 VDC	12 A			2								■			AgNi		With manual operation	**858-325**	74
48 VDC	16 A			1			■					■			AgNi 90/10			**788-305**	30
60 VDC	8 A			2			■					■			AgNi 90/10			**788-314**	32
60 VDC	16 A			1			■					■			AgNi 90/10			**788-306**	30
110 VDC	5 A			1			■				■	■			$AgSnO_2$			**859-307**	80
110 VDC	5 A			1			■				■	■			$AgSnO_2$	■		**859-391**	86
110 VDC	5 A			1			■				■				$AgSnO_2$	■		**859-399**	87
110 VDC	5 A			1			■				■	■			AgNi + Au	■		**859-317**	85
110 VDC	5 A			4			■					■			AgCe		With manual operation	**858-307**	66
110 VDC	6 A			4								■			AgNi 90/10		With manual operation	**858-392**	72
110 VDC	8 A			2			■					■			AgNi 90/10			**788-315**	32
110 VDC	8 A			2			■					■			AgNi + Au			**788-415**	33
110 VDC	12 A			2								■			AgNi		With manual operation	**858-327**	74
110 VDC	16 A			1			■					■			AgNi 90/10			**788-307**	30
220 VDC	5 A			1			■				■	■			$AgSnO_2$			**859-308**	80
220 VDC	5 A			1			■				■	■			AgNi + Au			**859-318**	81
220 VDC	5 A			4			■					■			AgCe		With manual operation	**858-308**	66
220 VDC	6 A			4								■			AgNi 90/10		With manual operation	**858-391**	72
220 VDC	12 A			2								■			AgNi		With manual operation	**858-328**	74

WAGO Relay Modules
Selection Guide

1

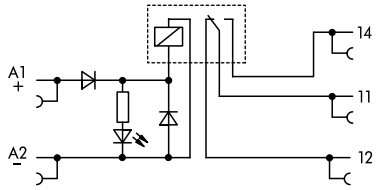
Nominal Input Voltage U_{inom}	Limiting Continuous Current	Make Contact	Break Contact	Changeover Contact	Approvals									Contact Material	For Railway Applications	Specialty function	Item Number	Page
					EN 50121-3-2	EN 50155	EN 61373	EN 50205	EN 61810-3	EN 61812-1	GL	UL 508	ATEX	IEC Ex					
12 VAC	6 A	4	4					■				■			$AgSnO_2$		Force-guided contacts	**288-413**	136
24 VAC	5 A			4			■					■			AgCe		With manual operation	**858-504**	68
24 VAC	5 A			4			■					■			AgCe + Au		With manual operation	**858-514**	69
24 VAC	8 A			2			■					■			AgNi 90/10			**788-512**	36
24 VAC	8 A			2			■					■			AgNi		With manual operation	**788-546**	47
24 VAC	16 A			1			■					■			AgNi 90/10			**788-506**	34
24 VAC	16 A			1			■					■			AgNi		With manual operation	**788-541**	46
115 VAC	5 A			1			■				■	■			$AgSnO_2$		Defined switch-on threshold	**859-367**	88
115 VAC	5 A			4			■					■			AgCe		With manual operation	**858-507**	68
115 VAC	5 A			4			■					■			AgCe + Au		With manual operation	**858-517**	69
115 VAC	7 A			1											AgNi 0.15			**286-507**	141
115 VAC	8 A			2			■					■			AgNi 90/10			**788-515**	36
115 VAC	8 A			2			■					■			AgNi + Au			**788-615**	37
115 VAC	8 A			2			■					■			AgNi		With manual operation	**788-548**	47
115 VAC	16 A			1			■					■			AgNi 90/10			**788-507**	34
115 VAC	16 A			1			■					■			AgNi + Au			**788-607**	35
115 VAC	16 A			1			■					■			AgNi		With manual operation	**788-543**	46
230 VAC	5 A			4			■				■	■			AgCe		With manual operation	**858-508**	68
230 VAC	5 A			4			■				■	■			AgCe + Au		With manual operation	**858-518**	69
230 VAC	5 A			1			■				■	■			$AgSnO_2$		Defined switch-on threshold	**859-368**	89
230 VAC	6 A			1			■								$AgSnO_2$		Integrated base load module	**857-358/006-000**	16
230 VAC	6 A			1			■								AgNi + Au		Integrated base load module	**857-368/006-000**	17
230 VAC	7 A			1											AgNi 0.15			**286-508**	141
230 VAC	7 A			2											AgNi 0.15			**286-516**	143
230 VAC	8 A			2			■					■			AgNi 90/10			**788-516**	36
230 VAC	8 A			2			■					■			AgNi + Au			**788-616**	37
230 VAC	8 A			2			■					■			AgNi		With manual operation	**788-549**	47
230 VAC	8 A			2											AgNi		With manual operation	**789-1549**	121
230 VAC	12 A			1											AgNi 90/10			**789-508**	113
230 VAC	12 A			1											AgNi		With manual operation	**789-1544**	119
230 VAC	12 A			2								■			AgNi		With manual operation	**858-528**	75
230 VAC	16 A	1													$AgSnO_2$			**789-570**	127
230 VAC	16 A			1			■					■			AgNi		With manual operation	**788-544**	46
230 VAC	16 A			1			■					■			AgNi 90/10			**788-508**	34
230 VAC	16 A			1			■					■			AgNi + Au			**788-608**	35

WAGO Relay Modules
Selection Guide

Nominal Input Voltage U_{nom}	Limiting Continuous Current	Make Contact	Break Contact	Changeover Contact	Approvals									Contact Material	For Railway Applications	Specialty function	Item Number	Page
					EN 50121-3-2	EN 50155	EN 61373	EN 50205	EN 61810-3	EN 61812-1	GL	UL 508	ATEX	IEC Ex					
12 VAC/DC	5 A			1			■				■	■			$AgSnO_2$			**859-353**	82
24 VAC/DC	4 A	1					■					■	■	■	$AgSnO_2$			**857-1330**	20
24 VAC/DC	4 A	4													AgNi + Au			**789-552**	116
24 VAC/DC	4 A	2	2												AgNi + Au			**789-536**	117
24 VAC/DC	5 A	1													AgNi 0.15			**288-564**	130
24 VAC/DC	5 A			1			■				■	■			$AgSnO_2$			**859-354**	82
24 VAC/DC	6 A	4	4					■				■			$AgSnO_2$		Force-guided contacts	**288-414**	136
24 VAC/DC	6 A			1			■					■	■	■	$AgSnO_2$			**857-354**	14
24 VAC/DC	6 A			1											AgNi 90/10			**288-504**	132
24 VAC/DC	6 A			1			■					■	■	■	AgNi + Au			**857-364**	15
24 VAC/DC	6 A			2											AgNi 0.15			**288-512**	133
24 VAC/DC	16 A	1													$AgSnO_2$		For lamp loads	**789-520**	115
48 VAC/DC	5 A			1			■				■	■			$AgSnO_2$			**859-355**	82
115 VAC/DC	5 A			1			■				■	■			AgNi + Au			**859-360**	83
115 VAC/DC	5 A			1			■				■	■			$AgSnO_2$			**859-357**	82
115 VAC/DC	6 A			1			■					■	■	■	$AgSnO_2$			**857-357**	12
115 VAC/DC	6 A			1			■					■	■	■	AgNi + Au			**857-367**	15
230 VAC/DC	5 A			1			■				■	■			$AgSnO_2$			**859-358**	82
230 VAC/DC	5 A			1			■				■	■			AgNi + Au			**859-359**	83
230 VAC/DC	6 A	4	4					■				■			$AgSnO_2$		Force-guided contacts	**288-418**	136
230 VAC/DC	6 A			1			■				■	■	■	■	$AgSnO_2$			**857-358**	12
230 VAC/DC	6 A			1			■				■	■	■	■	AgNi + Au			**857-368**	15
24 … 230 VAC/DC	3 A	1			■		■								$AgSnO_2$			**2042-3809**	94
24 … 230 VAC/DC	3 A	4				■	■								AgNi			**2042-3829**	107
24 … 230 VAC/DC	3 A	2	2			■	■								AgNi			**2042-3889**	109
24 … 230 VAC/DC	3 A	3	1			■	■								AgNi			**2042-3879**	108
24 … 230 VAC/DC	4 A			1		■	■								AgNi			**2042-3839**	97
24 … 230 VAC/DC	5 A	2			■		■								AgNi			**2042-3819**	101
24 … 230 VAC/DC	5 A	1	1		■		■								AgNi			**2042-3869**	103
24 … 230 VAC/DC	5 A			2	■		■								AgNi			**2042-3849**	102
24 … 230 VAC/DC	6 A		1			■	■								$AgSnO_2$			**2042-3859**	95
24 … 230 VAC/DC	6 A			1	■		■					■			$AgSnO_2$			**857-359**	18
24 … 230 VAC/DC	6 A			1	■		■					■			AgNi + Au			**857-369**	19

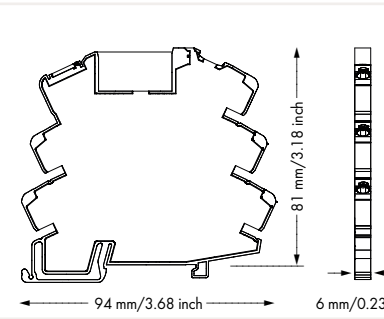
Relay Module
857 Series

1

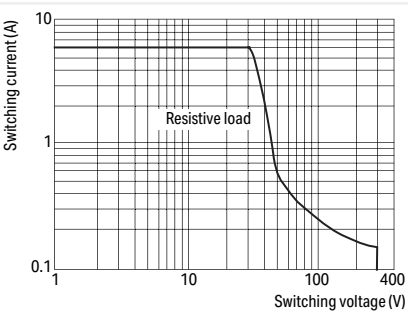


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	17 mA	857-303	25
24 VDC	10 mA	857-304	25
48 VDC	6.5 mA	857-305	25
115 VAC/DC	4 mA	857-357	25
230 VAC/DC	3.5 mA	857-358	25



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

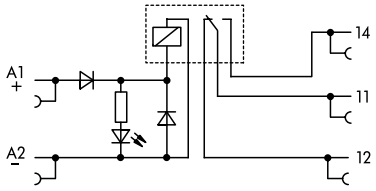


DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching frequency with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +60 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508; ATEX, IEC Ex

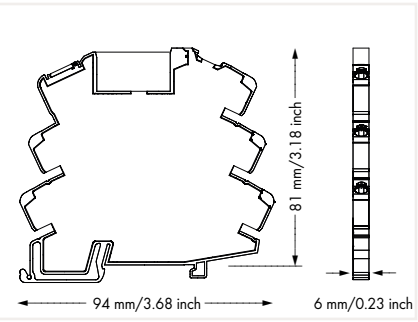
» Accessories Page 26

Relay Module
857 Series

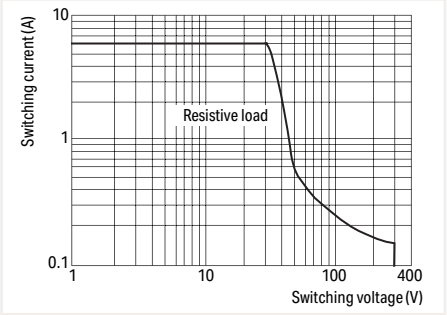


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Gold contacts; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	10 mA	857-314	25



Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



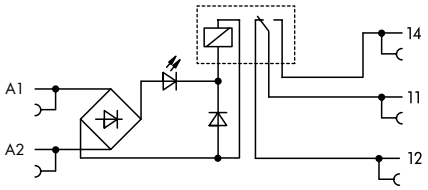
DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching frequency with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	250 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	31.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +60 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508; GL; ATEX; IEC Ex

» Accessories Page 26

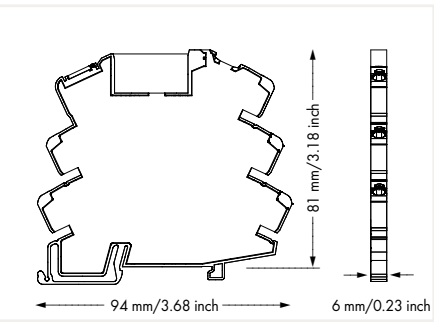
Relay Module
857 Series

1

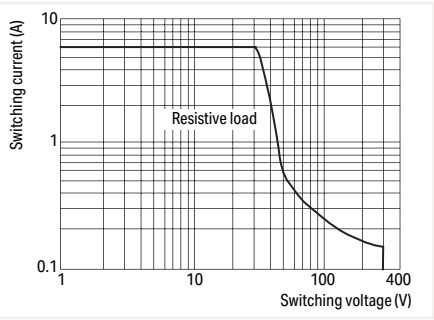


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	8.5 mA	857-354	25
115 VAC/DC	4 mA	857-357	25
230 VAC/DC	3.5 mA	857-358	25



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

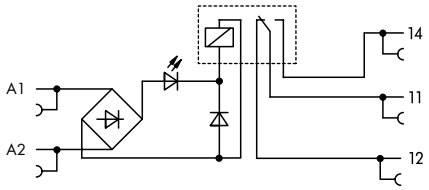


DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 % (857-354; 857-357); −20 … +10 % (857-358)
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching frequency with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +60 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508; ATEX, IEC Ex

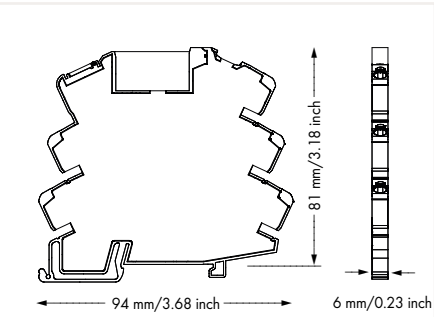
» Accessories Page 26

Relay Module
857 Series

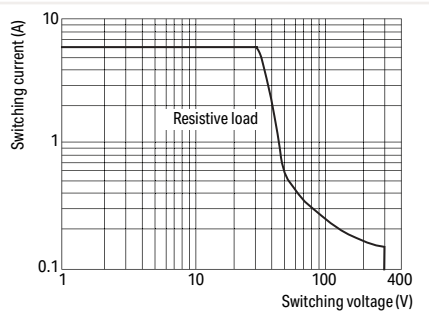


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Gold contacts; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	8.5 mA	857-364	25
115 VAC/DC	4 mA	857-367	25
230 VAC/DC	3.5 mA	857-368	25



Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

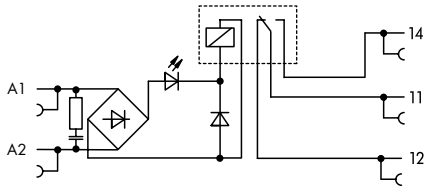
Control Circuit	
Input voltage range	−15 … +20 % (857-364; 857-367); −20 … +10 % (857-368)
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50x 10^3 switching operations
Mechanical life	5x 10^6 switching operations
Switching frequency with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	250 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +60 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508; ATEX, IEC Ex

» Accessories Page 26

Relay Module
857 Series

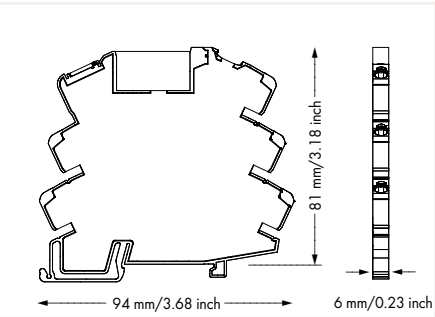
1

Similar to pictured device

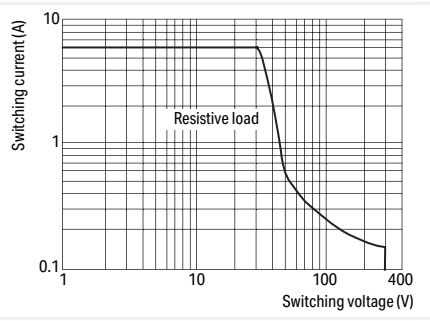


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	16 mA	857-358/006-000	25



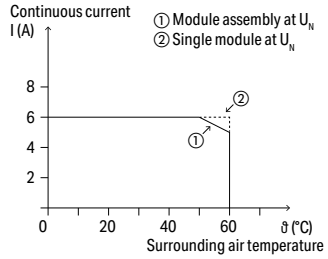
Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

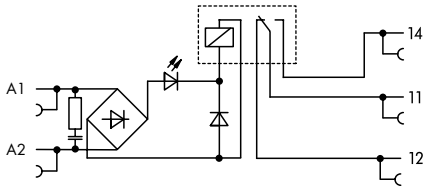
» Accessories Page 26

Control Circuit	
Input voltage range	−15 … +10 %
Line capacitance (max.)	170 nF
Cable length (control circuit)	≤ 350 m (for a line capacitance of 330 nF/km)
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching frequency with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	33.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +60 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373



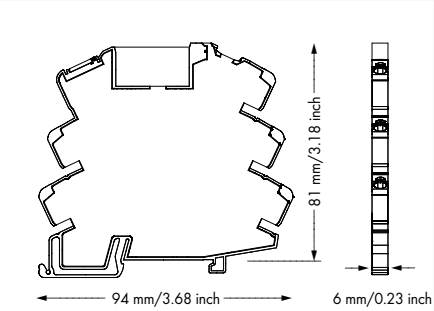
Relay Module
857 Series

Similar to pictured device

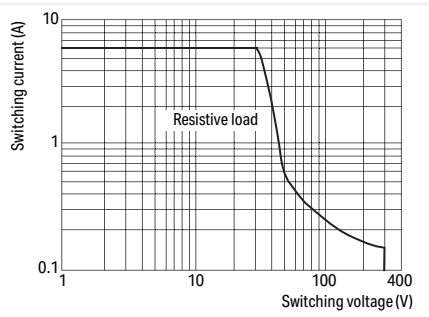


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Gold contacts; with integrated base load module; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	16 mA	857-368/006-000	25



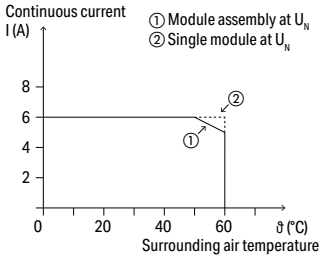
Note:
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.
- To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

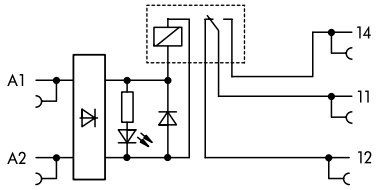
» Accessories Page 26

Control Circuit	
Input voltage range	−15 … +10 %
Line capacitance (max.)	170 nF
Cable length (control circuit)	≤ 350 m (for a line capacitance of 330 nF/km)
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching frequency with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	31.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +60 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373



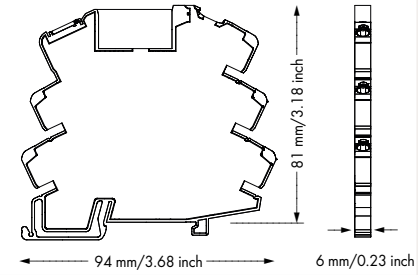
Relay Module
857 Series

1

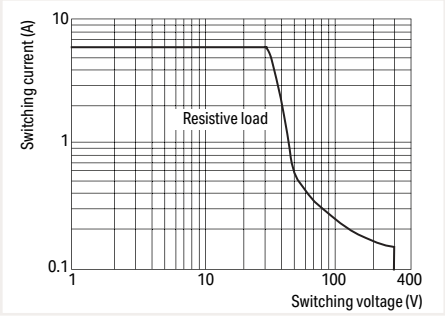


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Status indicator: yellow; 6 mm wide

U_N	Item No.	Pack. Unit
24 … 230 VAC/DC	857-359	25



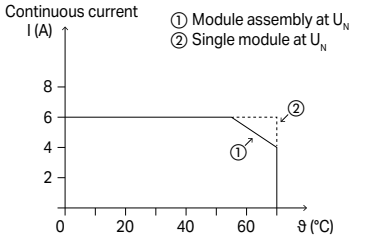
Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



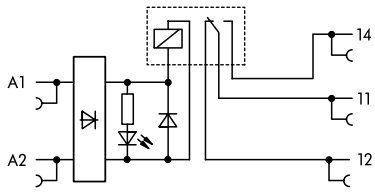
DC Load Limit Curve

» Accessories Page 26

Control Circuit	
Input voltage range	−30 … +10 %
Input current	3.5 mA (230 VAC); 20 mA (24 VDC)
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching frequency with/without load (max.)	6 min^{-1} / 60 min^{-1}
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3; EN 61010-2-201; EN 61810-1; EN 61373; UL 508

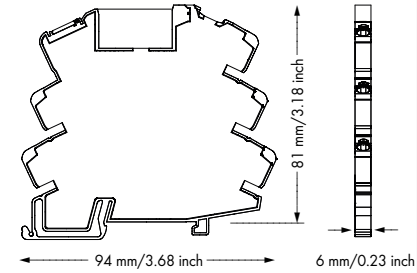


Relay Module
857 Series

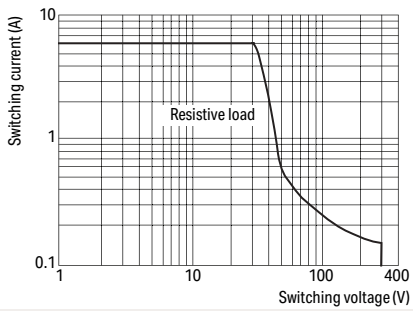


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; Gold contacts; Status indicator: yellow; 6 mm wide

U_N	Item No.	Pack. Unit
24 … 230 VAC/DC	857-369	25



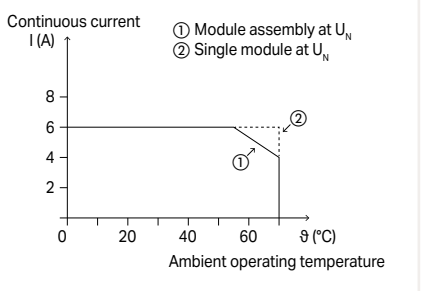
Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

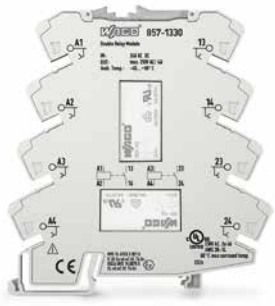
» Accessories Page 26

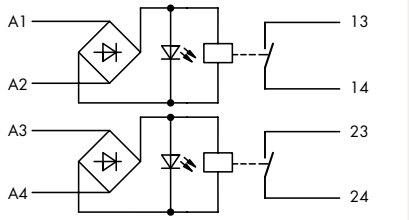
Control Circuit	
Input voltage range	−30 … +10 %
Input current	3.5 mA (230 VAC); 20 mA (24 VDC)
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching frequency with/without load (max.)	6 min^{-1} / 60 min^{-1}
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	300 VDC
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	31.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3; EN 61010-2-201; EN 61810-1; EN 61373; UL 508



Relay Module
857 Series

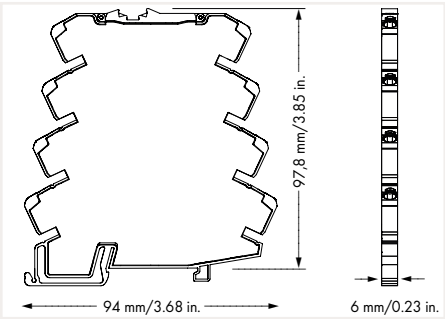
1



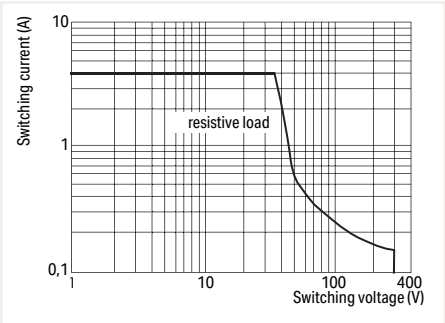


Relay Module; 2-channel; 1 make contact; Limiting continuous current: 4 A; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
AC/DC 24	10 mA	**857-1330**	25



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

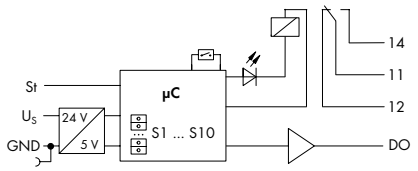


DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 %
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	4 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching frequency with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	250 VDC
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	4 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	39.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +85 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508; ATEX, IEC Ex

» Accessories Page 26

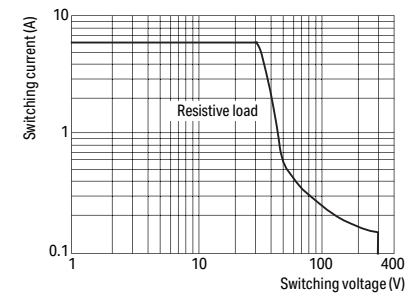
Timer Relay Module
857 Series



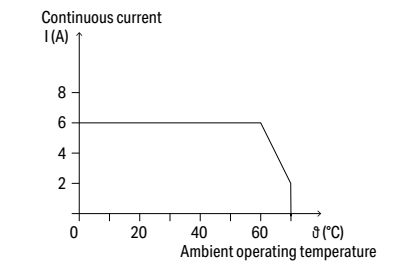
Timer Relay Module; 1 changeover contact; Limiting continuous current: 6 A; for railway applications; Multifunctional/multi-time; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	18 mA	857-640	1

Features:
- 14 functions
- Function and time range adjustable via DIP switch



DC Load Limit Curve

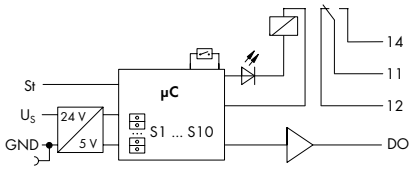


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range	±30 %
Time range	Adjustable: 0.01 … 0.1 s; 0.1 … 1 s; 1 … 10 s; 10 … 100 s; 1 … 10 min; 10 … 100 min; 1 … 10 h; 10 … 100 h
Reset time	50 ms
Minimum pulse length (control input)	10 ms
Functions	On delay; On-delay, with control input; Off-delay, with control input; On- and off-delay, with control input; Single-shot leading edge; Single-shot leading edge, with control input; Off-delay, with control input; Single-shot leading and trailing edge, with control input; On-delay and single-shot leading edge; On-delay and single-shot leading edge, with control input; Step switching; Blinking, pulse start; Blinking, interval start; Relay switching
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Digital output (DO)	U_N – 1 V; 100 mA
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	250 VDC
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	33.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61812-1; EN 61373; EN 50121-3-2; UL 508

» Accessories Page 26

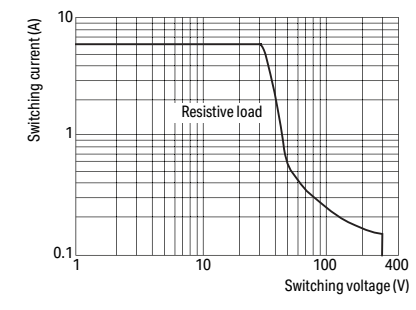
Timer Relay Module
857 Series



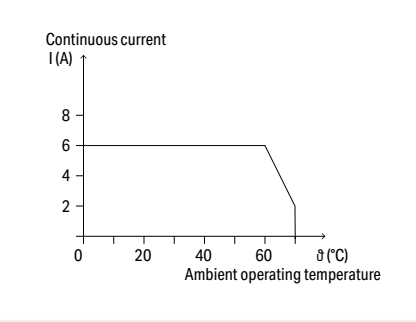
Timer Relay Module; 1 changeover contact; Limiting continuous current: 6 A; for railway applications; Multifunctional/multi-time; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	18 mA	857-642	1

Features:
- 7 functions
- 2 separately adjustable time ranges
- Function and time range adjustable via DIP switch



DC Load Limit Curve



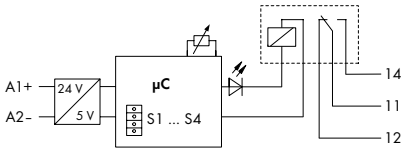
Current-Carrying Capacity Curve

Control Circuit	
Input voltage range	±30 %
Time range	Adjustable: 0.01 … 0.1 s; 0.1 … 1 s; 1 … 10 s; 10 … 100 s; 1 … 10 min; 10 … 100 min; 1 … 10 h; 10 … 100 h
Reset time	50 ms
Minimum pulse length (control input)	10 ms
Functions	On- and off-delay, with control input; On-delay and single-shot leading edge; On-delay and single-shot leading edge, with control input; Single-shot leading and trailing edge, with control input; Pulse sequence evaluation, with control input; Repeat cycle timer, pulse start; Repeat cycle timer, interval start, control input
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Digital output (DO)	U_N – 1 V; 100 mA
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	250 VDC
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	52 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61812-1; EN 61373; EN 50121-3-2; UL 508

» Accessories Page 26

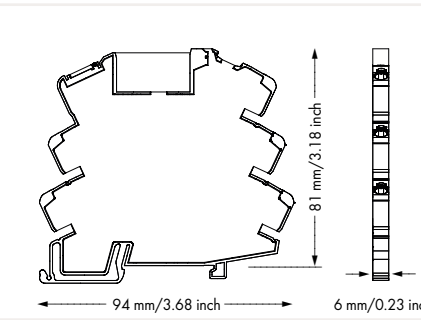
Timer Relay Module
857 Series

1

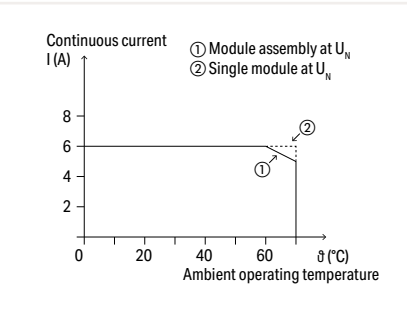


Timer Relay Module; 1 changeover contact; Limiting continuous current: 6 A; for railway applications; Multifunctional/multi-time; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	18 mA	857-604	1



Features:
- 4 functions
- Function and time range adjustable via DIP switch



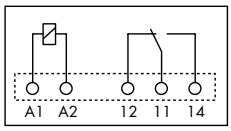
Current-Carrying Capacity Curve

Control Circuit	
Input voltage range	±30 %
Time range	Adjustable: 0.1 … 10 s; 3 … 300 s; 0.3 … 30 min; 3 … 300 min
Reset time	50 ms
Minimum pulse length (control input)	10 ms
Repeat accuracy	±1 %
Functions	On-delay; Single-shot leading edge; On-delay and single-shot leading edge (1s fixed); blinking
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	250 VDC
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	24.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61812-1; EN 61373; EN 50121-3-2; UL 508

» Accessories Page 26

Basic Relay
857 Series

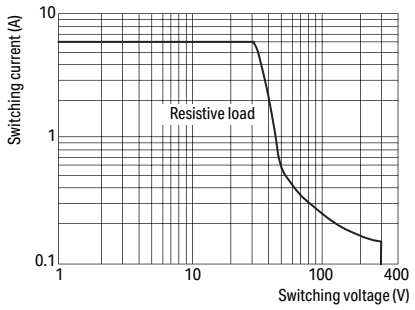
1



Basic Relay; 1 changeover contact; Limiting continuous current: 6 A; 5 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
12 VDC	**857-150**	20
24 VDC	**857-152**	20
48 VDC	**857-154**	20
60 VDC	**857-155**	20

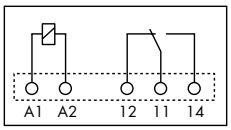
Note:
- The 60 VDC spare relay must be used for 60 VDC, 110 VDC, 220 VDC and 115 VAC/DC, 230 VAC/DC relay modules.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching frequency with/without load (max.)	6 min^{-1} / 180 min^{-1}
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.09 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	4.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +85 °C
Surrounding air temperature (storage)	–40 … +85 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61810-1, EN 61373; VDE, UR

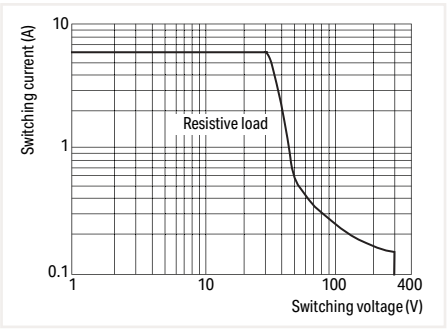
Basic Relay
857 Series



Basic Relay; 1 changeover contact; Limiting continuous current: 6 A; Gold contacts; 5 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
12 VDC	**857-151**	20
24 VDC	**857-153**	20
60 VDC	**857-157**	20

Note:
- The 60 VDC spare relay must be used for 60 VDC, 110 VDC, 220 VDC and 115 VAC/DC, 230 VAC/DC relay modules.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.
- 30 VDC switching voltages and 50 mA currents must not be exceeded for gold-plated basic relays. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



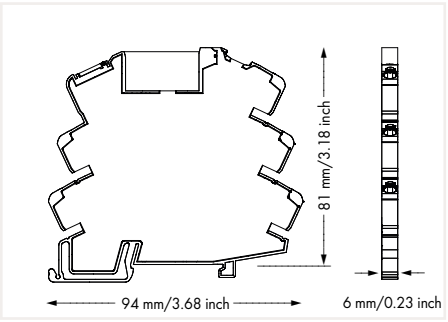
DC Load Limit Curve

Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching frequency with/without load (max.)	6 min^{-1} / 180 min^{-1}
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.09 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	4.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +85 °C
Surrounding air temperature (storage)	–40 … +85 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61810-1, EN 61373; VDE, UR

Relay Socket
857 Series

Relay Socket; for 5 mm basic relay; Status indicator: yellow

U_N	Item No.	Pack. Unit
24 VAC/DC	857-104	25



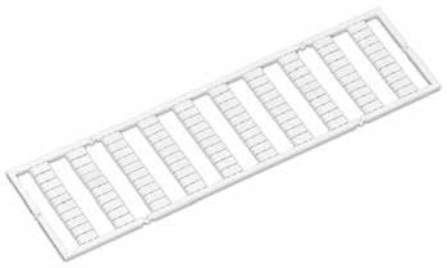
Load Circuit	
Limiting continuous current	6 A
Switching voltage (max.)	250 VAC
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	300 V
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	26.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … 70 °C
Surrounding air temperature (storage)	–40 … 70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; UR 508

Accessories

Push-in type jumper bar; light gray; insulated; 18 A		
Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)
3-way	859-403	200 (8x25)
4-way	859-404	200 (8x25)
5-way	859-405	200 (8x25)
6-way	859-406	100 (4x25)
7-way	859-407	100 (4x25)
8-way	859-408	100 (4x25)
9-way	859-409	100 (4x25)
10-way	859-410	100 (4x25)
Item no. suffixes for colored push-in type jumper bars		
yellow	.../000-029	
red	.../000-005	
blue	.../000-006	

Comb-style jumper bar; insulated; for conductor entry		
Description	Item No.	Pack. Unit
2-way	281-482	100

Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade		
	Item No.	Pack. Unit
	210-720	50



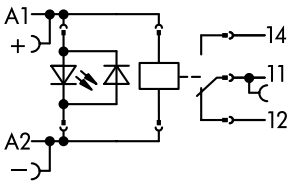
WMB marker card; 10 strips with 10 markers; white; with black printing		
Marking	Item No.	Pack. Unit
plain	793-501	5 cards
1 ...10 (10 x)	793-502	5 cards
11 ... 20 (10 x)	793-503	5 cards
21 ... 30 (10 x)	793-504	5 cards
31 ... 40 (10 x)	793-505	5 cards
41 ... 50 (10 x)	793-506	5 cards
1 ... 50 (2 x)	793-566	5 cards

WMB Inline; for terminal block width: 5 ... 5.2 mm; plain; 1500 markers/reel; white		
Marking	Item No.	Pack. Unit
plain	2009-115	1

Marking strip; plain; 11 mm wide; 50 m reel; white		
Marking	Item No.	Pack. Unit
plain	2009-110	1

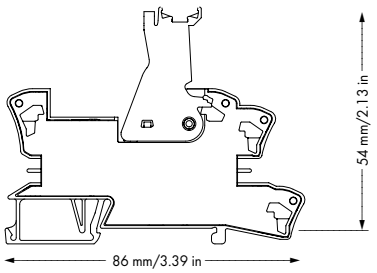
Relay Module
788 Series

1

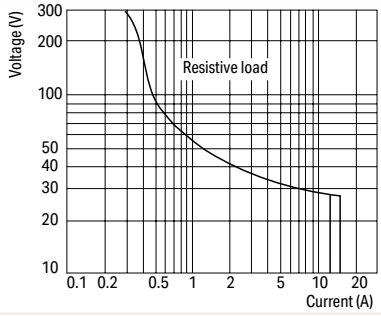


Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	36 mA	788-303	20
24 VDC	19 mA	788-304	20
48 VDC	11 mA	788-305	20
60 VDC	115 mA	788-306	20
110 VDC	6 mA	788-307	20



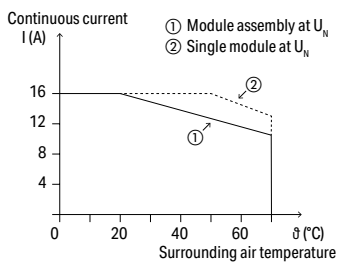
Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

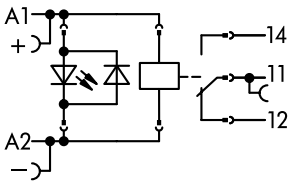
» Accessories Page 50

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	16 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	30 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 1200 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	45.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 10 A)



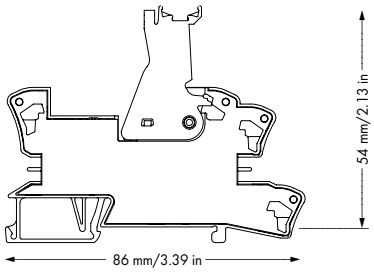
Current-Carrying Capacity Curve

Relay Module
788 Series

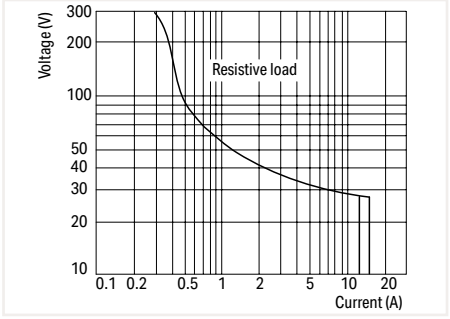


Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Gold contacts; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	788-404	20

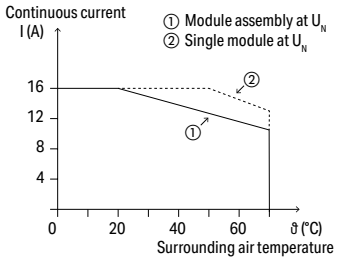


Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	70 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Switching load with/without load (max.)	10 min^{-1} / 1200 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	46.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508

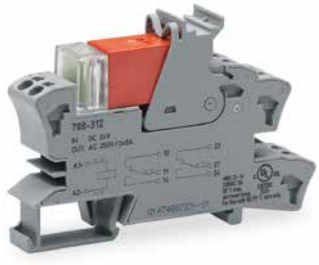


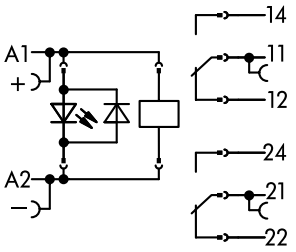
Current-Carrying Capacity Curve

» Accessories Page 50

Relay Module
788 Series

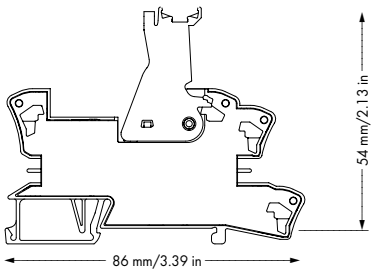
1



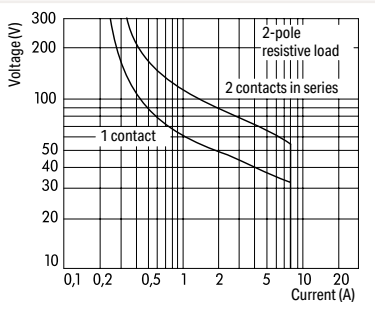


Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	36 mA	788-311	20
24 VDC	19 mA	788-312	20
48 VDC	11 mA	788-313	20
60 VDC	11 mA	788-314	20
110 VDC	6 mA	788-315	20



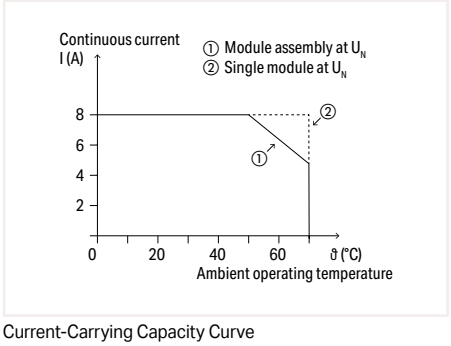
Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

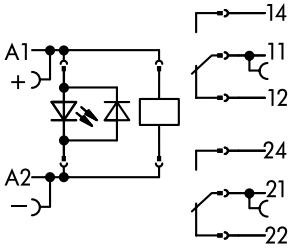
» Accessories Page 50

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi 90/10
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	13 ms
Bounce time (typ.)	10 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 1200 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	45.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508



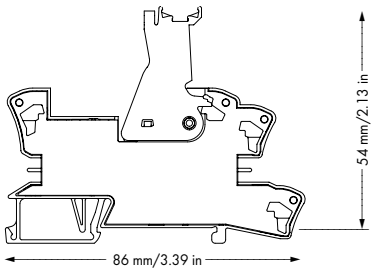
Current-Carrying Capacity Curve

Relay Module
788 Series

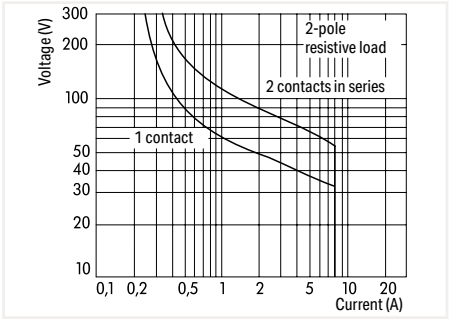


Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Gold contacts; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	17 mA	788-412	20
110 VDC	5 mA	788-415	20



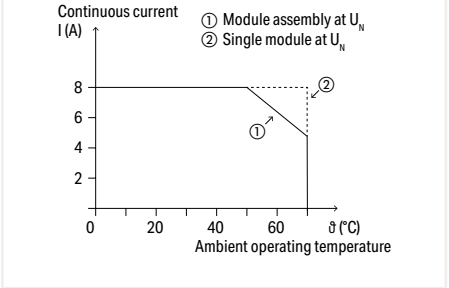
Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

» Accessories Page 50

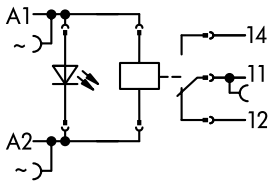
Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi + Au
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Switching load with/without load (max.)	10 min^{-1} / 1200 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	47.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508



Current-Carrying Capacity Curve

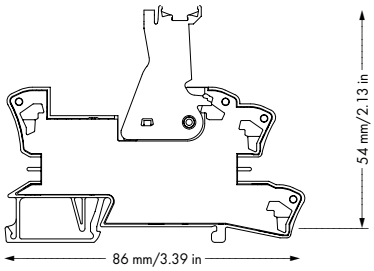
Relay Module
788 Series

1

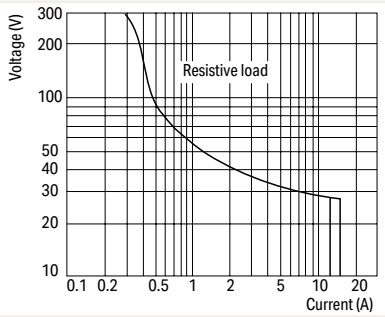


Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC	34 mA	788-506	20
115 VAC	8 mA	788-507	20
230 VAC	3.5 mA	788-508	20

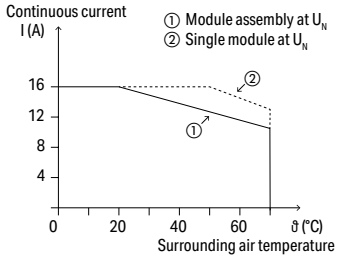


Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

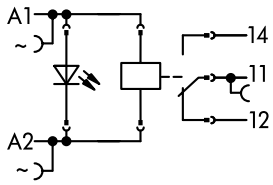
Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	16 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	35 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	30 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 600 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	46.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508



Current-Carrying Capacity Curve

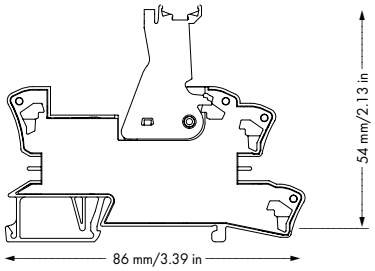
» Accessories Page 50

Relay Module
788 Series

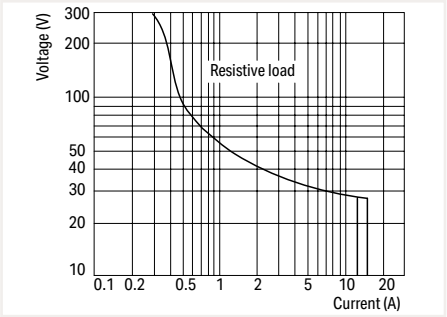


Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Gold contacts; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC	8.2 mA	788-607	20
230 VAC	5 mA	788-608	20



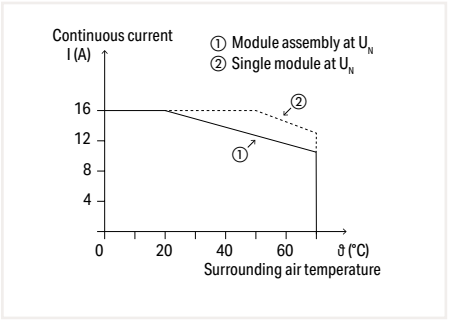
Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

» Accessories Page 50

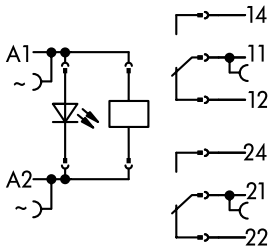
Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	70 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Switching load with/without load (max.)	10 min^{-1} / 1200 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	44.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508



Current-Carrying Capacity Curve

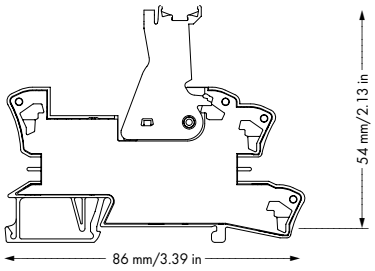
Relay Module
788 Series

1

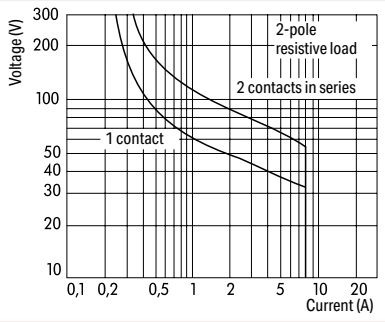


Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC	34 mA	788-512	20
115 VAC	8 mA	788-515	20
230 VAC	3.5 mA	788-516	20

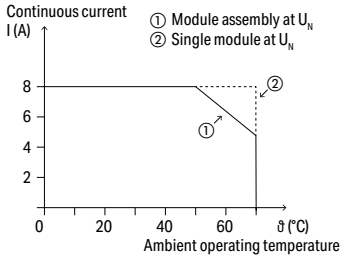


Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

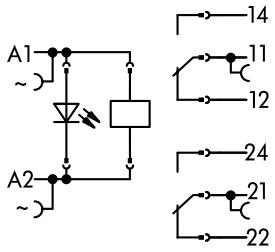
Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi 90/10
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	35 ms
Bounce time (typ.)	10 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 1200 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	47.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508



Current-Carrying Capacity Curve

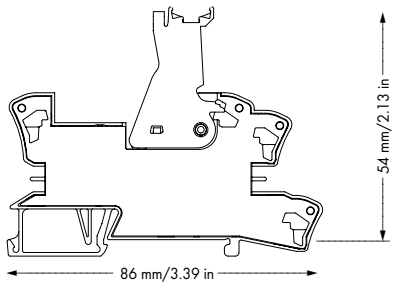
» Accessories Page 50

Relay Module
788 Series

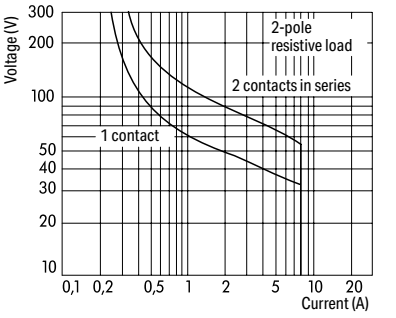


Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Gold contacts; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC	8.2 mA	788-615	20
230 VAC	5 mA	788-616	20



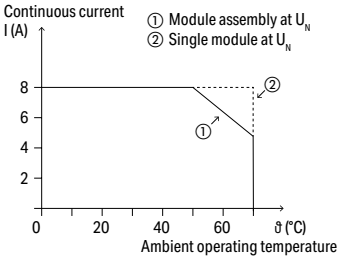
Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

» Accessories Page 50

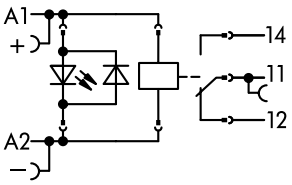
Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi + Au
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Switching load with/without load (max.)	10 min^{-1} / 1200 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	47.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508



Current-Carrying Capacity Curve

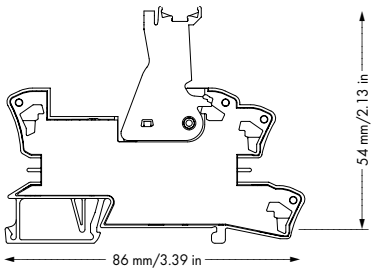
Relay Module
788 Series

1

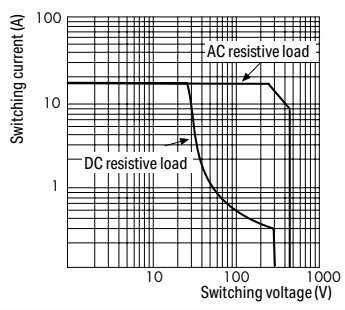


Relay Module; 1 changeover contact; Limiting continuous current: 16 A; for lamp loads; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	35 mA	788-353	20
24 VDC	19 mA	788-354	20

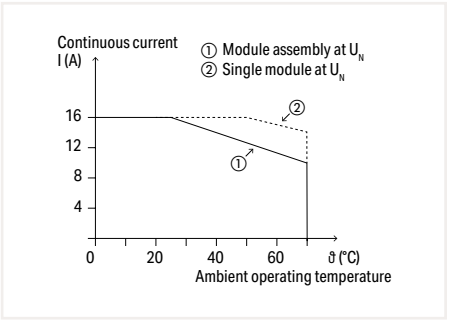


Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

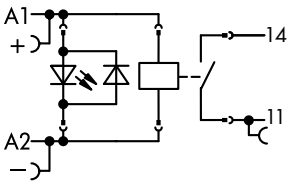
Control Circuit	
Input voltage range	−15 … +20 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	16 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Recommended minimum load	5 V / 100 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	44.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 10 A)



Current-Carrying Capacity Curve

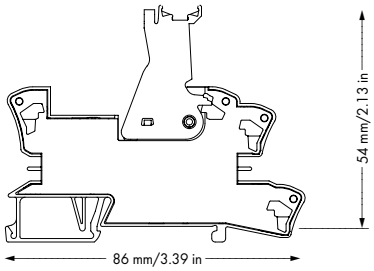
» Accessories Page 50

Relay Module
788 Series

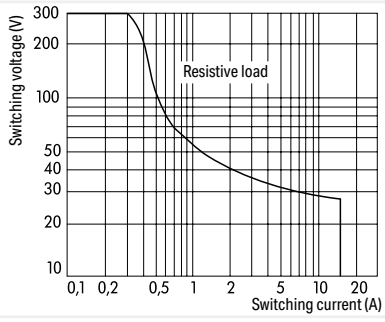


Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	788-356	20

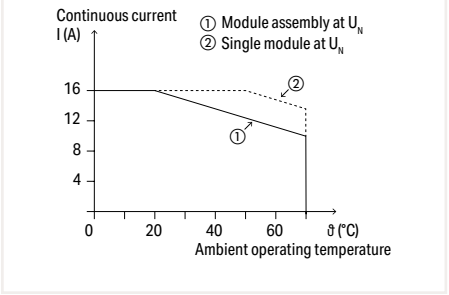


Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit	
Input voltage range	–15 … +20 %
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	16 A
Inrush current (resistive) max.	80 A (AC) / 20 ms; 30 A / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	9 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	3 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	46.8 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 10 A)

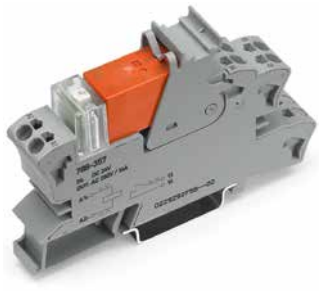


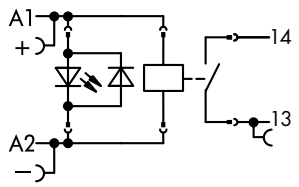
Current-Carrying Capacity Curve

» Accessories Page 50

Relay Module
788 Series

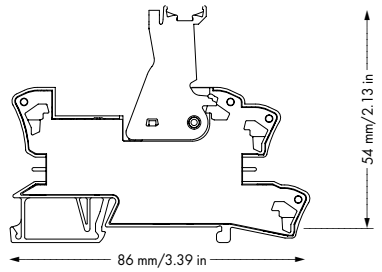
1



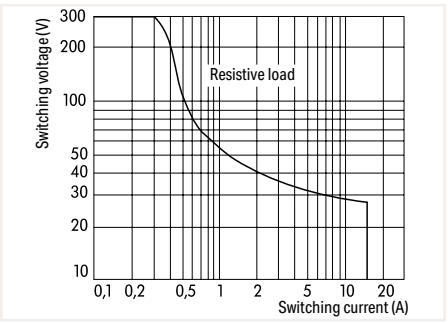


Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	17 mA	788-357	20

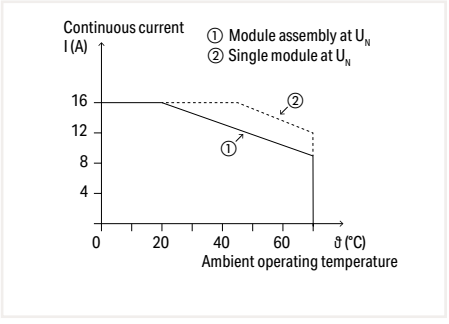


Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

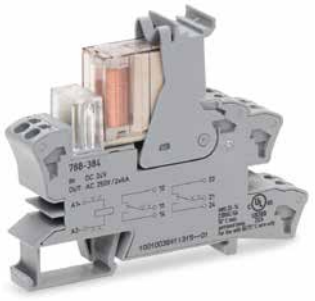
Control Circuit	
Input voltage range	–10 … +20 %
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$, W pre-make contact
Limiting continuous current	16 A
Inrush current (resistive) max.	165 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	5 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	5 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 60 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1.25 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	46.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373

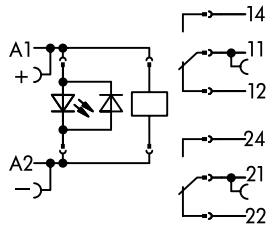


Current-Carrying Capacity Curve

» Accessories Page 50

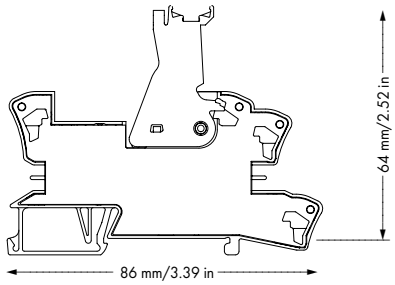
Relay Module
788 Series



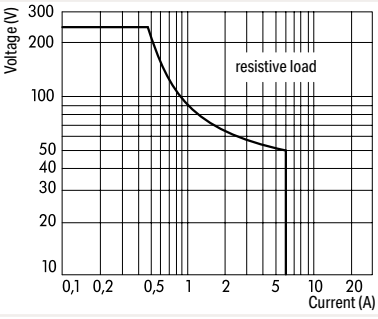


Relay Module; with force-guided contacts; 2 change-over contacts; Limiting continuous current: 6 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	31 mA	788-384	10

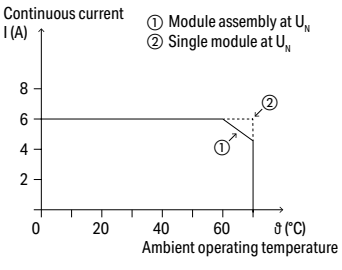


Note:
- Per EN 50205, it is only permitted to use 1 make contact/1 break contact for safety circuits (11-14 and 22-21 or 12-11 and 21-24).
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	6 A
Inrush current (resistive) max.	14 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 3 A / 24 VDC
Recommended minimum load	5 V / 10 mA
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 300 min^{-1}
Mechanical force-guided operation	Type A
Type of basic relay	TE SR2M
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	3 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	50.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508

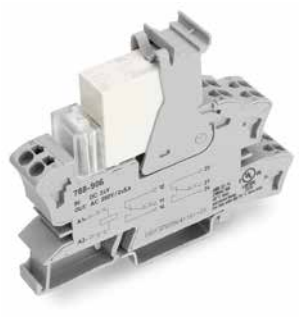


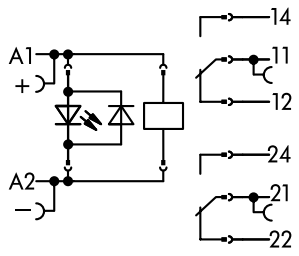
Current-Carrying Capacity Curve

» Accessories Page 50

Relay Module
788 Series

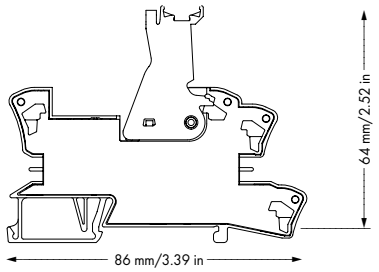
1



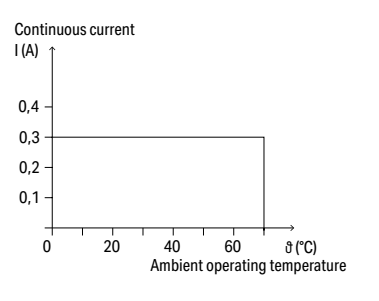


Relay Module; with force-guided contacts; 2 changeover contacts; Limiting continuous current: 0.3 A; Gold contacts; Status indicator: green; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	30 mA	788-906	10



Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



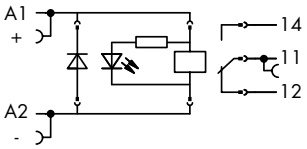
Current-Carrying Capacity Curve

Control Circuit	
Input voltage range	−15 … +10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi + Au
Limiting continuous current	0.3 A
Switching voltage (max.)	60 VAC
Switching power (resistive) max.	18 VA (AC)
Recommended minimum load	0.1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	12 ms
Electrical life (NO; resistive load; 23 °C)	200 x 10^3 switching operations
Mechanical life	50 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 600 min^{-1}
Mechanical force-guided operation	Type A
Type of basic relay	Dold OA 5669
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	50 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature UL (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201, EN 61810-3; UL 508 (max. 40 °C)

» Accessories Page 50

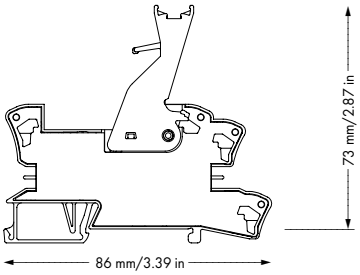
Relay Module
788 Series

1

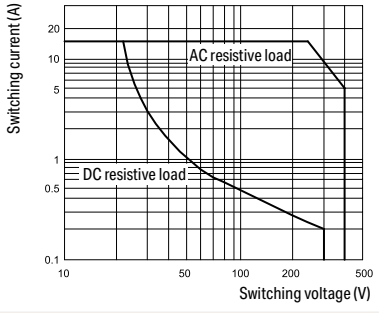


Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Manually operated; Status indicator: red; 15 mm wide

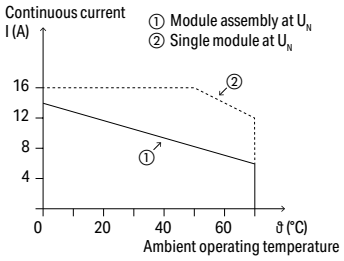
U_N	I_N	Item No.	Pack. Unit
24 VDC	16.7 mA	**788-341**	15



Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

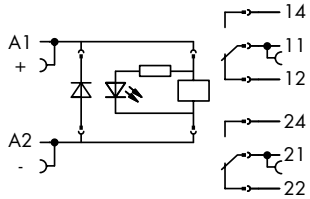


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	16 A
Inrush current (resistive) max.	24 A (AC) / 4 s; 32 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 240 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 300 min^{-1}
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	55.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 10 A)

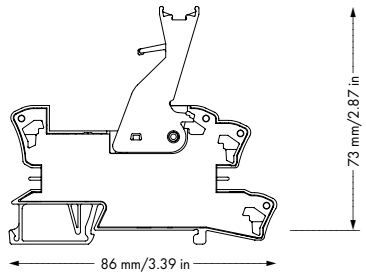
» Accessories Page 50

Relay Module
788 Series

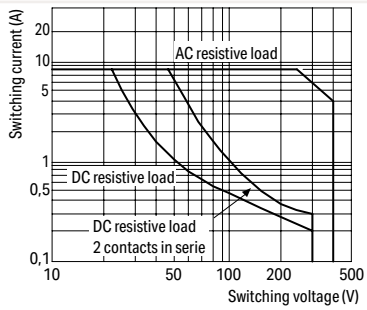


Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Manually operated; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	16.7 mA	788-346	15

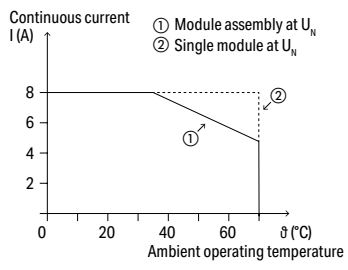


Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

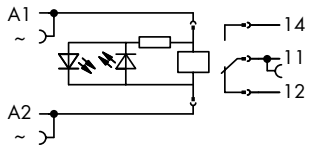
Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	12 A (AC) / 4 s; 16 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 240 VAC; DC 13: 1 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 300 min^{-1}
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	34.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508



Current-Carrying Capacity Curve

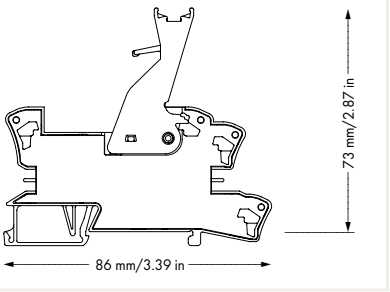
» Accessories Page 50

Relay Module
788 Series

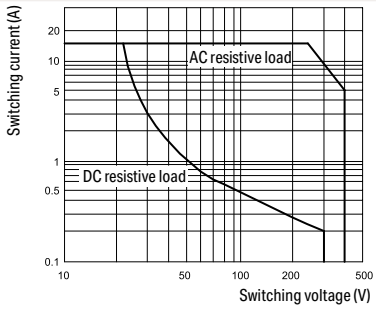


Relay Module; 1 changeover contact; Limiting continuous current: 16 A; Manually operated; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC	31.6 mA	788-541	15
115 VAC	6.6 mA	788-543	15
230 VAC	3.2 mA	788-544	15

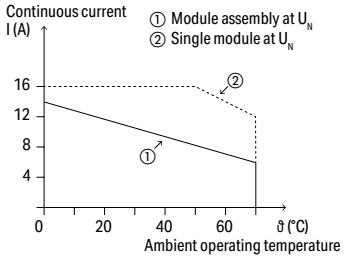


Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

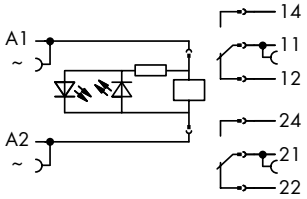
Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	16 A
Inrush current (resistive) max.	24 A (AC) / 4 s; 32 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 240 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 300 min^{-1}
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	47 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 10 A)



Current-Carrying Capacity Curve

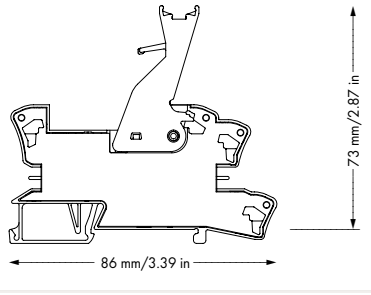
» Accessories Page 50

Relay Module
788 Series

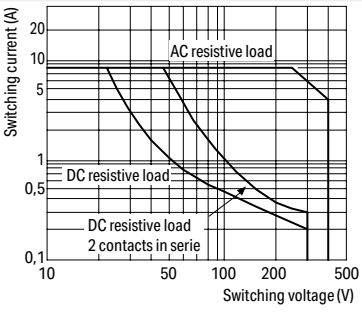


Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Manually operated; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC	31.6 mA	788-546	15
115 VAC	6.6 mA	788-548	15
230 VAC	3.2 mA	788-549	15

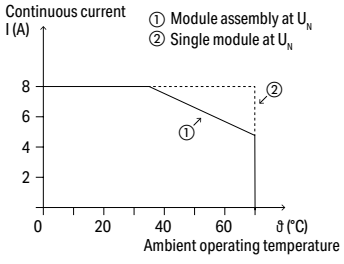


Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	12 A (AC) / 4 s; 16 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 240 VAC; DC 13: 1 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 300 min^{-1}
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	46.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508

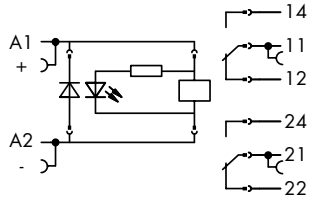


Current-Carrying Capacity Curve

» Accessories Page 50

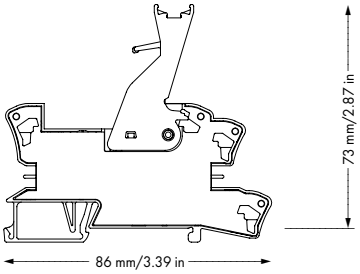
Relay Module
788 Series

1



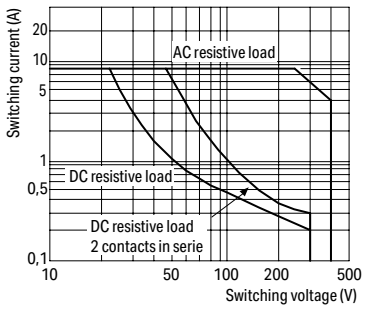
Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Manually operated; for railway applications; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19.1 mA	788-390	15

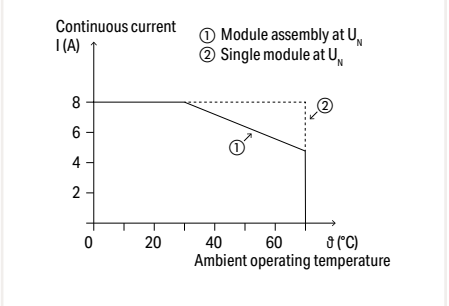


Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	12 A (AC) / 4 s; 16 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 240 VAC; DC 13: 1 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Electrical life (NO; resistive load; 23 °C)	10x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 300 min^{-1}
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	48 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373



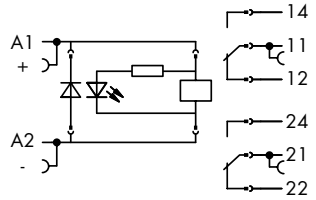
DC Load Limit Curve



Current-Carrying Capacity Curve

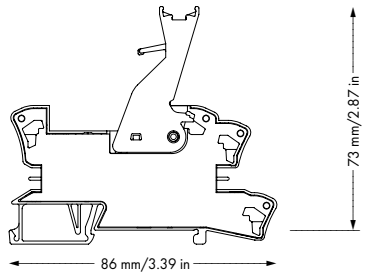
» Accessories Page 50

Relay Module
788 Series



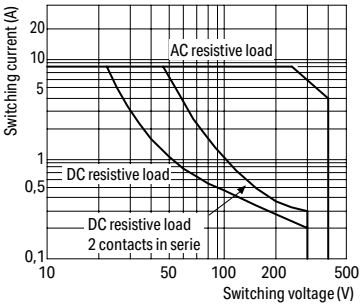
Relay Module; 1 changeover contacts; Limiting continuous current: 16 A; Manually operated; for railway applications; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19.1 mA	788-391	15

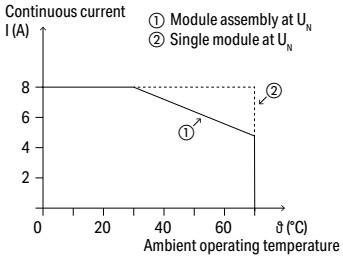


Note:
- Reinforced insulation between coil and contacts
- A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.
- To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	16 A
Inrush current (resistive) max.	32 A (AC) / 0.02 s; 24 A / 4 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 240 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Electrical life (NO; resistive load; 23 °C)	10x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 300 min^{-1}
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	48 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373



DC Load Limit Curve

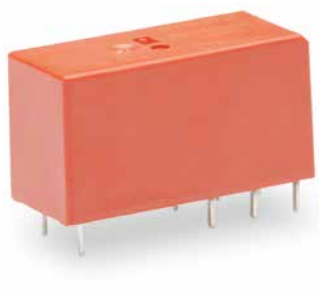


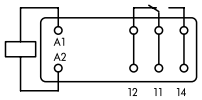
Current-Carrying Capacity Curve

» Accessories Page 50

Basic Relay
788 Series

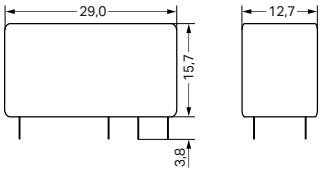
1

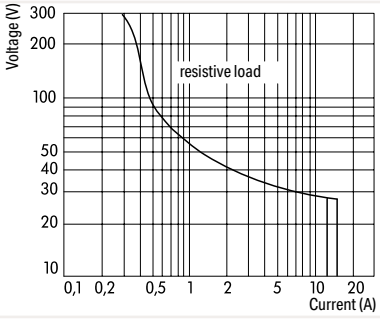




Basic Relay; 1 changeover contact; Limiting continuous current: 16 A; 13 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
12 VDC	**788-150**	20
24 VDC	**788-154**	20
48 VDC	**788-158**	20
60 VDC	**788-162**	20
110 VDC	**788-166**	20
24 VAC	**788-170**	20
115 VAC	**788-174**	20
230 VAC	**788-178**	20

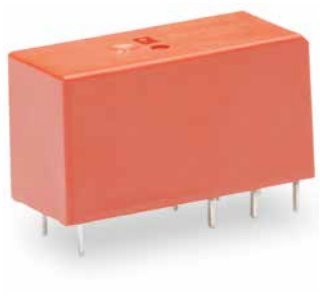


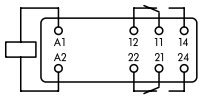


DC Load Limit Curve

Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	16 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	30 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 1200 min^{-1}
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP40
Physical Data	
Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	14.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +85 °C
Surrounding air temperature (storage)	–40 … +85 °C
Standards and Specifications	
Standards/specifications	EN 61810-1

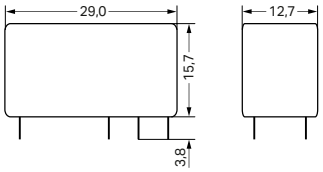
Basic Relay
788 Series

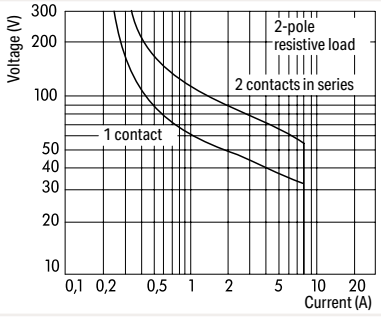




Basic Relay; 2 changeover contacts; Limiting continuous current: 8 A; 13 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
12 VDC	788-152	20
24 VDC	788-156	20
48 VDC	788-160	20
60 VDC	788-164	20
110 VDC	788-168	20
24 VAC	788-172	20
115 VAC	788-176	20
230 VAC	788-180	20



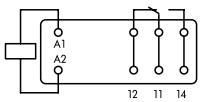


DC Load Limit Curve

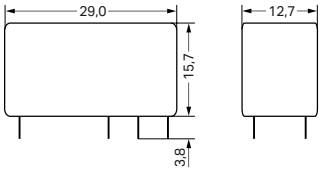
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi 90/10
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	10 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 1200 min^{-1}
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP40
Physical Data	
Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	13 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +85 °C
Surrounding air temperature (storage)	–40 … +85 °C
Standards and Specifications	
Standards/specifications	EN 61810-1

Basic Relay
788 Series

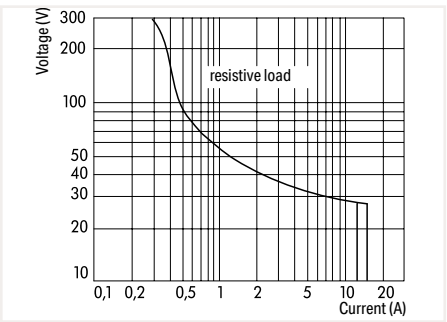
1



Basic Relay; 1 changeover contact; Limiting continuous current: 16 A; Gold contacts; 13 mm wide; 15 mm high		
U_N	Item No.	Pack. Unit
24 VDC	788-155	20
115 VAC	788-175	20
230 VAC	788-179	20



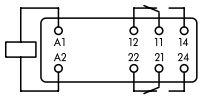
Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

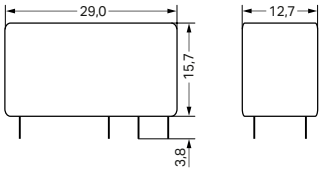
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 6 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Electrical life (NO; resistive load; 23 °C)	30 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Physical Data	
Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	11 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +85 °C
Surrounding air temperature (storage)	–40 … +85 °C
Standards and Specifications	
Standards/specifications	EN 61810-1

Basic Relay
788 Series

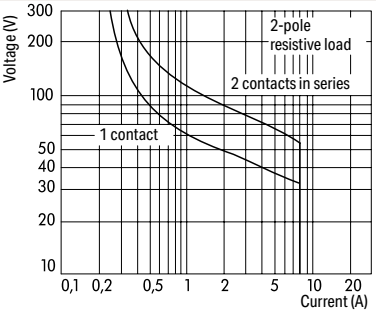


Basic Relay; 2 changeover contacts; Limiting continuous current: 8 A; Gold contacts; 13 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
24 VDC	788-157	20
115 VAC	788-177	20
230 VAC	788-181	20



Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.

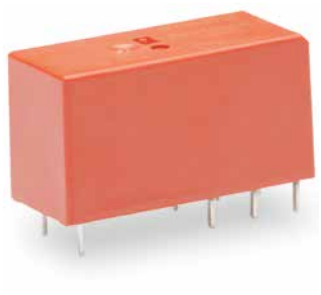


DC Load Limit Curve

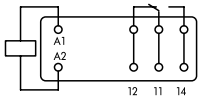
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi + Au
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 250 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	5 V / 2 mA / 50 mW
Pull-in time (typ.)	7 ms
Drop-out time (typ.)	3 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Physical Data	
Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	14.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +85 °C
Surrounding air temperature (storage)	–40 … +85 °C
Standards and Specifications	
Standards/specifications	EN 61810-1

Basic Relay
788 Series

1

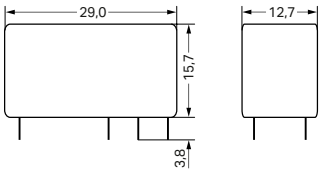


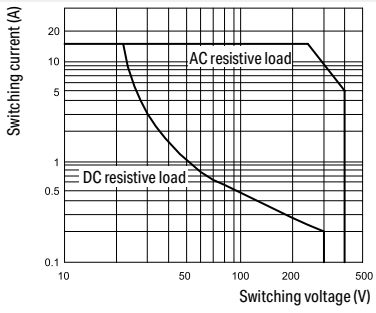
Similar to pictured device



Basic Relay; 1 changeover contact; Limiting continuous current: 16 A; Manually operated; 13 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
24 VDC	788-931	20
230 VAC	788-944	20

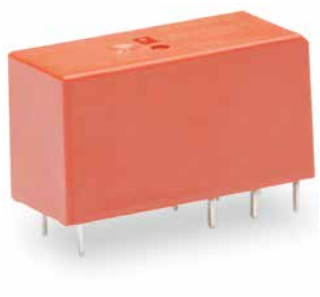




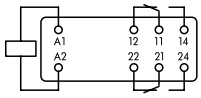
DC Load Limit Curve

Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 3 A / 240 VAC; DC 13: 2 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Physical Data	
Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	15.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +85 °C
Standards and Specifications	
Standards/specifications	EN 61810-1

Basic Relay
788 Series

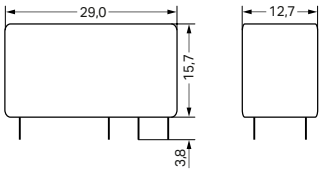


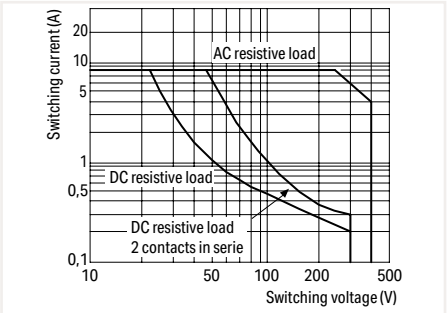
Similar to pictured device



Basic Relay; 2 changeover contact; Limiting continuous current: 8 A; Manually operated; 13 mm wide; 15 mm high

U_N	Item No.	Pack. Unit
24 VDC	788-936	20
24 VAC	788-946	20
230 VAC	788-949	20

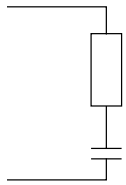




DC Load Limit Curve

Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 250 VAC; DC 13: 1 A / 24 VDC
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Physical Data	
Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	15.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +85 °C
Standards and Specifications	
Standards/specifications	EN 61810-1

Suppressor Module
788 Series



Filter Module; for miniature switching relays; Pluggable, for relay sockets (788 and 858 Series)

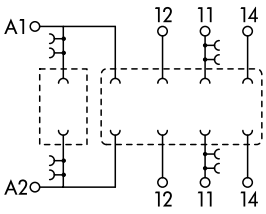
U_N	Item No.	Pack. Unit
110 … 230 VAC	**788-148**	50

Note:
- To guarantee safe operation, residual voltages (due to the cable capacitance of long connection lines or leakage currents of semi-conductor switches and their protective circuits) must be lower than the release voltage of the relays.
- For DC relays, the release voltage is specified with ≤ 5% of the nominal voltage; for AC relays, it is 15% of the nominal voltage (per VDE 0435).
- The relay may not reset if a high residual voltage exists. Depending on the reason for the residual voltage, changing the cable routing or a parallel connection of an RC element could remedy this situation.

Operating Data	
Nominal operating voltage	110 … 230 VAC
Operating voltage	0 … 230 VAC
Power consumption at U_N	7.2 mA (230 VAC; 50 Hz); 3.6 mA (115 VAC; 50 Hz)
Nominal mains frequency range	50 … 60 Hz
Module Characteristics	
Resistance	470 Ω
Capacitance	100 nF
Safety and protection	
Protection type	IP20
Physical Data	
Width	15 mm / 0.591 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	10 mm / 0.394 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	1.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

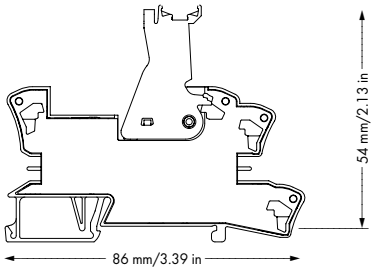
Relay Socket
788 Series

1



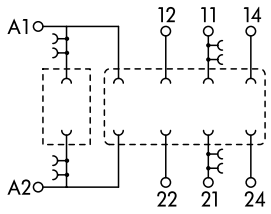
Relay Socket; 1 changeover contact; for 15 mm basic relays

	Item No.	Pack. Unit
	788-100	20



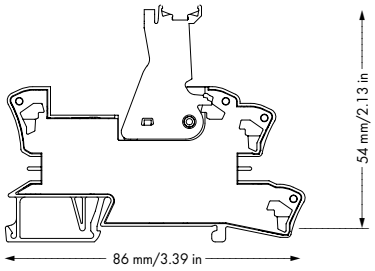
Control Circuit	
Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 … 250 V (depends on relay)
Load Circuit	
Number of changeover/switchover contacts	1
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV_{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms} (depends on relay)
Dielectric strength, channel/channel (AC, 1 min.)	(depending on relay)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	31.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C (depends on relay)
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

Relay Socket
788 Series



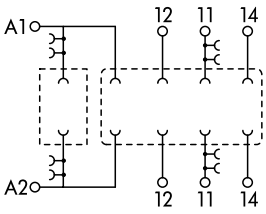
Relay Socket; 2 changeover contacts; for 15 mm basic relays

	Item No.	Pack. Unit
	788-102	20



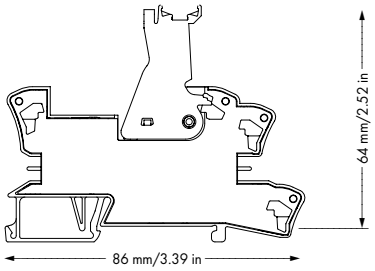
Control Circuit	
Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 … 250 V (depends on relay)
Load Circuit	
Number of changeover/switchover contacts	2
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC)
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV_{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms} (depends on relay)
Dielectric strength, load/load circuit (AC, 1 min)	3.5 kV
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C (depends on relay)
Surrounding air temperature (storage)	–40 … +80 °C
Processing temperature	–25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

Relay Socket
788 Series



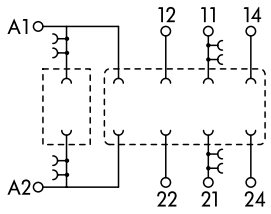
Relay Socket; 1 changeover contact; for 25 mm basic relays

	Item No.	Pack. Unit
	788-101	15



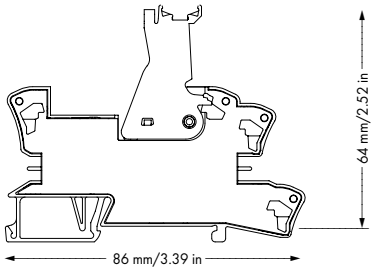
Control Circuit	
Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 … 250 V (depends on relay)
Load Circuit	
Number of changeover/switchover contacts	1
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV_{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms} (depends on relay)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	25 mm / 0.984 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	31 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C (depends on relay)
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

Relay Socket
788 Series



Relay Socket; 2 changeover contacts; for 25 mm basic relays

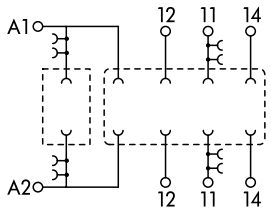
	Item No.	Pack. Unit
	788-103	15



Control Circuit	
Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 … 250 V (depends on relay)
Load Circuit	
Number of changeover/switchover contacts	2
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC)
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV_{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms} (depends on relay)
Dielectric strength, channel/channel (AC, 1 min.)	(depending on relay)
Dielectric strength, load/load circuit (AC, 1 min)	3.5 kV_{rms} (depends on relay)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	25 mm / 0.984 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	31 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C (depends on relay)
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

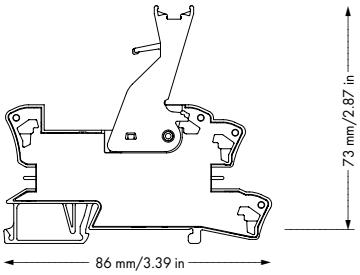
Relay Socket
788 Series

Similar to pictured device



Relay Socket; 1 changeover contact; Manually operated; for 25 mm basic relays

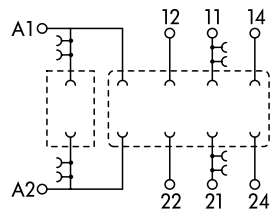
	Item No.	Pack. Unit
	788-108	15



Control Circuit	
Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 … 250 V (depends on relay)
Load Circuit	
Number of changeover/switchover contacts	1
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV_{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms} (depends on relay)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	32 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C (depends on relay)
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

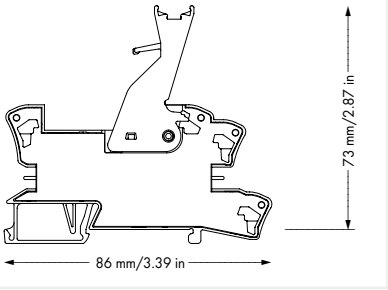
Relay Socket
788 Series

Similar to pictured device



Relay Socket; 2 changeover contacts; Manually operated; for 25 mm basic relays

	Item No.	Pack. Unit
	788-109	15



Control Circuit	
Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 … 250 V (depends on relay)
Load Circuit	
Number of changeover/switchover contacts	2
Limiting continuous current	8 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC)
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV_{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms} (depends on relay)
Dielectric strength, load/load circuit (AC, 1 min)	3.5 kV_{rms} (depends on relay)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	32.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C (depends on relay)
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Accessories for relay modules; Operation status indicator: red

U_N	I_N	Item No.	Pack. Unit
24 VDC	2.4 mA	**788-120**	50(2x25)
48 VDC	1.9 mA	**788-121**	50(2x25)
110 VDC	1.9 mA	**788-122**	50(2x25)
24 VAC	2.1 mA	**788-123**	50(2x25)
115 VAC	1.7 mA	**788-124**	50(2x25)
230 VAC	1.6 mA	**788-125**	50(2x25)

Twin ferrule; Sleeve for 2 x 1 mm² / 2 x 18 AWG; red, insulated; 12 mm long

Color	Item No.	Pack. Unit
red	**216-542**	500

Comb-style jumper bar; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	**788-113**	200 (8x25)
3-way	**788-114**	100 (4x25)
4-way	**788-115**	100 (4x25)
6-way	**788-116**	100 (4x25)
8-way	**788-117**	100 (4x25)
1 to 3	**788-118**	100 (4x25)

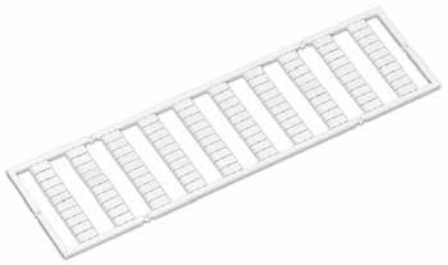
Push-in type jumper bar; light gray; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	**859-402**	200 (8x25)

Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

	Item No.	Pack. Unit
	210-720	50

Accessories

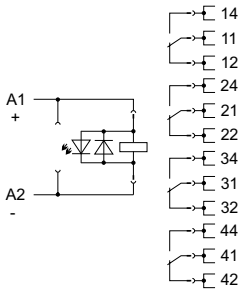


WMB marker card; 10 strips with 10 markers; white; with black printing		
Marking	**Item No.**	Pack. Unit
plain	**793-501**	5 cards
1 ...10 (10 x)	**793-502**	5 cards
11 ... 20 (10 x)	**793-503**	5 cards
21 ... 30 (10 x)	**793-504**	5 cards
31 ... 40 (10 x)	**793-505**	5 cards
41 ... 50 (10 x)	**793-506**	5 cards
1 ... 50 (2 x)	**793-566**	5 cards

WMB Inline; for terminal block width: 5 ... 5.2 mm; plain; 1500 markers/reel; white		
Marking	**Item No.**	Pack. Unit
plain	**2009-115**	1

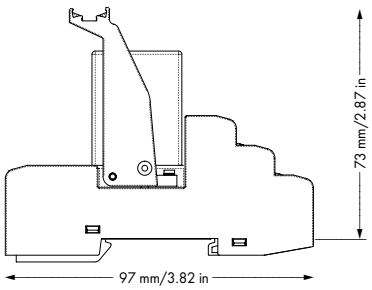
Relay Module
858 Series

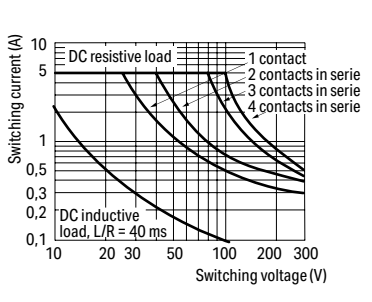
1



Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	75 mA	858-303	5
24 VDC	36.9 mA	858-304	5
48 VDC	18.5 mA	858-305	5
110 VDC	10 mA	858-307	5
220 VDC	4.1 mA	858-308	5



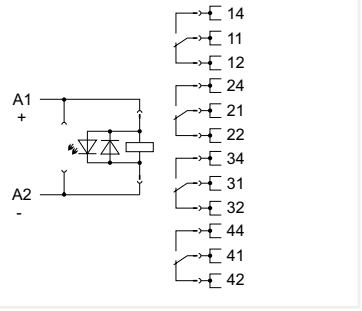


DC Load Limit Curve

Control Circuit	
Input voltage range	−20 … +10 %
Load Circuit	
Number of changeover/switchover contacts	4
Contact material	AgCe
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Fine-stranded conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Note (conductor cross section)	2 x 0.34 … 2 x 1.5 mm² / 1 x 2.5 mm² / 2 x 22 … 2 x 16 AWG
Physical Data	
Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	99.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +70 °C
Surrounding air temperature UL (operation at U_N)	−25 … +50 °C
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 50 °C); GL (858-304)

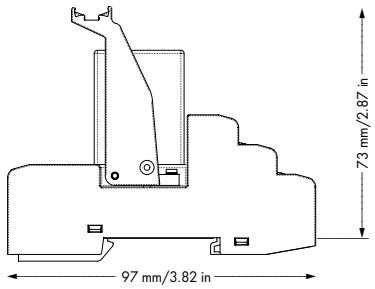
» Accessories Page 76

Relay Module
858 Series

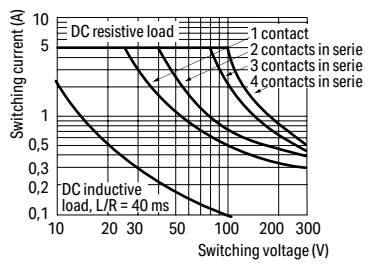


Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; with gold contacts; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	36.9 mA	858-314	5



Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



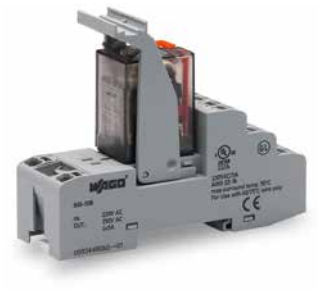
DC Load Limit Curve

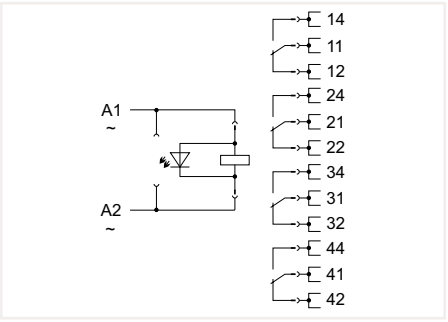
Control Circuit	
Input voltage range	−20 … +10 %
Load Circuit	
Number of changeover/switchover contacts	4
Contact material	AgCe + Au
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	5 V / 1 mA / 50 mW
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Fine-stranded conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Note (conductor cross section)	2 x 0.34 … 2 x 1.5 mm² / 1 x 2.5 mm² / 2 x 22 … 2 x 16 AWG
Physical Data	
Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	97.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +70 °C
Surrounding air temperature UL (operation at U_N)	−25 … +50 °C
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508 (max. 50 °C)

» Accessories Page 76

Relay Module
858 Series

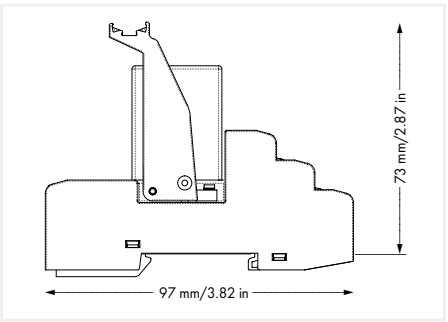
1

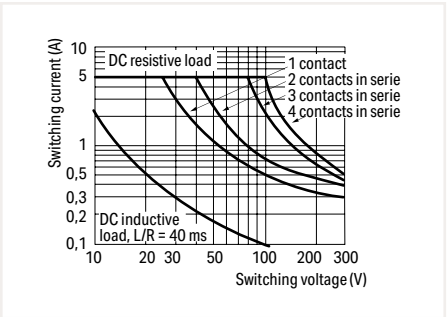




Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC	50 mA	858-504	5
115 VAC	10 mA	858-507	5
230 VAC	8.3 mA	858-508	5



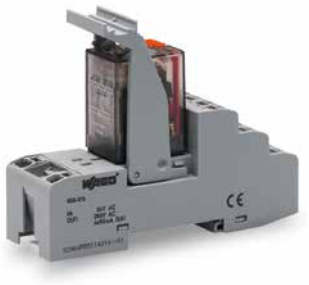


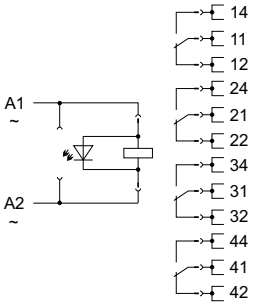
DC Load Limit Curve

Control Circuit	
Input voltage range	−20 … +10 %
Load Circuit	
Number of changeover/switchover contacts	4
Contact material	AgCe
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	35 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Fine-stranded conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Note (conductor cross section)	2 x 0.34 … 2 x 1.5 mm² / 1 x 2.5 mm² / 2 x 22 … 2 x 16 AWG
Physical Data	
Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	96.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +70 °C
Surrounding air temperature UL (operation at U_N)	−25 … +50 °C
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 50 °C)

» Accessories Page 76

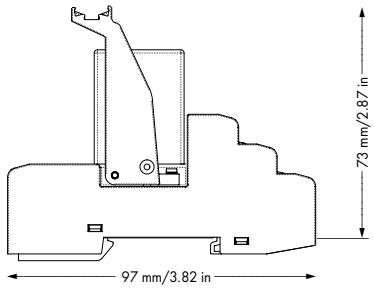
Relay Module
858 Series



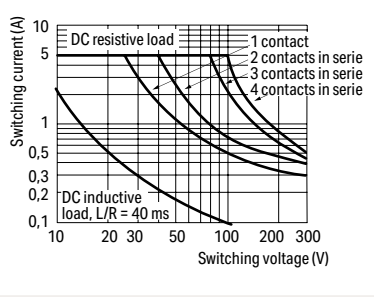


Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; with gold contacts; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC	50 mA	858-514	5
115 VAC	10 mA	858-517	5
230 VAC	8.3 mA	858-518	5



Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



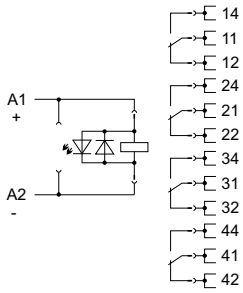
DC Load Limit Curve

Control Circuit	
Input voltage range	−20 … +10 %
Load Circuit	
Number of changeover/switchover contacts	4
Contact material	AgCe + Au
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	5 V / 1 mA / 50 mW
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	35 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Fine-stranded conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Note (conductor cross section)	2 x 0.34 … 2 x 1.5 mm² / 1 x 2.5 mm² / 2 x 22 … 2 x 16 AWG
Physical Data	
Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	95.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +70 °C
Surrounding air temperature UL (operation at U_N)	−25 … +50 °C
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 50 °C)

» Accessories Page 76

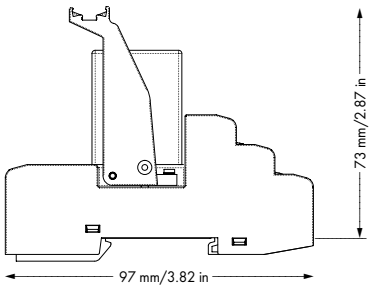
Relay Module
858 Series

1

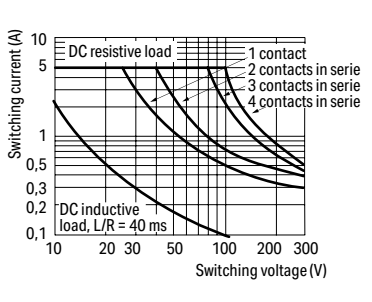


Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; manually operated; for railway applications; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	42 mA	858-354	5



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

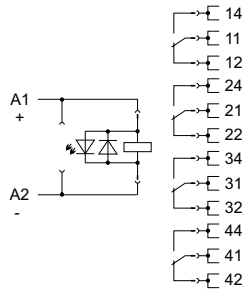


DC Load Limit Curve

Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of changeover/switchover contacts	4
Contact material	AgCe
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Fine-stranded conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Note (conductor cross section)	2 x 0.34 … 2 x 1.5 mm² / 1 x 2.5 mm² / 2 x 22 … 2 x 16 AWG
Physical Data	
Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	98.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +70 °C
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508

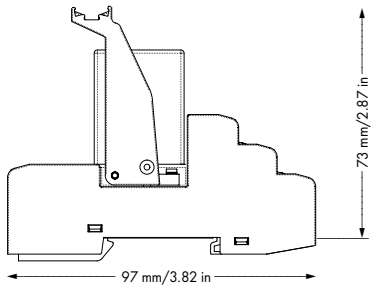
» Accessories Page 76

Relay Module
858 Series

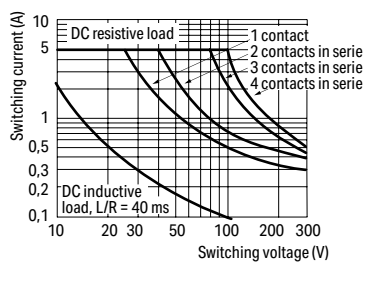


Relay Module; 4 changeover contacts; Limiting continuous current: 5 A; with gold contacts; manually operated; for railway applications; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	42 mA	858-355	5



Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.

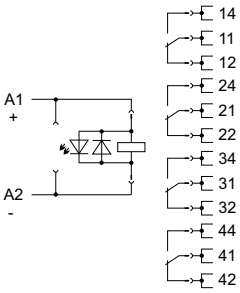


DC Load Limit Curve

Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of changeover/switchover contacts	4
Contact material	AgCe + Au
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Recommended minimum load	5 V / 1 mA / 50 mW
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Fine-stranded conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Note (conductor cross section)	2 x 0.34 … 2 x 1.5 mm² / 1 x 2.5 mm² / 2 x 22 … 2 x 16 AWG
Physical Data	
Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	101 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +70 °C
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508

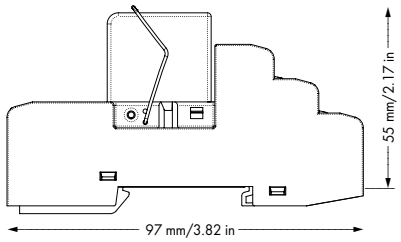
» Accessories Page 76

Relay Module
858 Series

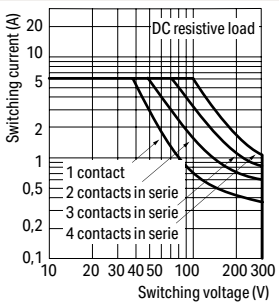


Relay Module; 4 changeover contacts; Limiting continuous current: 6 A; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	31.5 mA	858-390	5
110 VDC	7.7 mA	858-392	5
220 VDC	4.3 mA	858-391	5



Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.

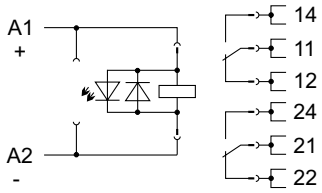


DC Load Limit Curve

Control Circuit	
Input voltage range	−10 … +30 %
Load Circuit	
Number of changeover/switchover contacts	4
Contact material	AgNi 90/10
Limiting continuous current	6 A
Inrush current (resistive) max.	12 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	18 ms
Bounce time (typ.)	8 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 60 min^{-1}
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1.2 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Fine-stranded conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Note (conductor cross section)	2 x 0.34 … 2 x 1.5 mm² / 1 x 2.5 mm² / 2 x 22 … 2 x 16 AWG
Physical Data	
Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	97 mm / 3.819 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	87.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature UL (operation at U_N)	−25 … +50 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; UL 508 (max. 50 °C)

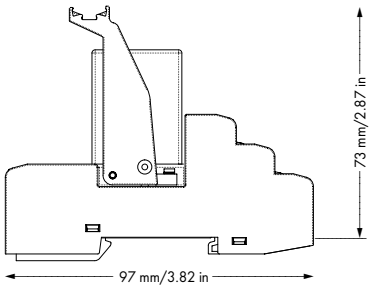
» Accessories Page 76

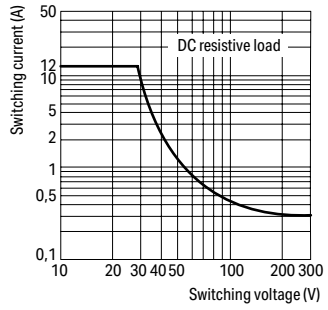
Relay Module
858 Series



Relay Module; 2 changeover contacts; Limiting continuous current: 12 A; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	37.5 mA	858-324	5
48 VDC	18.5 mA	858-325	5
110 VDC	8.1 mA	858-327	5
220 VDC	4.1 mA	858-328	5



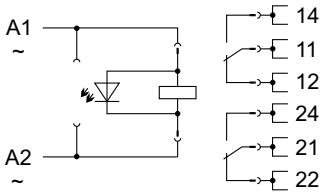


DC Load Limit Curve

Control Circuit	
Input voltage range	−20 … +10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	12 A
Inrush current (resistive) max.	24 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 240 VAC; DC 13: 0.1 A / 250 VDC
Recommended minimum load	10 V / 5 mA / 300 mW
Pull-in time (typ.)	13 ms
Drop-out time (typ.)	3 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Switching load with/without load (max.)	20 min^{-1} / 200 min^{-1}
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Fine-stranded conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Note (conductor cross section)	2 x 0.34 … 2 x 1.5 mm² / 1 x 2.5 mm² / 2 x 22 … 2 x 16 AWG
Physical Data	
Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	87.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +55 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; UL 508

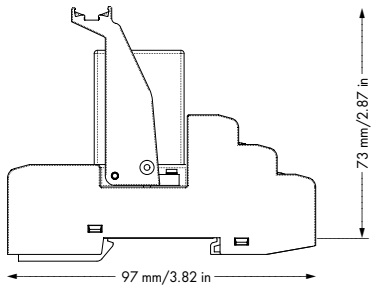
» Accessories Page 76

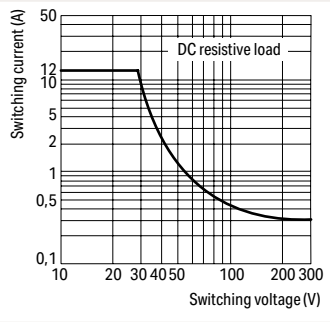
Relay Module
858 Series



Relay Module; 2 changeover contacts; Limiting continuous current: 12 A; manually operated; Status indicator: red; 31 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	11 mA	858-528	5





DC Load Limit Curve

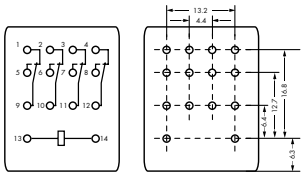
Control Circuit	
Input voltage range	−20 … +10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	12 A
Inrush current (resistive) max.	24 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Switching capacity	AC 15: 1.5 A / 240 VAC; DC 13: 0.1 A / 250 VDC
Recommended minimum load	10 V / 5 mA / 300 mW
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	8 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Switching load with/without load (max.)	20 min^{-1} / 200 min^{-1}
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Fine-stranded conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Note (conductor cross section)	2 x 0.34 … 2 x 1.5 mm² / 1 x 2.5 mm² / 2 x 22 … 2 x 16 AWG
Physical Data	
Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	73 mm / 2.874 inch
Depth	97 mm / 3.819 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	85.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +55 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; UL 508

» Accessories Page 76

Basic Relay
858 Series

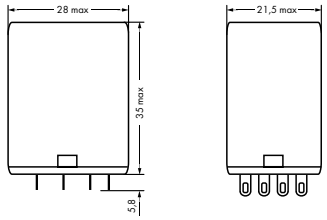
1

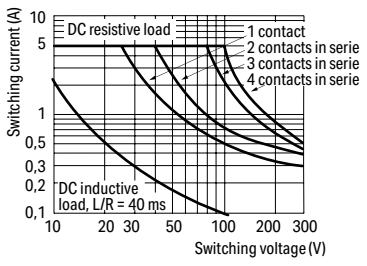
Similar to pictured device



Basic Relay; 4 changeover contacts; Limiting continuous current: 5 A; manually operated; Status indicator: red; 22 mm wide; 25 mm high

U_N	I_N	Item No.	Pack. Unit
12 VDC	75 mA	858-164	3
24 VDC	36.9 mA	858-150	3
24 VAC	50 mA	858-154	3
230 VAC	8.3 mA	858-151	3



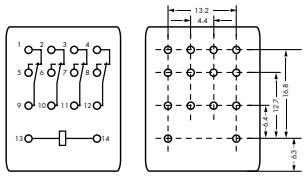


DC Load Limit Curve

Load Circuit	
Number of changeover/switchover contacts	4
Contact material	AgCe
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 100 mA
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	21.5 mm / 0.846 inch
Height from the surface	35 mm / 1.378 inch
Depth	28 mm / 1.102 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	37 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +80 °C
Standards and Specifications	
Standards/specifications	EN 61810-1

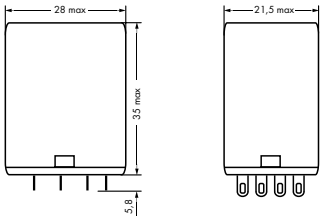
Basic Relay
858 Series

Similar to pictured device

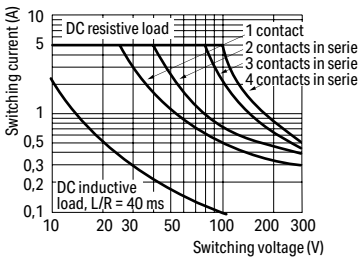


Basic Relay; 4 changeover contacts; Limiting continuous current: 5 A; with gold contacts; manually operated; Status indicator: red; 22 mm wide; 25 mm high

U_N	I_N	Item No.	Pack. Unit
24 VDC	36.9 mA	858-152	3
230 VAC	8.3 mA	858-153	3



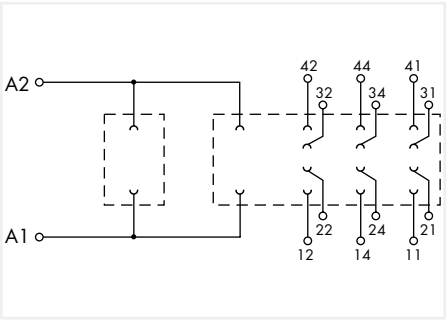
Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

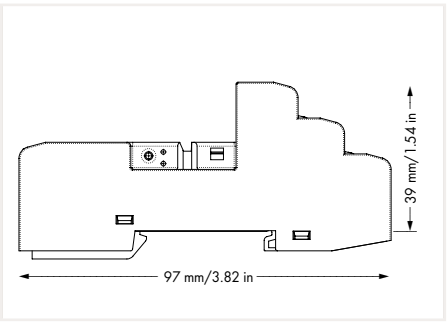
Load Circuit	
Number of changeover/switchover contacts	4
Contact material	AgCe + Au
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	5 V / 1 mA / 50 mW
Pull-in time (typ.)	25 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Signaling	
Status indicator	Red LED; mechanical
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	21.5 mm / 0.846 inch
Height from the surface	35 mm / 1.378 inch
Depth	28 mm / 1.102 inch
Mechanical Data	
Mounting type	Pluggable module
Material Data	
Weight	35 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +80 °C
Standards and Specifications	
Standards/specifications	EN 61810-1

Relay Socket
858 Series



Relay Socket; 4 changeover contacts; Limiting continuous current: 6 A; manually operated; 31 mm wide

	Item No.	Pack. Unit
	858-100	10



Control Circuit	
Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 … 250 V (depends on relay)
Load Circuit	
Limiting continuous current	12 A
Switching voltage (max.)	250 VAC
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1.5 kV_{rms} (depends on relay)
Dielectric strength, channel/channel (AC, 1 min.)	(depends on relay)
Dielectric strength, load/load circuit (AC, 1 min)	2 kV_{rms} (depends on relay)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Fine-stranded conductor	0.34 … 1.5 mm² / 22 … 16 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Note (conductor cross section)	2 x 0.34 … 2 x 1.5 mm² / 1 x 2.5 mm² / 2 x 22 … 2 x 16 AWG
Physical Data	
Width	31 mm / 1.22 inch
Height from upper-edge of DIN-rail	39 mm / 1.535 inch
Depth	97 mm / 3.819 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	56.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C (depends on relay)
Surrounding air temperature (storage)	–40 … +80 °C
Standards and Specifications	
Standards/specifications	EN 60664-1; UL 508

Accessories

Accessories for relay modules; Operation status indicator: red

U_N	Power consumption at U_N	Item No.	Pack. Unit
24 VDC	2.4 mA	788-120	50(2x25)
48 VDC	1.9 mA	788-121	50(2x25)
110 VDC	1.9 mA	788-122	50(2x25)
24 VAC	2.1 mA	788-123	50(2x25)
115 VAC	1.7 mA	788-124	50(2x25)
230 VAC	1.6 mA	788-125	50(2x25)

Holding bracket

	Item No.	Pack. Unit
	858-110	10 (1)

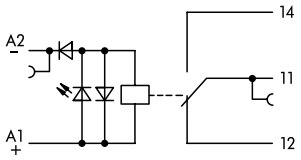
Push-in type jumper bar; for the coil side

Description	Item No.	Pack. Unit
I_N 12 A	858-402	200 (8x25)

Operating tool with a partially insulated shaft; Type 1; (2.5 x 0.4) mm blade

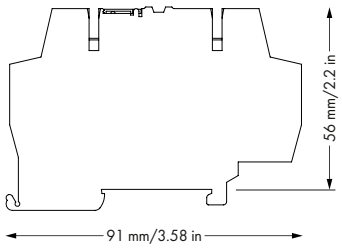
	Item No.	Pack. Unit
	210-719	50

Relay Module
859 Series

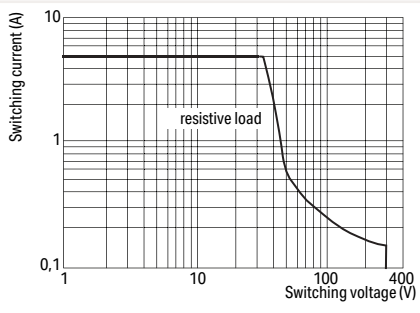


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	31 mA	859-302	10
12 VDC	17 mA	859-303	10
24 VDC	10 mA	859-304	10
48 VDC	6.5 mA	859-305	10
110 VDC	3.5 mA	859-307	10
220 VDC	3.2 mA	859-308	10



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

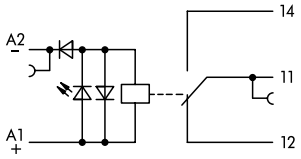


DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	5 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	22.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +50 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508

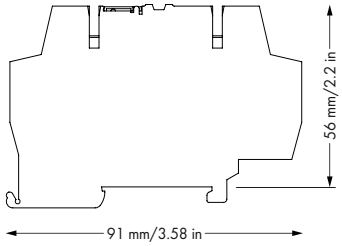
» Accessories Page 90

Relay Module
859 Series

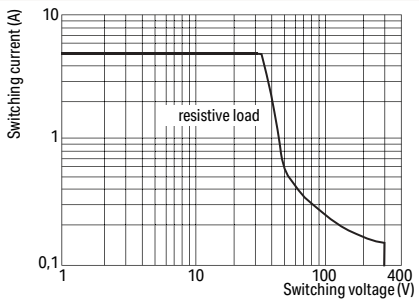


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; with gold contacts; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	31 mA	859-312	10
24 VDC	10 mA	859-314	10
220 VDC	3.2 mA	859-318	10



Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.

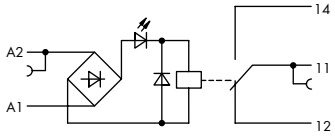


DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	22.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +50 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508

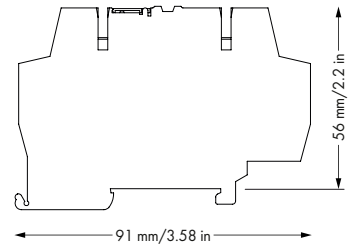
» Accessories Page 90

Relay Module
859 Series

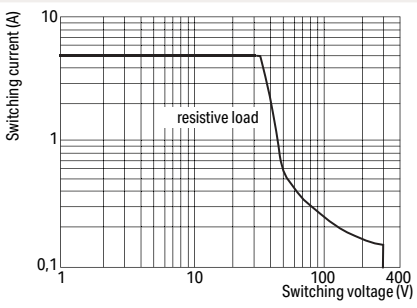


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VAC/DC	15 mA	859-353	10
24 VAC/DC	8 mA	859-354	10
48 VAC/DC	5.3 mA	859-355	10
115 VAC/DC	3.5 mA	859-357	10
230 VAC/DC	3.5 mA	859-358	10



Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

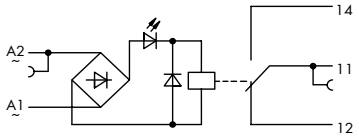


DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	5 A
Inrush current (resistive) max.	20 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	22.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +50 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508

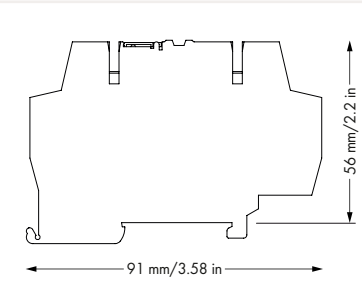
» Accessories Page 90

Relay Module
859 Series

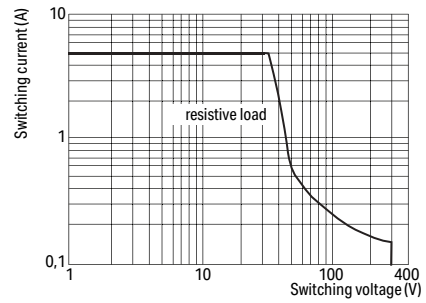


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; with gold contacts; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC/DC	3.5 mA	859-360	10
230 VAC/DC	3.5 mA	859-359	10



Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



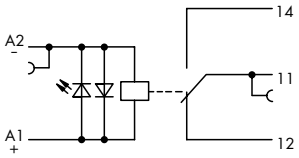
DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	5 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	30 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	25.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +50 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508

» Accessories Page 90

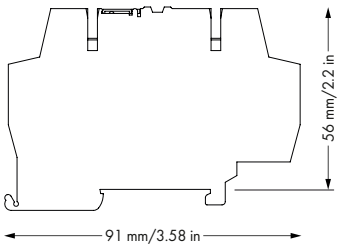
Relay Module
859 Series

1

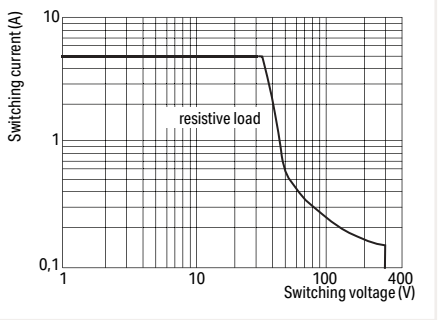


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	12 mA	859-390	10

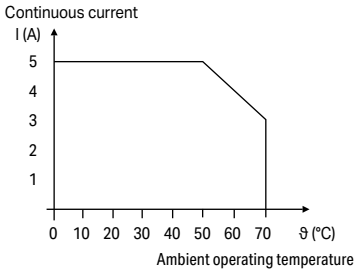


Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

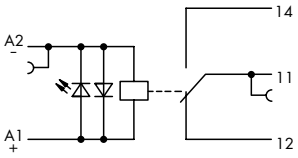
Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	22.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508



Current-Carrying Capacity Curve

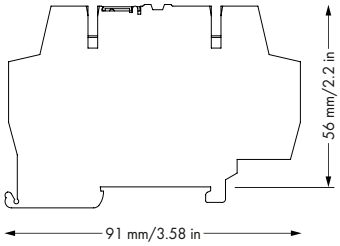
» Accessories Page 90

Relay Module
859 Series

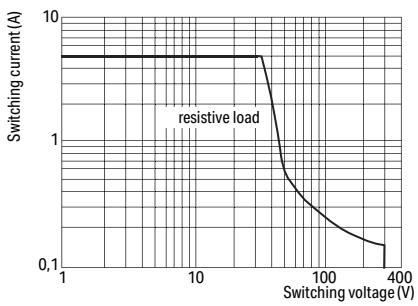


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; with gold contacts; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	10 mA	859-392	10
36 VDC	10.1 mA	859-386	10
110 VDC	3.1 mA	859-317	10

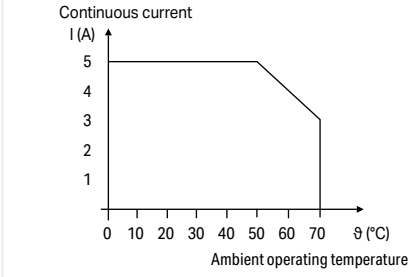


Note:
To prevent damaging the gold layer, 30 VDC switching voltages and 50 mA currents must not be exceeded. Higher switching power eventually evaporates the gold layer. The resulting deposits in the housing may reduce service life.



DC Load Limit Curve

Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi + Au
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	22.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508

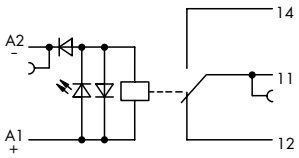


Current-Carrying Capacity Curve

» Accessories Page 90

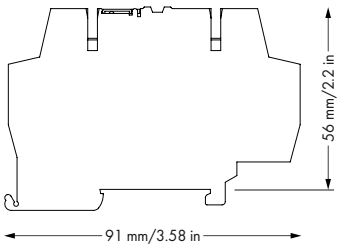
Relay Module
859 Series

1

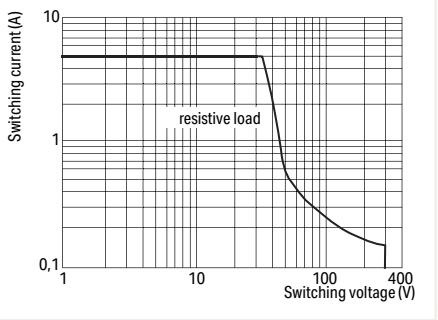


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
110 VDC	2.7 mA	859-391	10

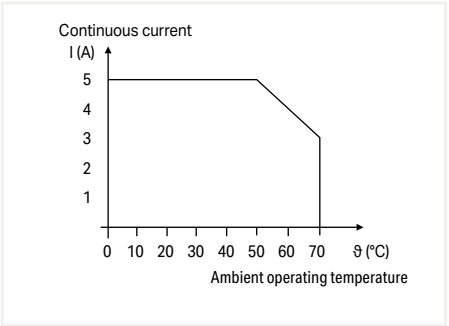


Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

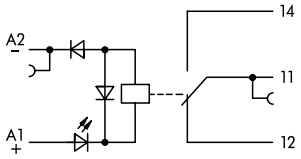
Control Circuit	
Input voltage range	±30 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	22.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508



Current-Carrying Capacity Curve

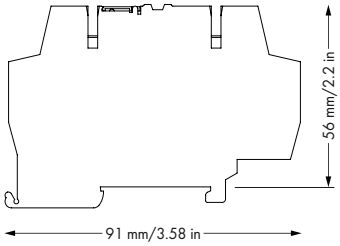
» Accessories Page 90

Relay Module
859 Series

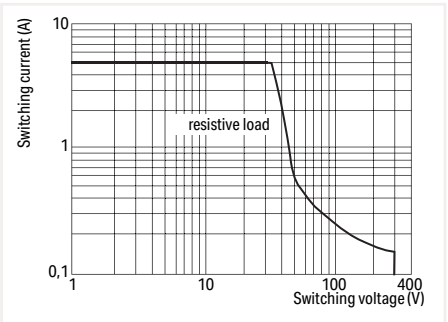


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	14.4 mA	859-398	10
48 VDC	7.9 mA	859-397	10
110 VDC	3.1 mA	859-399	10

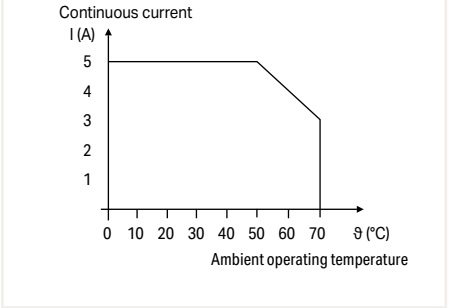


Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit	
Input voltage range	±40 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	22.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL

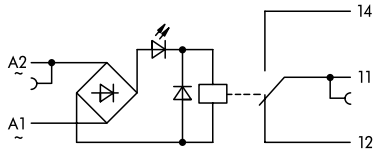


Current-Carrying Capacity Curve

» Accessories Page 90

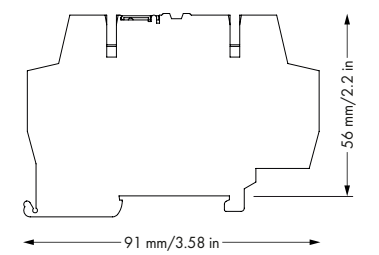
Relay Module
859 Series

1

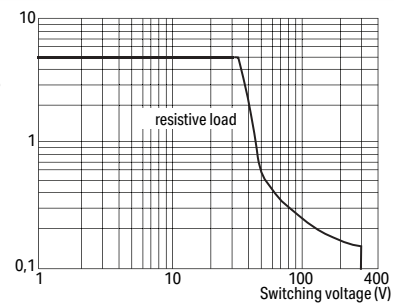


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; with defined switch-on threshold; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC	4.2 mA	859-367	10



Note
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

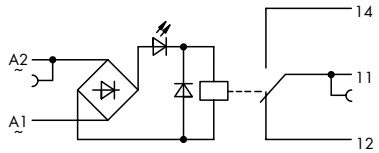


DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Switch-off threshold (relay/LED)	60 VAC / 60 VAC
Switch-on threshold (relay/LED)	95 VAC / 80 VAC
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	5 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	22.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +50 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508

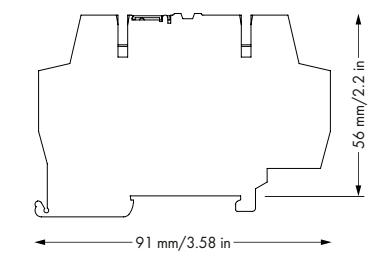
» Accessories Page 90

Relay Module
859 Series

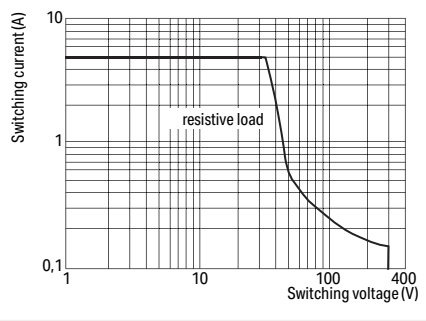


Relay Module; 1 changeover contact; Limiting continuous current: 5 A; with defined switch-on threshold; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	4.2 mA	859-368	10



Note
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Switch-off threshold (relay/LED)	140 VAC / 150 VAC
Switch-on threshold (relay/LED)	190 VAC / 165 VAC
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	5 A
Inrush current (resistive) max.	20 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	25 ms
Bounce time (typ.)	3.5 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 180 min^{-1}
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	22.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +50 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61810-1; EN 61373; GL; UL 508

» Accessories Page 90

Accessories

Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

	Item No.	Pack. Unit
	210-720	50

End and intermediate plate; 1 mm thick

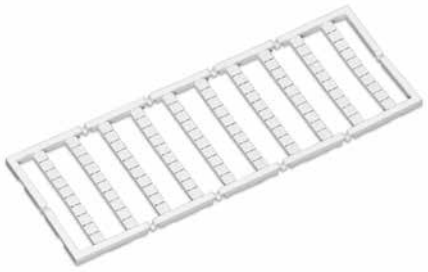
	Item No.	Pack. Unit
	859-525	100

Test pin; 1 mm Ø; with solder connection for test cable

	Item No.	Pack. Unit
	859-500	100

Accessories

Push-in type jumper bar; light gray; insulated; 18 A		
Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)
3-way	859-403	200 (8x25)
4-way	859-404	200 (8x25)
5-way	859-405	200 (8x25)
6-way	859-406	100 (4x25)
7-way	859-407	100 (4x25)
8-way	859-408	100 (4x25)
9-way	859-409	100 (4x25)
10-way	859-410	100 (4x25)
Item no. suffixes for colored push-in type jumper bars		
yellow	.../000-029	
red	.../000-005	
blue	.../000-006	



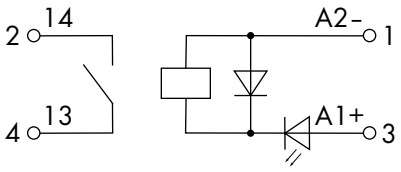
Mini-WSB marker card; Marker width: 5 mm; 10 strips with 10 markers/card		
Marking	Item No.	Pack. Unit
plain	248-501	50
1 ... 10 (10 x)	248-502	50
11 ... 20 (10 x)	248-503	50
21 ... 30 (10 x)	248-504	50
31 ... 40 (10 x)	248-505	50
41 ... 50 (10 x)	248-506	50
1 ... 50 (2 x)	248-566	50
K1 ... K10	248-450	50
K11 ... K20	248-451	50
K100	248-452	50
U1 ... U10	248-453	50
U11 ... U20	248-454	50
U100	248-455	50

Mini-WSB Inline; for terminal block width: 5 ... 5.2 mm; plain; 1700 markers/reel; white		
Marking	Item No.	Pack. Unit
plain	2009-145	1

Relay Module
2042 Series

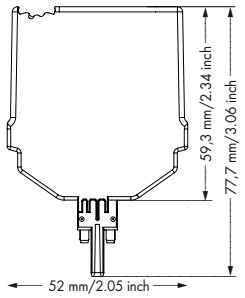
1

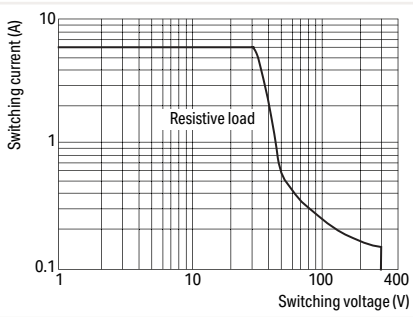
Similar to picture



Relay Module; Relay with 1 make contact; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	6.6 mA	2042-3004	6





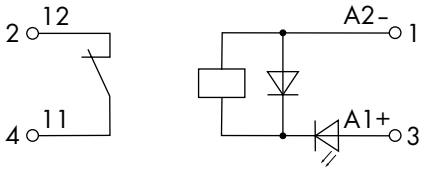
DC Load Limit Curve

Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Switching capacity	AC-15: 3 A / AC 250 V; DC-13: 2 A / DC 24 V
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	20.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

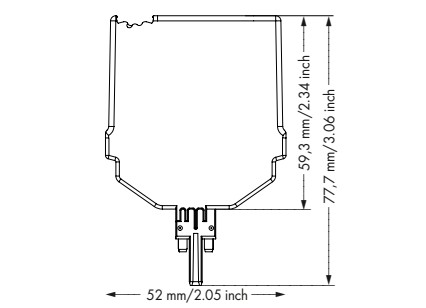
Relay Module
2042 Series

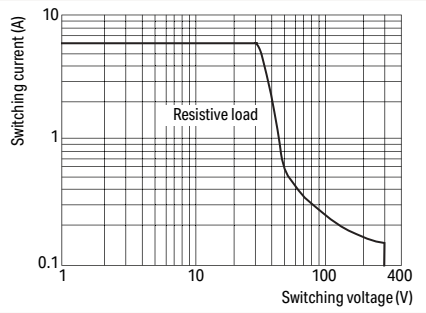
Similar to picture



Relay Module; Relay with 1 break contact; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	6.4 mA	2042-3054	6





DC Load Limit Curve

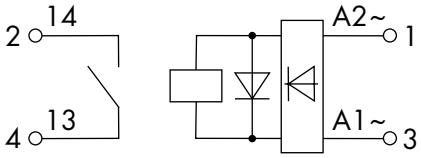
Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of break contacts/switch-off contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Mechanical life	5 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	67.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

Relay Module
2042 Series

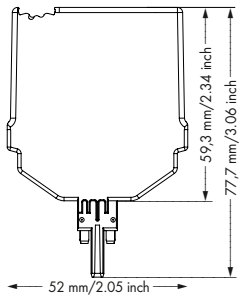
1

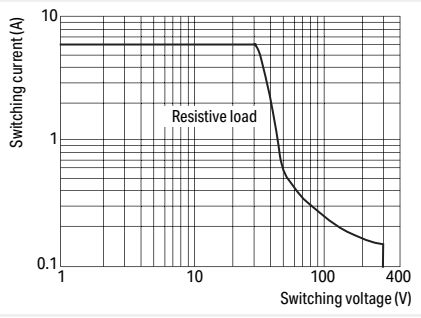
Similar to picture



Relay Module; Relay with 1 make contact; 24 … 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 … 230 V AC/DC	26.3 … 1.7 mA	2042-3809	6





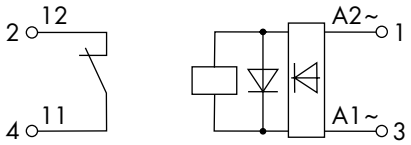
DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	3 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	750 VA (AC); DC see load limit curve
Switching capacity	AC-15: 3 A / AC 250 V; DC-13: 2 A / DC 24 V
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	69.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

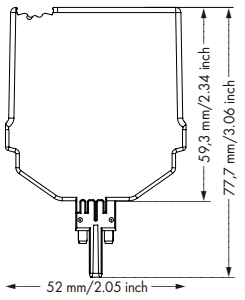
Relay Module
2042 Series

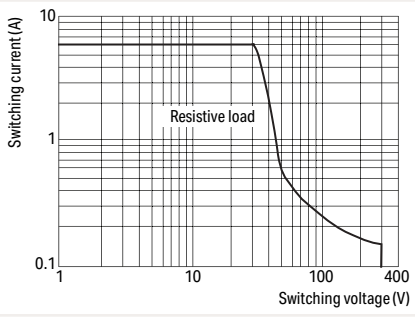
Similar to picture



Relay Module; Relay with 1 break contact; 24 … 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 … 230 V AC/DC	26.3 … 1.7 mA	**2042-3859**	6





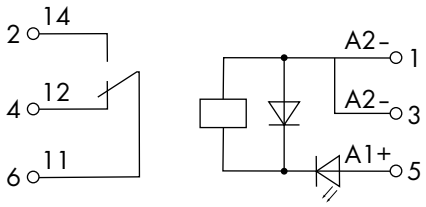
DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of break contacts/switch-off contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC); DC see load limit curve
Recommended minimum load	10 V / 10 mA; 24 V / 1 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	4 ms
Mechanical life	5 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	69.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

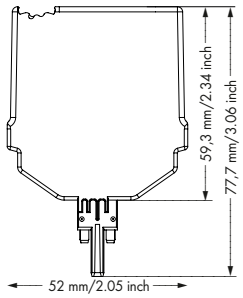
Relay Module
2042 Series

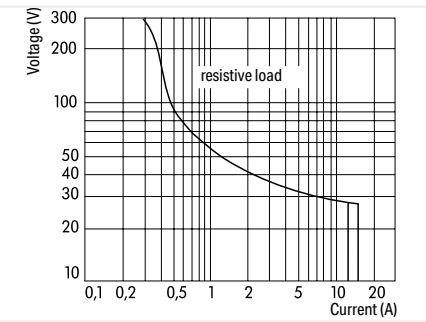
1



Relay Module; Relay with 1 changeover contact; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	13.7 mA	2042-3034	4



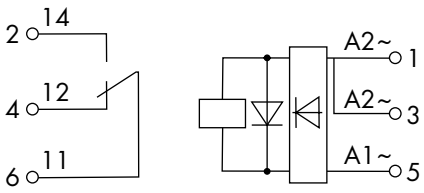


DC Load Limit Curve

Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	10 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2500 VA (AC); DC see load limit curve
Switching capacity	AC-15: 6 A / AC 250 V; DC-13: 2 A / DC 24 V
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	15.5 mm / 0.61 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	33.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

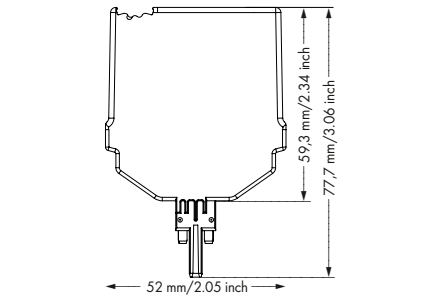
» Accessories Page 110

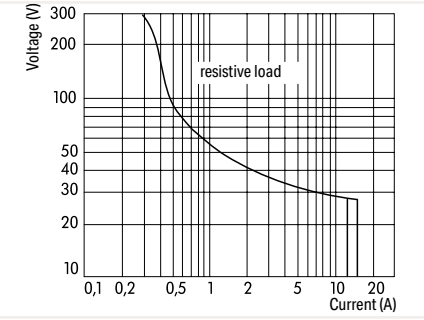
Relay Module
2042 Series



Relay Module; Relay with 1 changeover contact; 24 … 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 … 230 V AC/DC	50.2 … 6 mA	2042-3839	4





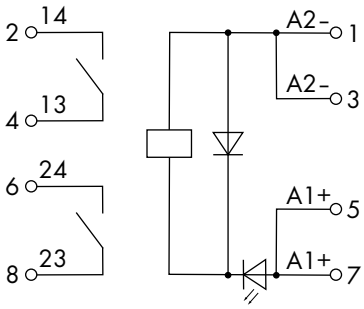
DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	4 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Switching capacity	AC-15: 6 A / AC 250 V; DC-13: 2 A / DC 24 V
Recommended minimum load	5 V / 100 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	15.5 mm / 0.61 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	36.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

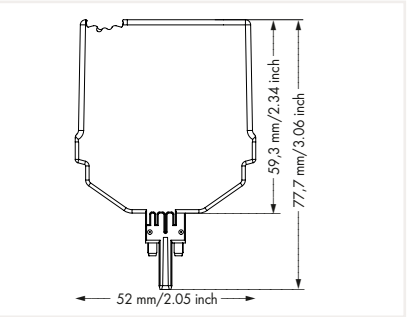
Relay Module
2042 Series

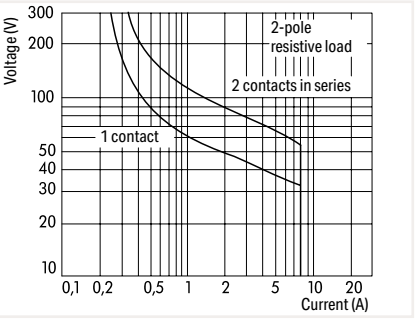
1



Relay Module; Relay with 2 make contacts; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	13.8 mA	2042-3014	4



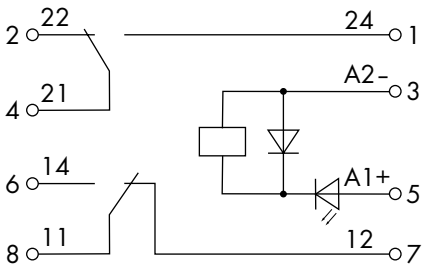


DC Load Limit Curve

Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of make contacts/switch-on contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	36.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

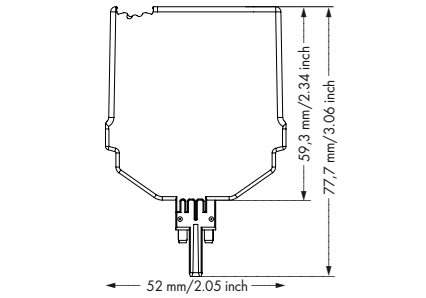
» Accessories Page 110

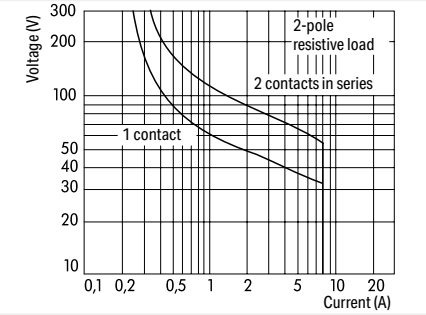
Relay Module
2042 Series



Relay Module; Relay with 2 changeover contacts; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	13.8 mA	2042-3044	4





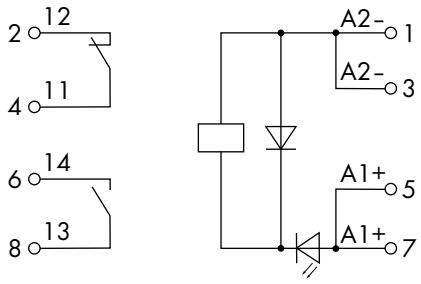
DC Load Limit Curve

Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	37 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

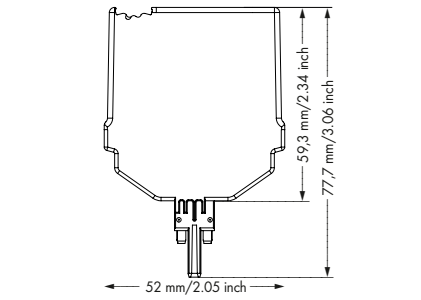
Relay Module
2042 Series

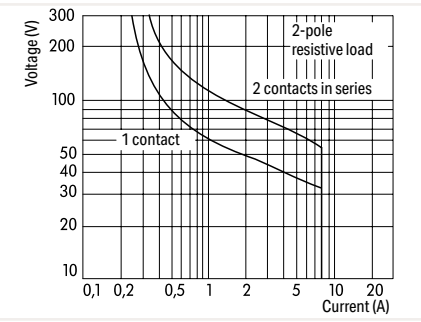
1



Relay Module; Relay with 1 break contact and 1 make contact; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	13.8 mA	2042-3064	4



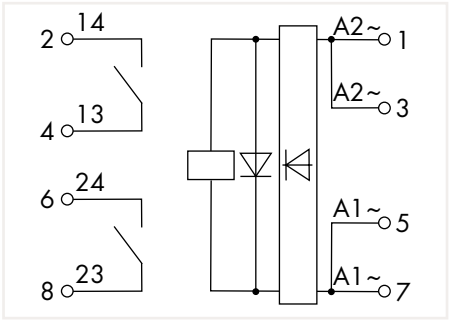


DC Load Limit Curve

Control Circuit	
Input voltage range	–30 … +25 %
Load Circuit	
Number of break contacts/switch-off contacts	1
Number of make contacts/switch-on contacts	1
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	37.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +85 °C
Processing temperature	–25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

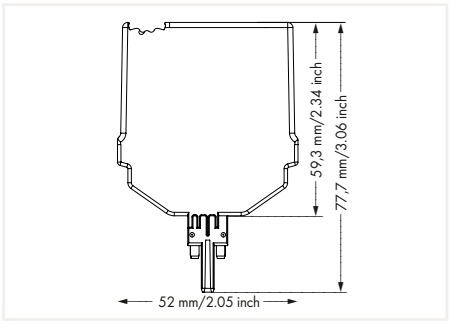
» Accessories Page 110

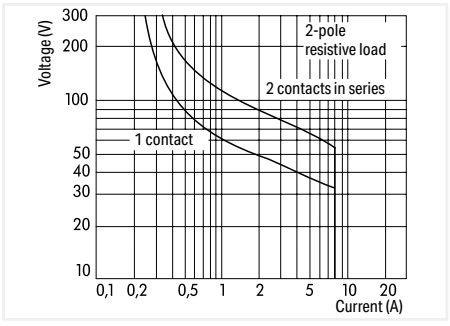
Relay Module
2042 Series



Relay Module; Relay with 2 make contacts; 24 … 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 … 230 V AC/DC	49.1 … 2.9 mA	2042-3819	4





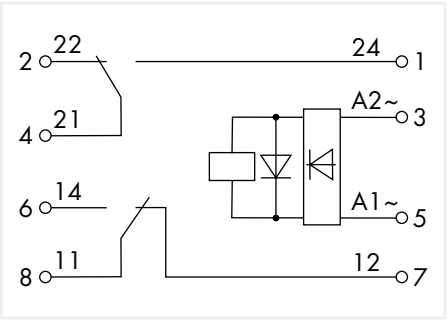
DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of make contacts/switch-on contacts	2
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	40.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

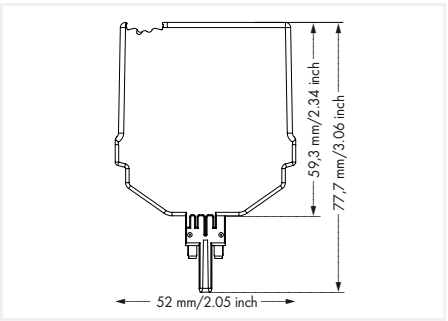
Relay Module
2042 Series

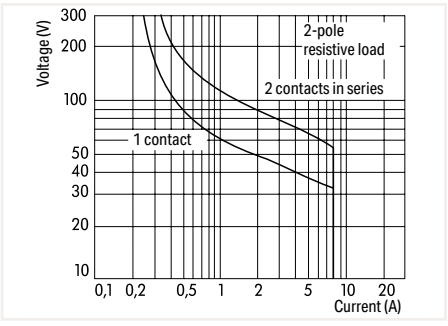
1



Relay Module; Relay with 2 changeover contacts; 24 … 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 … 230 V AC/DC	49.1 … 2.8 mA	2042-3849	4



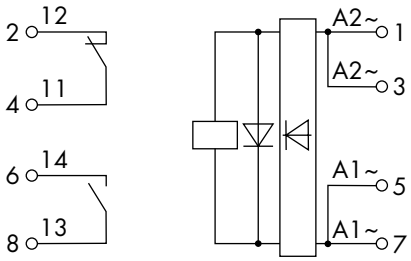


DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	51.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

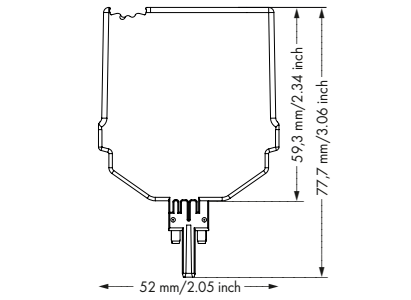
» Accessories Page 110

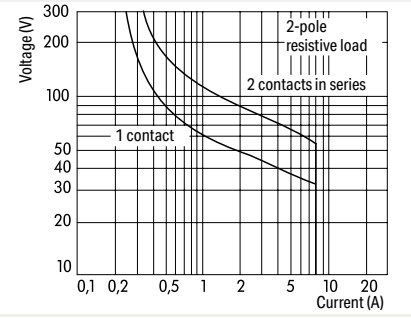
Relay Module
2042 Series



Relay Module; Relay with 1 break contact and 1 make contact; 24 … 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 … 230 V AC/DC	49.1 … 2.8 mA	**2042-3869**	4





DC Load Limit Curve

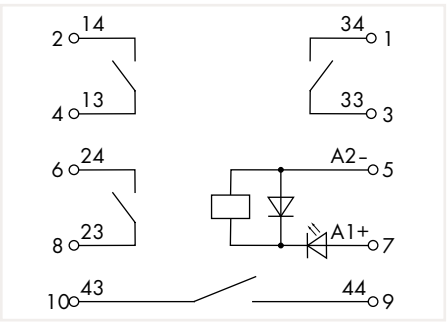
Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of break contacts/switch-off contacts	1
Number of make contacts/switch-on contacts	1
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	20.7 mm / 0.815 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	39.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

Relay Module
2042 Series

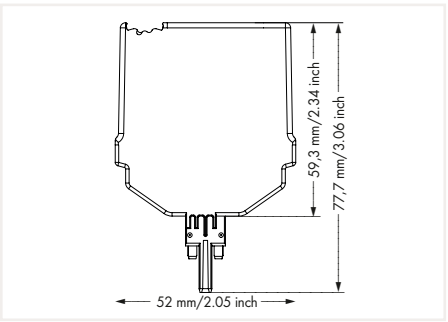
1

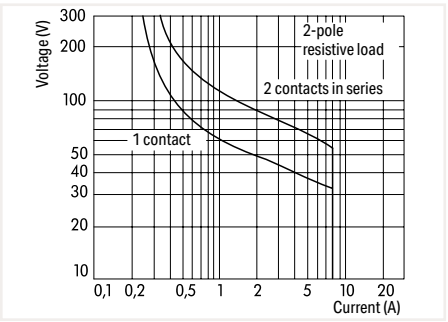
Similar to picture



Relay Module; Relay with 4 make contacts; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	28.1 mA	2042-3024	5



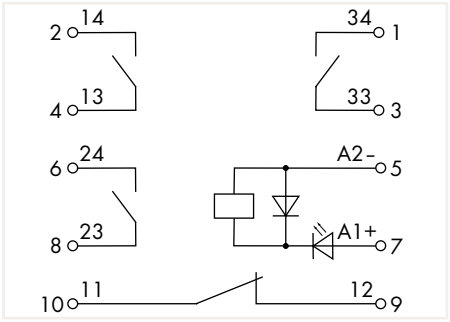


DC Load Limit Curve

Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of make contacts/switch-on contacts	4
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	70.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

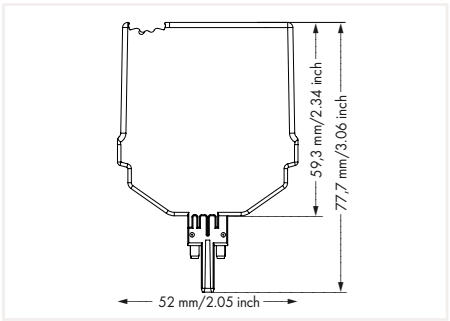
» Accessories Page 110

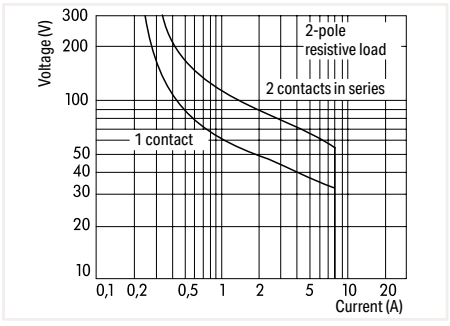
Relay Module
2042 Series



Relay Module; Relay with 3 make contacts and 1 break contact; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	27.4 mA	2042-3074	5





DC Load Limit Curve

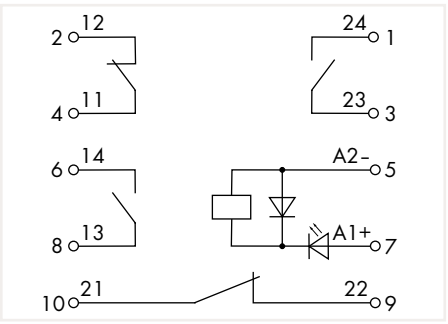
Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of break contacts/switch-off contacts	1
Number of make contacts/switch-on contacts	3
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	58.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

Relay Module
2042 Series

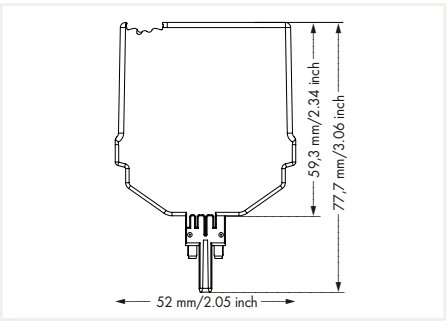
1

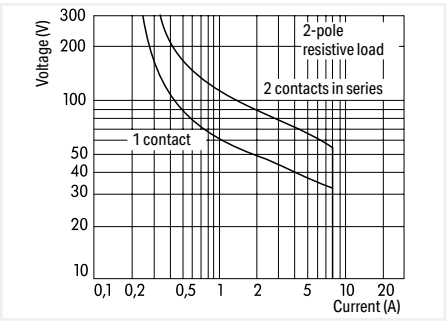
Similar to picture



Relay Module; Relay with 2 break contacts and 2 make contacts; 24 VDC; for railway applications; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 VDC	28.1 mA	2042-3084	5





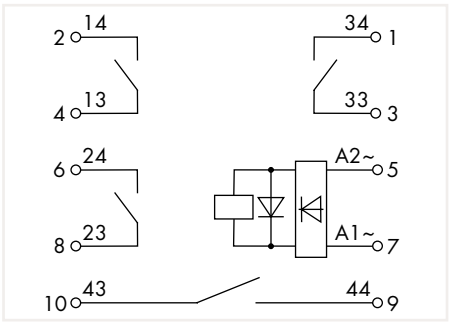
DC Load Limit Curve

Control Circuit	
Input voltage range	−30 … +25 %
Load Circuit	
Number of break contacts/switch-off contacts	2
Number of make contacts/switch-on contacts	2
Contact material	AgNi
Limiting continuous current	5 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	71.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

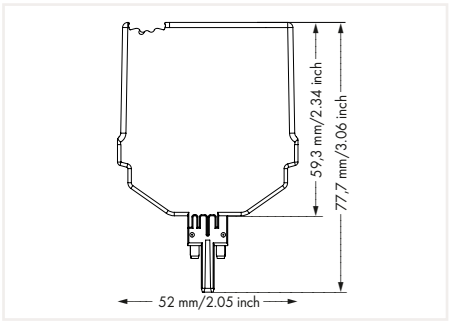
Relay Module
2042 Series

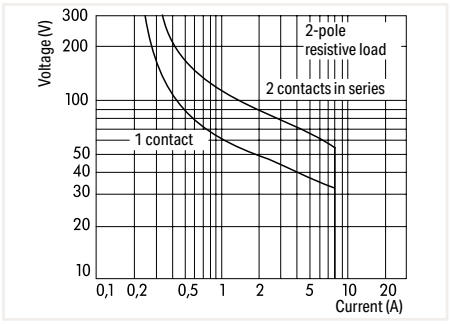
Similar to picture



Relay Module; Relay with 4 make contacts; 24 … 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 … 230 V AC/DC	58.4 … 6 mA	2042-3829	5





DC Load Limit Curve

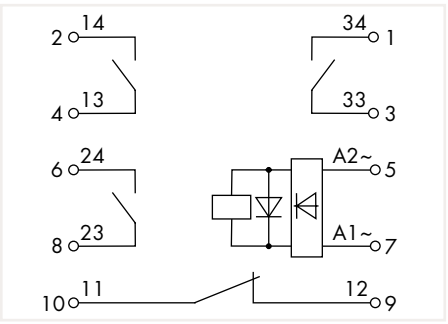
Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of make contacts/switch-on contacts	4
Contact material	AgNi
Limiting continuous current	3 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	750 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	59.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +50 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

Relay Module
2042 Series

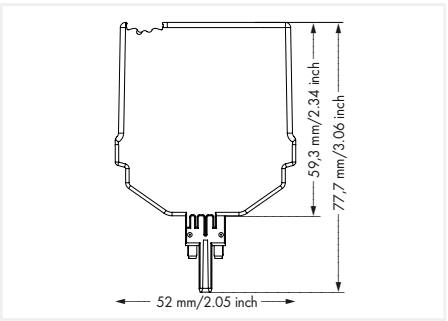
1

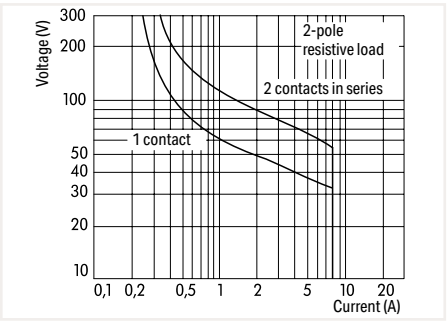
Similar to picture



Relay Module; Relay with 3 make contacts and 1 break contact; 24 … 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 … 230 V AC/DC	58.4 … 6 mA	2042-3879	5





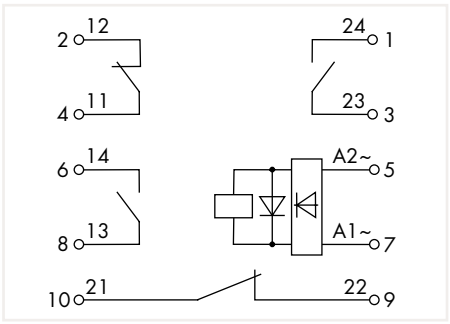
DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of break contacts/switch-off contacts	1
Number of make contacts/switch-on contacts	3
Contact material	AgNi
Limiting continuous current	3 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	750 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	59.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +50 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

» Accessories Page 110

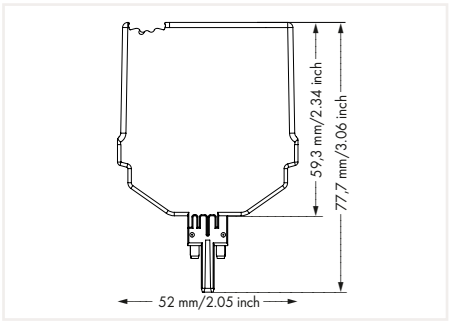
Relay Module
2042 Series

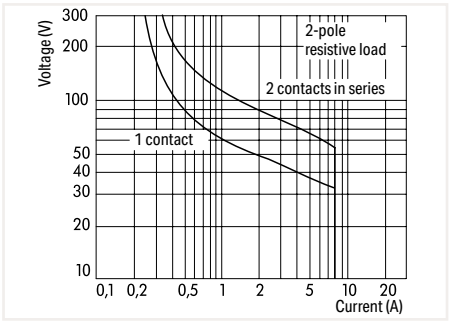
Similar to picture



Relay Module; Relay with 2 break contacts and 2 make contacts; 24 … 230 VAC/DC; Status indicator: green

U_N	I_N	Item No.	Pack. Unit
24 … 230 V AC/DC	58.4 … 6 mA	**2042-3889**	5





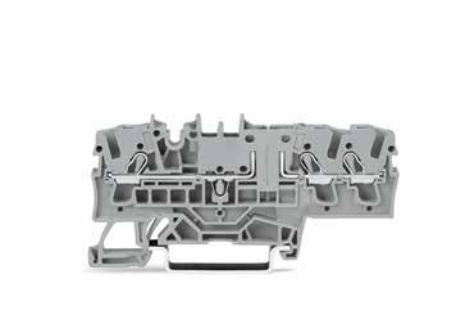
DC Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of break contacts/switch-off contacts	2
Number of make contacts/switch-on contacts	2
Contact material	AgNi
Limiting continuous current	3 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	750 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	250 V
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	25.9 mm / 1.02 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	59,2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +50 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2

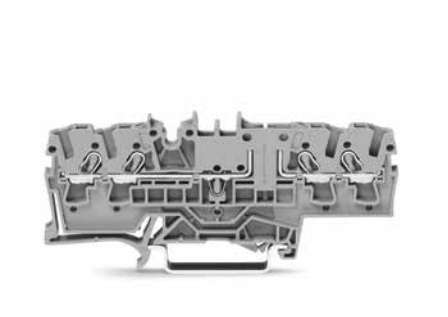
» Accessories Page 110

Accessories

2-conductor carrier terminal block; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²; Push-in CAGE CLAMP®		
Color	Item No.	Pack. Unit
gray	2002-1661	50



3-conductor carrier terminal block; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²; Push-in CAGE CLAMP®		
Color	Item No.	Pack. Unit
gray	2002-1761	50



4-conductor carrier terminal block; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²; Push-in CAGE CLAMP®		
Color	Item No.	Pack. Unit
gray	2002-1861	50

End and intermediate plate; 1 mm thick		
Color	Item No.	Pack. Unit
orange	2002-1692	
gray	2002-1691	

End and intermediate plate; 1 mm thick		
Color	Item No.	Pack. Unit
orange	2002-1792	
gray	2002-1791	

End and intermediate plate; 1 mm thick		
Color	Item No.	Pack. Unit
orange	2002-1892	
gray	2002-1891	

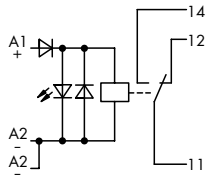
Accessories

2-conductor carrier terminal block; with additional slot for adjacent jumper, for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²; Push-in CAGE CLAMP®		
Color	**Item No.**	Pack. Unit
gray	**2002-1961**	50

End and intermediate plate; 1 mm thick		
Color	**Item No.**	Pack. Unit
orange	**2002-1992**	100 (4x25)
gray	**2002-1991**	100 (4x25)

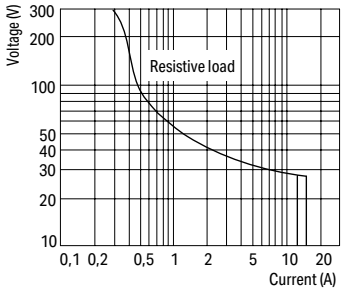
Relay Module
789 Series

1



Relay Module; 1 changeover contact; Limiting continuous current: 12 A; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-304	10

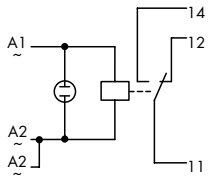


DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	12 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	6 ms
Mechanical life	3 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	50.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

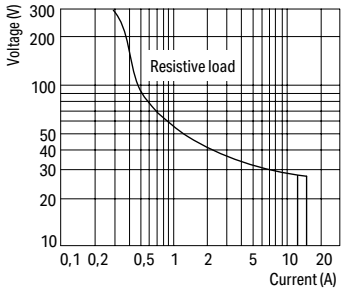
» Accessories Page 128

Relay Module
789 Series



Relay Module; 1 changeover contact; Limiting continuous current: 12 A; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	4.2 mA	789-508	10



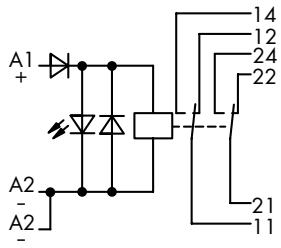
DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	12 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	15 ms
Bounce time (typ.)	3 ms
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	red
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	49.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

» Accessories Page 128

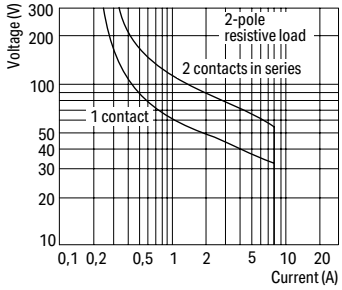
Relay Module
789 Series

1



Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	21 mA	789-312	10



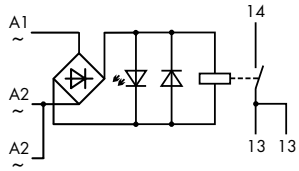
DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi 90/10
Limiting continuous current	8 A
Inrush current (resistive) max.	15 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	6 ms
Mechanical life	30 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	55 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201

» Accessories Page 128

Relay Module
789 Series

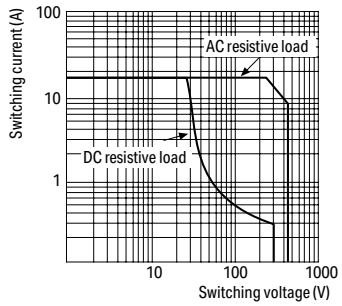
Similar to pictured device



Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	32 mA	789-520	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



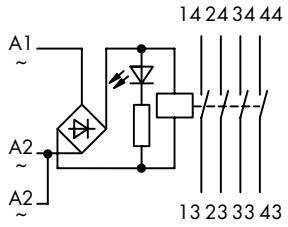
Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 %
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	16 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	53.8 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1, EN 61810-1

» Accessories Page 128

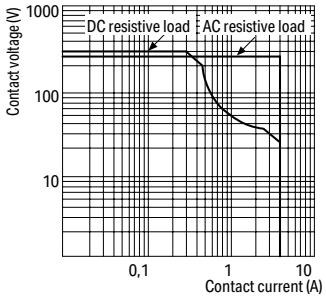
Relay Module
789 Series

1



Relay Module; 4 make contacts; Limiting continuous current: 4 A; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	12 mA	789-552	10

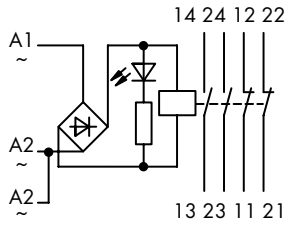


Load Limit Curve

Control Circuit	
Input voltage range	−15 … +10 %
Load Circuit	
Number of make contacts/switch-on contacts	4
Contact material	AgNi + Au
Limiting continuous current	4 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Recommended minimum load	0.1 V / 0.1 mA
Pull-in time (typ.)	20 ms
Drop-out time (typ.)	20 ms
Bounce time (typ.)	1 ms
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	230 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	0.75 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	51.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1, EN 61810-1

» Accessories Page 128

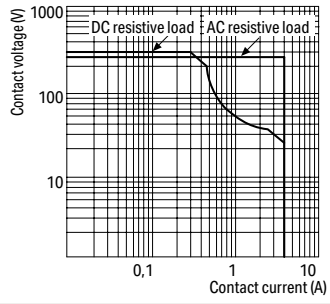
Relay Module
789 Series



Relay Module; 2 make contacts and 2 break contacts; Limiting continuous current: 4 A; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	12 mA	789-536	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

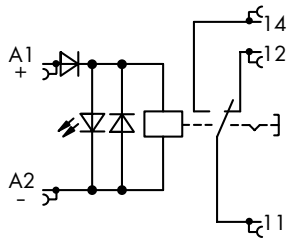
Control Circuit	
Input voltage range	−15 … +10 %
Load Circuit	
Number of break contacts/switch-off contacts	2
Number of make contacts/switch-on contacts	2
Contact material	AgNi + Au
Limiting continuous current	4 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1000 VA (AC); DC see load limit curve
Recommended minimum load	0.1 V / 0.1 mA
Pull-in time (typ.)	20 ms
Drop-out time (typ.)	20 ms
Bounce time (typ.)	1 ms
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	230 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	0.75 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	50.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1, EN 61810-1

» Accessories Page 128

Relay Module
789 Series

1

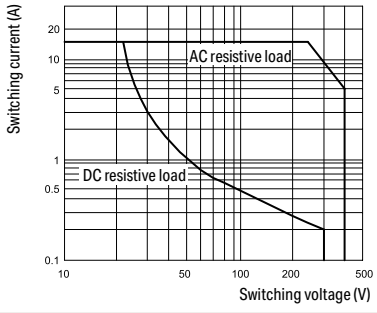
Similar to pictured device



Relay Module; 1 changeover contact; Limiting continuous current: 12 A; manually operated; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	17 mA	**789-1341**	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



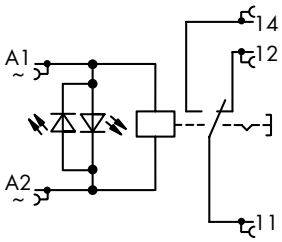
Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	12 A
Inrush current (resistive) max.	24 A (AC) / 4 s; 30 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	6 ms
Mechanical life	5 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	50.8 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +50 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

» Accessories Page 128

Relay Module
789 Series

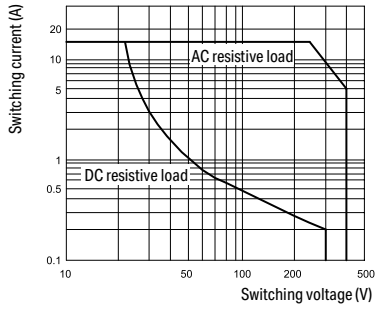
Similar to pictured device



Relay Module; 1 changeover contact; Limiting continuous current: 12 A; manually operated; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	3.5 mA	789-1544	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



Load Limit Curve

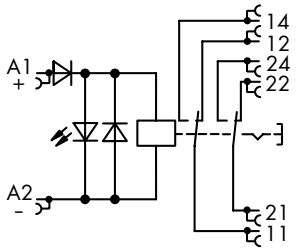
Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi
Limiting continuous current	12 A
Inrush current (resistive) max.	24 A (AC) / 4 s; 30 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	6 ms
Mechanical life	5 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	50.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +50 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

» Accessories Page 128

Relay Module
789 Series

1

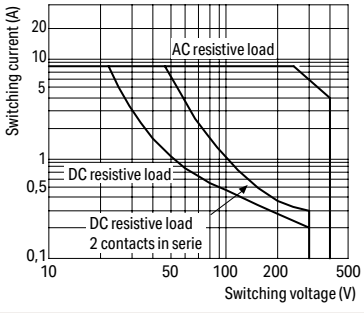
Similar to pictured device



Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; manually operated; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	17 mA	789-1346	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



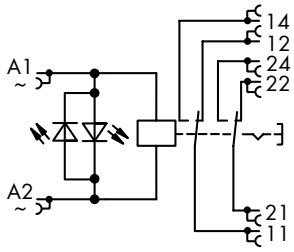
Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	12 A (AC) / 4 s; 16 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Mechanical life	5 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (load/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	57.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +50 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61010-2-201

» Accessories Page 128

Relay Module
789 Series

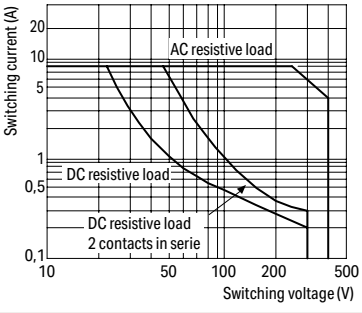
Similar to pictured device



Relay Module; 2 changeover contacts; Limiting continuous current: 8 A; manually operated; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	3.5 mA	789-1549	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



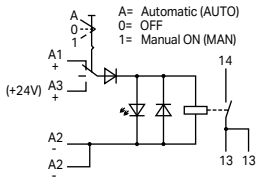
Load Limit Curve

Control Circuit	
Input voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi
Limiting continuous current	8 A
Inrush current (resistive) max.	12 A (AC) / 4 s; 16 A / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	2000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	8 ms
Bounce time (typ.)	7 ms
Mechanical life	5 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	59.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +50 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

» Accessories Page 128

Relay Module
789 Series

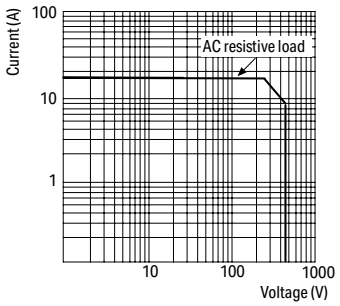
1



Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Manual/OFF/Auto switch; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-323	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

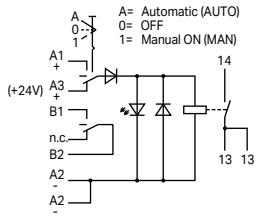


Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 %
Power loss (max.) $P_{l\,(max.)}$	0.7 W
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	16 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	54.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ ($T_{surrounding\ air}$ + 30 K)
Relative humidity	75% (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201

» Accessories Page 128

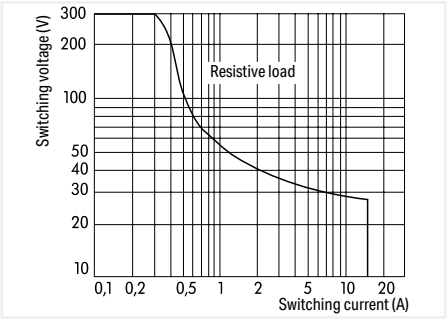
Relay Module
789 Series



Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Manual/0FF/Auto switch; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-324	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



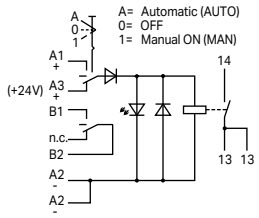
DC Load Limit Curve

Control Circuit	
Input voltage range	−10 … +20 %
Power loss (max.) $P_{l\,(max.)}$	0.7 W
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$, W pre-make contact
Limiting continuous current	16 A
Inrush current (resistive) max.	165 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	5 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	5 x 10^3 switching operations
Mechanical life	5 x 10^6 switching operations
Signal Contact	
Switching voltage (signal contact) (max.)	AC 30 V / DC 60 V
Limiting continuous current (signal contact)	4 A
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (load circuit/monitoring contact)	Reinforced insulation (safe isolation)
Insulation type (control circuit / signaling contact)	Basic insulation (Working voltage: 100 V); Overvoltage category II
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	60.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ ($T_{surrounding\ air}$ + 30 K)
Relative humidity	75% (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201

» Accessories Page 128

Relay Module
789 Series

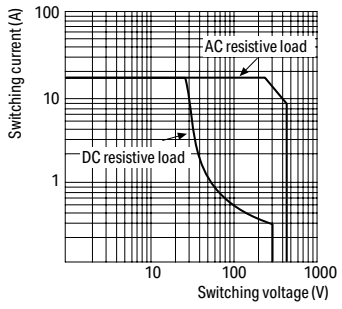
1



Relay Module; 1 make contact; Limiting continuous current: 16 A; for lamp loads; Manual/OFF/Auto switch; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-325	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

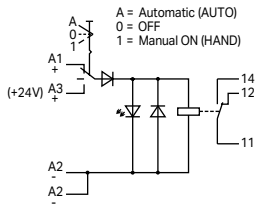


Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 %
Power loss (max.) $P_{l\,(max.)}$	0.7 W
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	16 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signal Contact	
Switching voltage (signal contact) (max.)	AC 30 V / DC 60 V
Limiting continuous current (signal contact)	4 A
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (load circuit/monitoring contact)	Reinforced insulation (safe isolation)
Insulation type (control circuit / signaling contact)	Basic insulation (Working voltage: 100 V); Overvoltage category II
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	57.8 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ ($T_{surrounding\ air}$ + 30 K)
Relative humidity	75% (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201

» Accessories Page 128

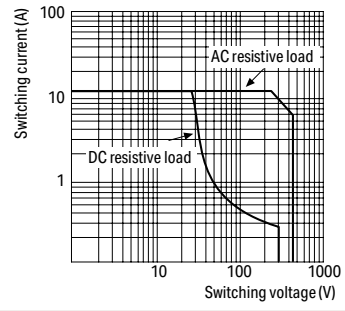
Relay Module
789 Series



Relay Module; 1 changeover contact; Limiting continuous current: 12 A; for lamp loads; Manual/0FF/Auto switch; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-326	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.



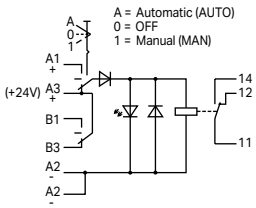
Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 %
Power loss (max.) $P_{l\,(max.)}$	0.7 W
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	12 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	55 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−20 … +40 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Temperature range of the connecting cable according to EN 61010-2-201	≥ ($T_{surrounding\ air}$ + 30 K)
Relative humidity	75% (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201

» Accessories Page 128

Relay Module
789 Series

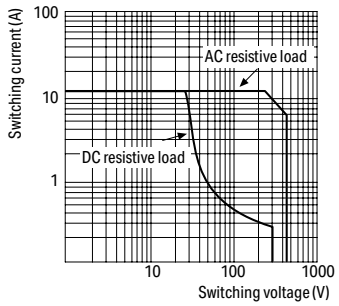
1



Relay Module; 1 changeover contact; Limiting continuous current: 12 A; for lamp loads; Manual/OFF/Auto switch; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19 mA	789-329	10

Note:
To protect the relay coils and contacts, inductive loads must be dampened with an effective protection circuit.

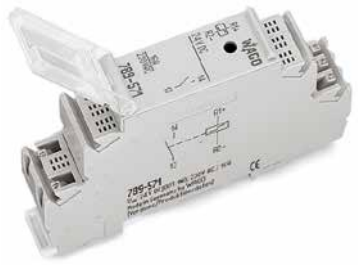


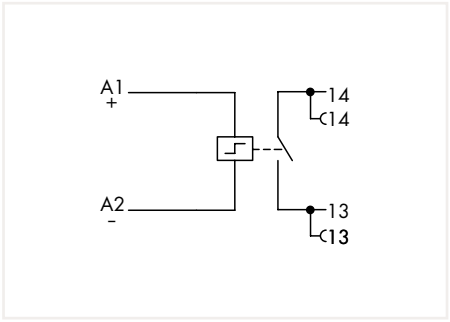
Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 %
Power loss (max.) $P_{l\,(max.)}$	0.6 W
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	12 A
Inrush current (resistive) max.	120 A (AC) / 50 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	3000 VA (AC); DC see load limit curve
Recommended minimum load	12 V / 10 mA
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	5 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (open contact)	Functional insulation
Insulation type (load circuit/monitoring contact)	Reinforced insulation (safe isolation)
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	51 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	75% (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201

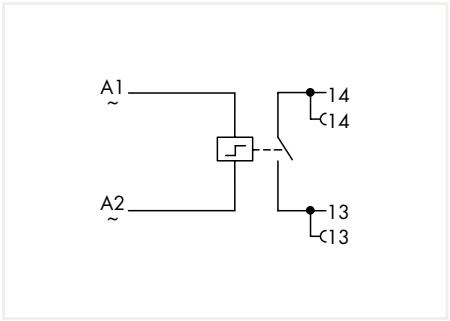
» Accessories Page 128

Latching Relay Module
789 Series





789-571



789-570

Latching Relay Module; 1 make contact; Limiting continuous current: 16 A; Status indicator: red; 18 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	42 mA	789-571	10
230 VAC	10 mA	789-570	10

Control Circuit	
Input voltage range	−15 … +10 %
Minimum pulse length (control input)	40 ms
Coil control	Pulse mode
Minimum break time	180 ms
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	16 A
Inrush current (resistive) max.	50 A (AC) / 20 ms
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)
Recommended minimum load	10 V / 10 mA
Electrical life (NO; resistive load; 23 °C)	50 x 10^3 switching operations
Mechanical life	1 x 10^6 switching operations
Switching load with/without load (max.)	6 min^{-1} / 240 min^{-1}
Cuircuit Protection	Circuit breaker max. 16 A, B characteristic
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Fine-stranded conductor	0.2 … 2.5 mm² / 24 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	17.5 mm / 0.689 inch
Height from upper-edge of DIN-rail	55 mm / 2.165 inch
Depth	90 mm / 3.543 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	58.8 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

» Accessories Page 128

Accessories

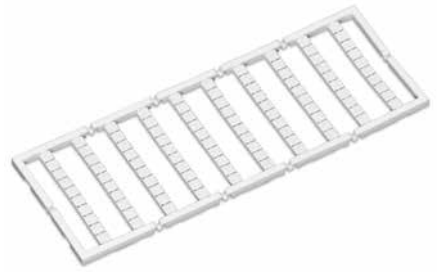
Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

	Item No.	Pack. Unit
	210-720	50

Push-in type jumper bar; 12-way; Nominal current: 16 A; uninsulated

	Item No.	Pack. Unit
	789-112	100 (4x25)

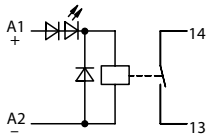
Accessories



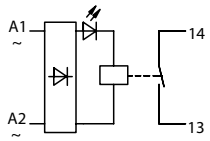
Mini-WSB marker card; Marker width: 5 mm; 10 strips with 10 markers/card		
Marking	Item No.	Pack. Unit
plain	248-501	50
1 … 10 (10 x)	248-502	50
11 … 20 (10 x)	248-503	50
21 … 30 (10 x)	248-504	50
31 … 40 (10 x)	248-505	50
41 … 50 (10 x)	248-506	50
1 … 50 (2 x)	248-566	50
K1 … K10	248-450	50
K11 … K20	248-451	50
K100	248-452	50
U1 … U10	248-453	50
U11 … U20	248-454	50
U100	248-455	50

Felt-tip pen; for permanent marking		
	Item No.	Pack. Unit
	210-110	200

Relay Module
288 Series



288-364

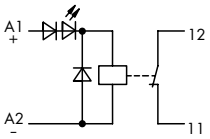


288-546; 288-567

Relay Module; 1 make contact; Limiting continuous current: 5 A; 13 mm wide			
U_N	I_N	Item No.	Pack. Unit
24 VDC	20 mA	288-364	1
24 VAC/DC	20 mA	288-564	1

Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	AgNi 0.15
Limiting continuous current	5 A
Inrush current (resistive) max.	16 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC)
Pull-in time (typ.)	4 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	200 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Safety and Protection	
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Line-to-neutral conductor voltage	AC / DC 300 V
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	13 mm / 0.512 inch
Height from upper-edge of DIN-rail	47 mm / 1.85 inch
Depth	85 mm / 3.346 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +70 °C
Processing temperature	–25 … +50 °C
Max. temperature rise of connection cable	30 K
Relative humidity	5 … 75 % (non-condensing)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201

Relay Module
288 Series



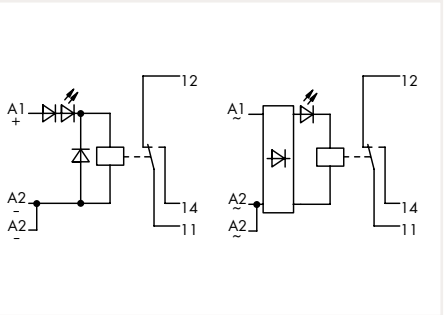
Relay Module; 1 break contact; Limiting continuous current: 5 A; 13 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	20 mA	288-368	1

Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of break contacts/switch-off contacts	1
Contact material	AgNi 0.15
Limiting continuous current	5 A
Inrush current (resistive) max.	16 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC)
Pull-in time (typ.)	4 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	200 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Safety and Protection	
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Line-to-neutral conductor voltage	AC / DC 300 V
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	13 mm / 0.512 inch
Height from upper-edge of DIN-rail	47 mm / 1.85 inch
Depth	85 mm / 3.346 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +70 °C
Processing temperature	–25 … +50 °C
Max. temperature rise of connection cable	30 K
Relative humidity	5 … 75 % (non-condensing)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201

Relay Module
288 Series

1

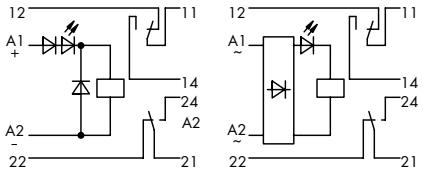


Relay Module; 1 changeover contact; Limiting continuous current: 6 A; 21 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	21.8 mA	**288-304**	1
24 VAC/DC	21.8 mA	**288-504**	1

Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	6 A
Inrush current (resistive) max.	16 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	9 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Safety and Protection	
Rated voltage	300 V
Pollution degree	2
Overvoltage category	II
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	20.5 mm / 0.807 inch
Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	85 mm / 3.346 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	45 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–40 … +80 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 75 % (non-condensing)
Standards and Specifications	
Standards/specifications	EN 61010-2-201

Relay Module
288 Series

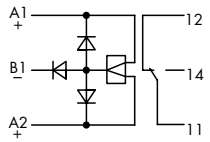


Relay Module; 2 changeover contacts; Limiting continuous current: 6 A; 23 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	21.8 mA	288-312	1
24 VAC/DC	21.8 mA	288-512	1

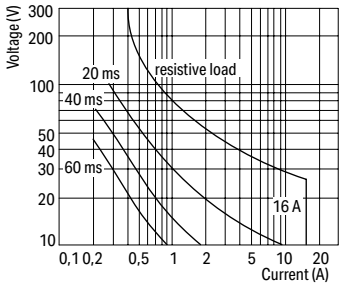
Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi 0.15
Limiting continuous current	6 A
Inrush current (resistive) max.	14 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	20 x 10^6 switching operations
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	22.5 mm / 0.886 inch
Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	85 mm / 3.346 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	50.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

Relay Module
288 Series



Relay Module; Bistable; 1 changeover contact; Limiting continuous current: 6 A; 21 mm wide

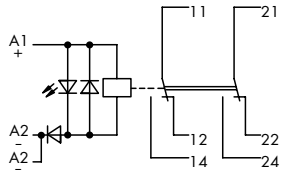
U_N	I_N	Item No.	Pack. Unit
24 VDC	41.5 mA	288-380	1



DC Load Limit Curve

Control Circuit	
Input voltage range	−15 … +20 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 0.15
Limiting continuous current	6 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	10 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	20.5 mm / 0.807 inch
Height from upper-edge of DIN-rail	48 mm / 1.89 inch
Depth	85 mm / 3.346 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	43.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−25 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 75 % (non-condensing)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201

Relay Module
288 Series



Relay Module; with force-guided contacts; 2 change-over contacts; Limiting continuous current: 5 A; 19 mm wide

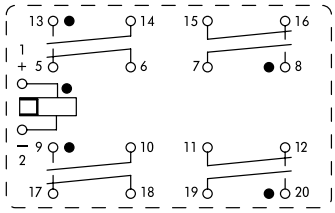
U_N	I_N	Item No.	Pack. Unit
24 VDC	36 mA	288-437	1

Note:
60 VDC switching voltages and 300 mA currents must not be exceeded for gold-plated basic relays. Higher switching power eventually evaporates the gold layer.

Control Circuit	
Input voltage range	–15 … +10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi 10 + Au
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC)
Recommended minimum load	0.1 V / 1 mA / 1 mW
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	12 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	50 x 10^6 switching operations
Safety and Protection	
Rated voltage	250 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	3 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (load/load circuit)	Functional insulation
Insulation type (adjacent devices)	Basic insulation
Protection type	IP00
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	19 mm / 0.748 inch
Height from upper-edge of DIN-rail	38 mm / 1.496 inch
Depth	75 mm / 3.346 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	44.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–25 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 %
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 50205

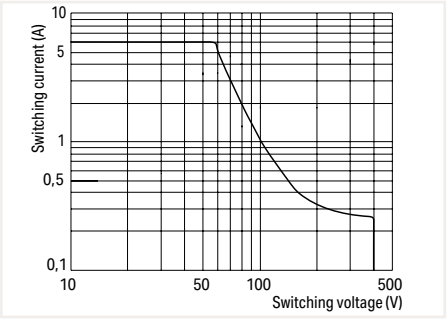
Relay Module
288 Series

1



Relay Module; with force-guided contacts; 4 make contacts and 4 break contacts; Limiting continuous current: 6 A; 64 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	41.6 mA	288-413	
24 VAC/DC	26 mA	288-414	1
230 VAC/DC	14 mA	288-418	1



DC Load Limit Curve

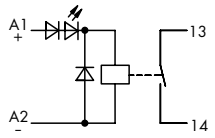
Note:
If required a ventilation hole can be made in the cover, reducing the degree of protection from IP67 to IP30.

If an outer contact (20) should weld then the forced operated inner contact (12) driven by the actuator remains open. The rotating armature remains free to move. The unaffected contact pairs can operate normally, (i.e., their function to make or break remains unaffected).

If an inner contact should weld (12) then the movement of the rotating armature is blocked via the operator. Open contacts of all four contact pairs remain open. This arrangement corresponds to conventional, force-guided operation.

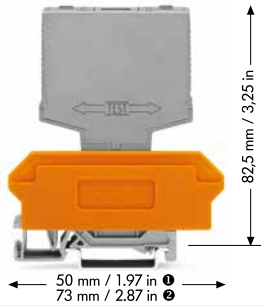
Control Circuit	
Input voltage range	−15 … +20 %
Load Circuit	
Number of break contacts/switch-off contacts	4
Number of make contacts/switch-on contacts	4
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Inrush current (resistive) max.	20 A (AC)
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Recommended minimum load	10 V / 10 mA
Pull-in time (typ.)	18 ms
Drop-out time (typ.)	21 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	10 x 10^6 switching operations
Mechanical force-guided operation	Type B
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1.3 kV
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 12 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	63.5 mm / 2.5 inch
Height from upper-edge of DIN-rail	40 mm / 1.575 inch
Depth	85 mm / 3.346 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	109.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1; EN 50205; EN 61810-1; ESTI (SEV): 09.1133; UL 508: E120782; TÜV: 968/EZ 116.02/09

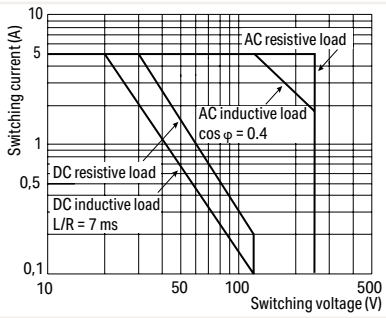
Relay Module
286 Series



Relay Module; 1 make contact; Limiting continuous current: 5 A; Status indicator: red; 10 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7.4 mA	286-364	1





DC Load Limit Curve

Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC)
Pull-in time (typ.)	6 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	10 x 10^3 switching operations
Mechanical life	50 x 10^3 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	2.5 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Protection type	IP20
Physical Data	
Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	16.8 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-618	40

Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

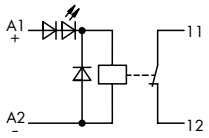
Item No.	Pack. Unit
280-608	40

Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-762	30

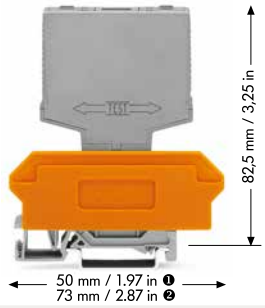
» Accessories Page 147

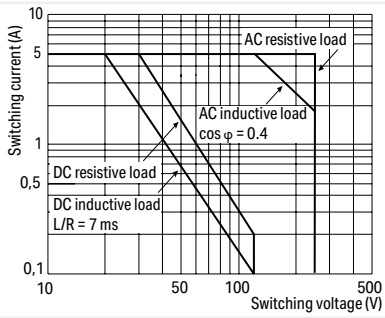
Relay Module
286 Series



Relay Module; 1 break contact; Limiting continuous current: 5 A; Status indicator: red; 10 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	20.4 mA	286-368	1





DC Load Limit Curve

Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of break contacts/switch-off contacts	1
Contact material	AgNi
Limiting continuous current	5 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1250 VA (AC)
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	3 ms
Mechanical life	5 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Protection type	IP20
Physical Data	
Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	19.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-618	40

Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-608	40

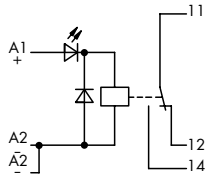
Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-762	30

» Accessories Page 147

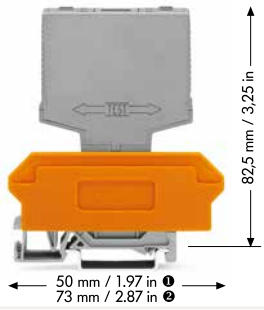
Relay Module
286 Series

1



Relay Module; 1 changeover contact; Limiting continuous current: 7 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	19.4 mA	286-304	1



Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 0.15
Limiting continuous current	7 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1750 VA (AC)
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	34.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

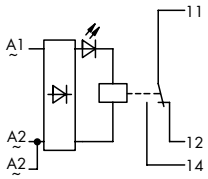
Item No.	Pack. Unit
280-609	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-763	25

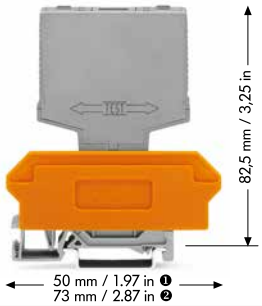
» Accessories Page 147

Relay Module
286 Series



Relay Module; 1 changeover contact; Limiting continuous current: 7 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC	6.1 mA	286-507	1
230 VAC	4.8 mA	286-508	1



Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 0.15
Limiting continuous current	7 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1750 VA (AC)
Pull-in time (typ.)	8 ms
Drop-out time (typ.)	6 ms
Bounce time (typ.)	4 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Protection type	IP20
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	31.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−25 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 75 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

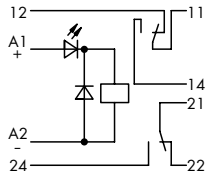
Item No.	Pack. Unit
280-609	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-763	25

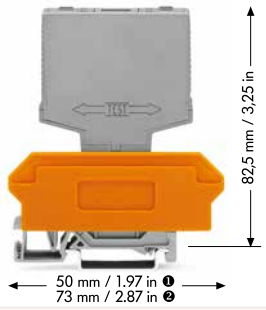
» Accessories Page 147

Relay Module
286 Series



Relay Module; 2 changeover contacts; Limiting continuous current: 7 A; Status indicator: red; 20 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	21.8 mA	286-312	1



Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi 0.15
Limiting continuous current	7 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1750 VA (AC)
Pull-in time (typ.)	18 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	39.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20

Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

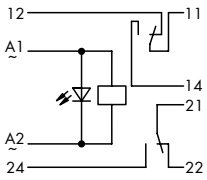
Item No.	Pack. Unit
280-628	20

Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-764	20

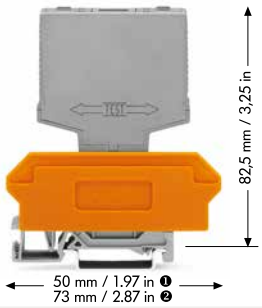
» Accessories Page 147

Relay Module
286 Series



Relay Module; 2 changeover contacts; Limiting continuous current: 7 A; Status indicator: red; 20 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC	3.5 mA	286-516	1



Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	2
Contact material	AgNi 0.15
Limiting continuous current	7 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1750 VA (AC)
Pull-in time (typ.)	15 ms
Drop-out time (typ.)	3 ms
Bounce time (typ.)	2 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	30 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	35.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20

Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-628	20

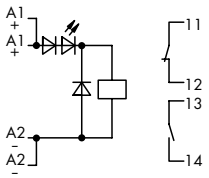
Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-764	20

» Accessories Page 147

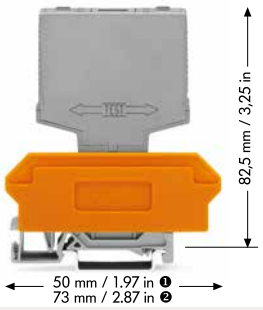
Relay Module
286 Series

1



Relay Module; 1 make contact and 1 break contact; Limiting continuous current: 6 A; Status indicator: red; 20 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7.4 mA	286-320	1



Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of break contacts/switch-off contacts	1
Number of make contacts/switch-on contacts	1
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Inrush current (resistive) max.	15 A (AC) / 1 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	1 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	50 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	32.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20

Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

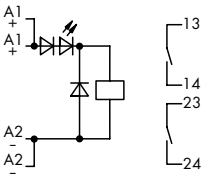
Item No.	Pack. Unit
280-628	20

Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-764	20

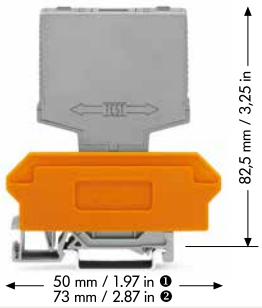
» Accessories Page 147

Relay Module
286 Series



Relay Module; 2 make contacts; Limiting continuous current: 6 A; Status indicator: red; 20 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7.5 mA	286-328	1



Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of make contacts/switch-on contacts	2
Contact material	$AgSnO_2$
Limiting continuous current	6 A
Inrush current (resistive) max.	15 A (AC) / 1 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	4 ms
Bounce time (typ.)	1 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Mechanical life	50 x 10^6 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Rated surge voltage	4 kV
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Dielectric strength, load/load circuit (AC, 1 min)	1.5 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (load/load circuit)	Functional insulation
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20
Physical Data	
Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	28.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−25 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 85 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201

Accessories

Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20

Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-628	20

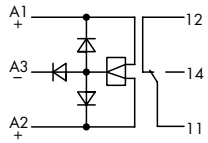
Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-764	20

» Accessories Page 147

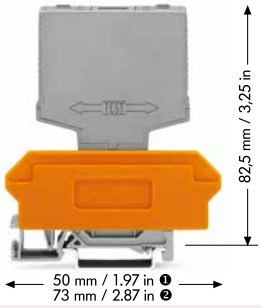
Relay Module
286 Series

1



Relay Module; Bistable; 1 changeover contact; Limiting continuous current: 6 A; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	51 mA	286-380	1



Control Circuit	
Input nominal voltage range	±10 %
Load Circuit	
Number of changeover/switchover contacts	1
Contact material	AgNi 90/10
Limiting continuous current	6 A
Inrush current (resistive) max.	30 A (AC) / 4 s
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	1500 VA (AC)
Pull-in time (typ.)	10 ms
Drop-out time (typ.)	10 ms
Bounce time (typ.)	6 ms
Electrical life (NO; resistive load; 23 °C)	100 x 10^3 switching operations
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Protection type	IP20
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.248 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	35 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−25 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 75 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201

Accessories

Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

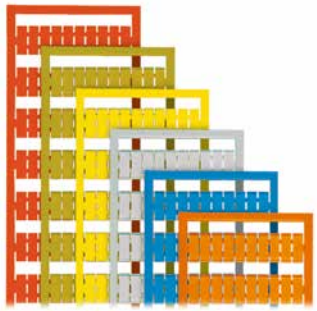
Item No.	Pack. Unit
280-609	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-763	25

» Accessories Page 147

Accessories

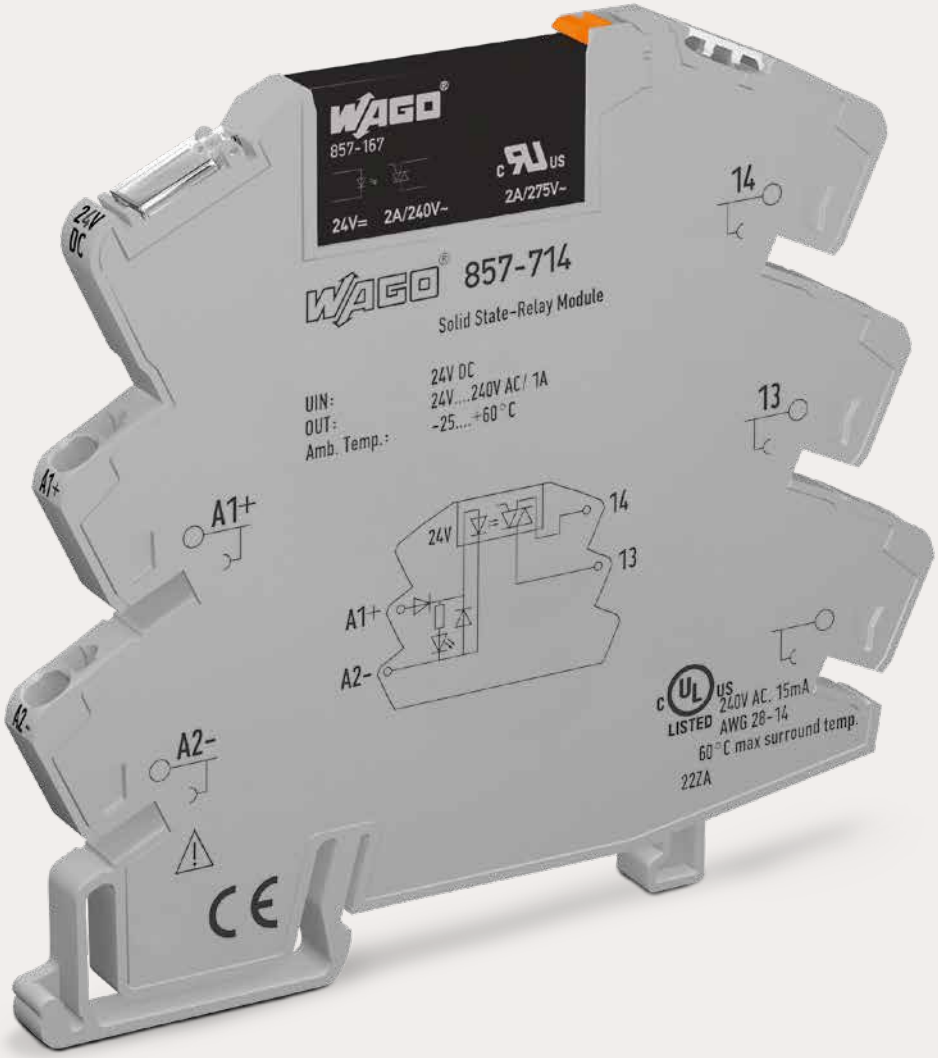


WSB marker card; WSB marker width: 4 mm; 10 strips with 10 markers/card

Marking	Item No.	Pack. Unit
K	209-782	50
1 ... 10 (10 x)	209-702	50
A1; A2; 13; 14	209-952	50
A1; A2; 11; 12	209-953	50
11; 12; 14; A1; A2; A2; 11; 12; 14	209-994	50
12; A1; A2; 24; 11; 14; 21; 22	209-995	50
A1; A1; A2; A2; 11; 12; 13; 14; 23; 24	209-693	50
12; A1; A2; 23; 24; 11; 13; 14; 21; 22	209-691	50
12; A1; A2; 23; 24; 11; 13; 14; 33; 34	209-690	50
14; A1; A2; 33; 34; 13; 23; 24; 43; 44	209-692	50
A1; A2; 32; 31; 34; 42; 41; 12; 11; 14; 22; 21; 24; 44	249-656	50
L+; 1; L-; L-; 11; 12; 13; 14	209-954	50
A1; A2; A3; 11; 12; 14	249-607	50
A1; A1; A2; A2; 12; 11; 11; 14	209-996	50
A1; A1; St; A2; A2; 12; 11; 11; 14	209-601	50
U1; U2; U3; U4; 0V; 12; 11; 11; 14; 14	209-951	50
U	209-789	50
A1; A2; A2; 1; 3; 2	209-685	50
A1; A2; A2; 1; 2; 2	209-686	50
A1+; A1+; A2-; A2-; 1; RL1; RL2; 2	209-955	50
A1+; A1+; A2-; A2-; 1+; 1+; A; 2-	249-651	50
+/-	209-552	50
1; 2; 3; 0V; +UB; OUT; ERR.; 0V	249-622	50
1; 2; 0V; +UB; OUT; ERR.; 0V	249-623	50
Lin; Lin; Lout; Lout; 24V; UA; UA; 0V	209-957	50
Lin; Lin; Lout; 11; 14; 14; Lin; Lin; Lout	249-654	50
Iin; Iin; Iout; Iout; 24V; 11; 12; 14; 0V	209-997	50
S	209-682	50
V	209-784	50
F1 ... F10	209-787	50
D	209-783	50
+; -; 1; 2; 3; 13; 14; 4; 5; 6	249-608	50
L; N; Ackn.; Failure; Test; N; 14; 24	249-606	50
A1; A2; Ackn.; Failure; 12; 11; 11; 14	249-653	50

WSB marker card; plain; WSB marker width: 4 mm; 10 strips with 10 markers/card

Color	Item No.	Pack. Unit
white	209-701	100
yellow	209-701/000-002	100
red	209-701/000-005	100
blue	209-701/000-006	100
gray	209-701/000-007	100
orange	209-701/000-012	100
light green	209-701/000-017	100
green	209-701/000-023	100
violet	209-701/000-024	100



WAGO Solid-State Relay and Optocoupler Modules

WAGO Solid-State Relay and Optocoupler Modules

		Page
	**Solid-State Relay and Optocoupler Modules, 857 Series**	
	Sockets with a Solid-State Relay	152
	Optocoupler Modules	164
	Solid-State Timer Relay Modules	168
	Accessories, 857 Series	170
	**Solid-State Relay Modules, 788 Series**	
	Solid-State Relay Modules	180
	Accessories, 788 Series	186
	**Optocoupler Modules, 859 Series**	
	Optocoupler Modules	192
	Accessories, 859 Series	221
	**Solid-State Relay Modules, 2042 Series**	
	Solid-State Relay Modules	224
	**Optocoupler Modules, 286 Series**	
	Optocoupler Modules	228
	Accessories, 286 Series	236

2

WAGO Solid-State Relay and Optocoupler Modules
Selection Guide

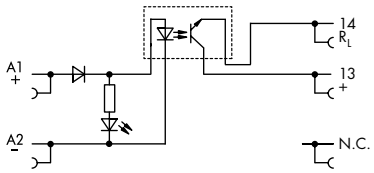
2

Nominal Input Voltage U_N	Limiting Continuous Current	Nominal Input Current at U_N	2-Wire Connection	3-Wire Connection	High-Side Switching	Low-Side Switching	Zero-Voltage Switching	2-Way	Standards/Approvals							For Railway Applications	Specialty Function	Item Number	Page
									EN 50121-3-2	EN 61000-6-2	EN 61000-6-3	EN 61373	EN 61812-1	GL	UL 508				
5 ADC	0.1 A	7.5 mA	■						■	■	■	■			■	■		859-793	197
5 VDC	0.1 A	16.5 mA		■	■					■	■	■			■			859-753	216
5 VDC	0.1 A	17 mA	■						■	■	■	■			■	■		859-795	194
5 VDC	0.5 A	7.7 mA	■				■			■	■				■			859-902	220
5 VDC	0.5 A	9.6 mA		■	■					■	■	■			■			859-702	209
5 VDC	0.5 A	10 mA		■	■					■	■	■			■			859-752	211
5 VDC	0.5 A	14 mA		■	■													286-752/002-000	228
5 VDC	5 A	7.2 mA	■							■	■	■						859-738	204
12 VDC	0.1 A	4 mA	■						■	■	■	■				■		859-798	196
12 VDC	0.5 A	9.2 mA	■							■	■				■			859-797	215
12 VDC	5 A	3.2 mA	■							■	■	■						859-739	205
24 VDC	0.1 A	4 mA	■															286-794	234
24 VDC	0.1 A	4 mA	■						■	■	■	■			■	■		859-791	192
24 VDC	0.1 A	4.2 mA	■						■	■	■	■			■	■		859-794	193
24 VDC	0.1 A	5.6 mA	■					■		■	■	■			■			857-1494	165
24 VDC	0.1 A	7 mA	■						■	■	■	■				■		2042-7204	224
24 VDC	0.1 A	9 mA	■							■	■	■			■			857-704	152
24 VDC	0.1 A	9 mA		■	■					■	■	■						859-759	217
24 VDC	0.1 A	9.2 mA	■						■	■	■	■			■	■		859-796	195
24 VDC	0.1 A	14 mA	■															286-791	233
24 VDC	0.25 A	15 mA	■					■										286-792	235
24 VDC	0.5 A	5.3 mA		■		■				■	■				■			859-732	218
24 VDC	0.5 A	5.9 mA		■	■			■		■	■	■			■			857-1432	166
24 VDC	0.5 A	6 mA	■				■			■	■				■			859-734	219
24 VDC	0.5 A	7 mA		■	■				■	■	■	■				■		2042-7304	226
24 VDC	0.5 A	7.7 mA		■		■				■	■	■			■			859-708	210
24 VDC	0.5 A	8 mA		■	■					■	■	■			■			859-758	213
24 VDC	0.5 A	9 mA	■														2 inverted outputs	286-790	232
24 VDC	0.5 A	11 mA		■	■					■	■	■			■			859-756	212
24 VDC	0.5 A	11 mA		■		■				■	■	■			■			859-706	214
24 VDC	0.5 A	15 mA		■	■													286-752	231
24 VDC	1 A	7 mA	■				■			■	■	■			■			788-720	184
24 VDC	1 A	9.15 mA	■				■		■			■	■				Multifunctional/ multi-time	857-634	169
24 VDC	2 A	9.15 mA	■						■			■	■				Multifunctional/ multi-time	857-624	168
24 VDC	2 A	9.2 mA	■				■			■	■	■			■			857-714	156
24 VDC	3 A	4 mA		■		■				■	■	■			■			859-720	202
24 VDC	3 A	7 mA	■							■	■	■			■			859-740	199
24 VDC	3 A	7 mA	■							■	■	■						859-762	201
24 VDC	3 A	7.75 mA	■					■		■	■	■		■	■			857-1430	164
24 VDC	3 A	9.2 mA	■							■	■	■		■	■			857-724	160
24 VDC	3 A	14 mA	■							■	■	■			■			859-730	198
24 VDC	3 A	14 mA	■							■	■	■						859-761	200
24 VDC	3.5 A	7 mA	■							■	■	■			■			788-700	181
24 VDC	3.5 A	13 mA	■				■			■	■	■						788-730	183
24 VDC	4 A	13.5 mA		■	■													286-723	230
24 VDC	5 A	3.5 mA	■							■	■	■						859-737	203
24 VDC	5 A	7 mA		■	■				■	■	■	■				■		2042-7604	227
24 VDC	5 A	9.3 mA	■							■	■	■			■			788-701	182
24 VDC	5 A	11 mA			■					■	■	■						788-710	180
24 VDC	5 A	13.5 mA		■		■												286-721	229
24 VDC	8 A	8.7 mA							■	■	■	■				■		857-734	163

WAGO Solid-State Relay and Optocoupler Modules
Selection Guide

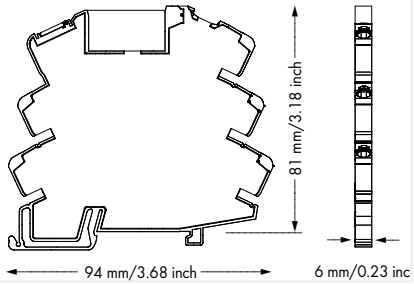
Nominal Input Voltage U_N	Limiting Continuous Current	Nominal Input Current at U_N	2-Wire Connection	3-Wire Connection	High-Side Switching	Low-Side Switching	Zero-Voltage Switching	2-Way	Standards/Approvals							For Railway Applications	Specialty Function	Item Number	Page
									EN 50121-3-2	EN 61000-6-2	EN 61000-6-3	EN 61373	EN 61812-1	GL	UL 508				
48 VDC	0.1 A	7 mA	■						■	■	■	■				■		**2042-7504**	225
12 … 48 VDC	4 A	5 mA	■							■	■	■						**859-744**	206
24 VAC/DC	4 A	10 mA	■				■			■	■	■			■			**788-721**	185
115 VAC/DC	0.1 A	4.2 mA	■							■	■	■			■			**857-707**	153
115 VAC/DC	2 A	3.9 mA	■				■			■	■	■			■			**857-717**	157
115 VAC/DC	3 A	3.9 mA	■							■	■	■			■			**857-727**	161
230 VAC/DC	0.1 A	3.25 mA	■							■	■	■			■			**857-708**	154
230 VAC/DC	2 A	3.2 mA	■				■			■	■	■			■			**857-718**	158
230 VAC/DC	3 A	3.2 mA	■							■	■	■			■			**857-728**	162
230 VAC	0.5 A	0.6 mA		■		■				■	■	■			■			**859-712**	207
230 VAC	0.5 A	0.6 mA		■	■					■	■	■			■			**859-772**	208

Solid-State Relay Module
857 Series



Solid-State Relay Module; Output voltage range: 0 … 48 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9 mA	**857-704**	25

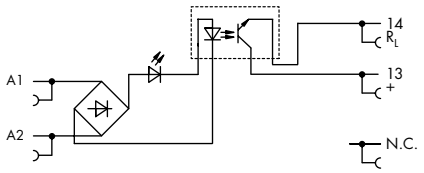


Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

Control Circuit	
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	16.8 … 30 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	0 … 48 VDC
Voltage drop (output) max.	≤ 1 VDC
Switching current (min.)	50 µA
Turn-on time	≤ 100 µs
Turn-off time	≤ 600 µs
Switching frequency	≤ 1 kHz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−20 … +60 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508

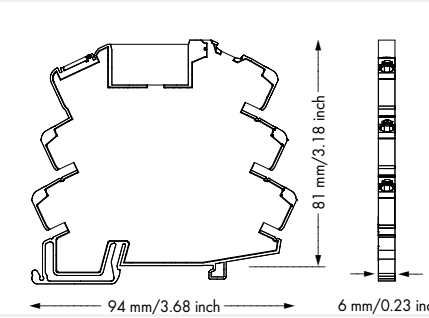
» Accessories Page 170

Solid-State Relay Module
857 Series



Solid-State Relay Module; Output voltage range: 0 … 48 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC/DC	4.2 mA	**857-707**	25

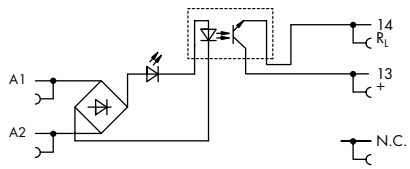


Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

Control Circuit	
Input voltage range (low level)	0 … 25 VAC/DC
Input voltage range (high level)	100 … 138 VAC/DC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC
Output voltage range	0 … 48 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 1 µA
Switching current (min.)	50 µA
Turn-on time	4.5 ms
Turn-off time	10 ms
Switching frequency	≤ 20 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–20 … +60 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508

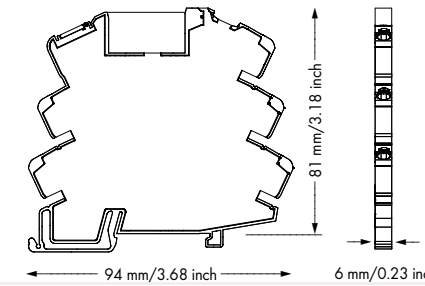
» Accessories Page 170

Solid-State Relay Module
857 Series



Solid-State Relay Module; Output voltage range: 0 … 48 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC/DC	3.25 mA	**857-708**	25

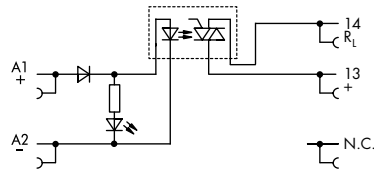


Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

Control Circuit	
Input voltage range (low level)	0 … 30 VAC/DC
Input voltage range (high level)	200 … 253 VAC/DC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC
Output voltage range	0 … 48 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 1 µA
Switching current (min.)	50 µA
Turn-on time	4.5 ms
Turn-off time	10 ms
Switching frequency	≤ 20 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–20 … +60 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508

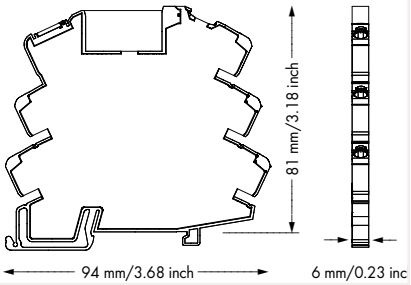
» Accessories Page 170

Solid-State Relay Module
857 Series

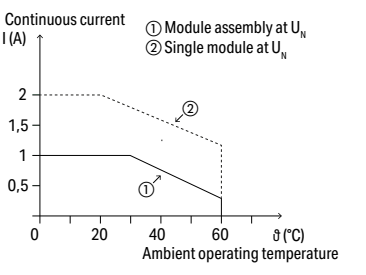


Solid-State Relay Module; Output voltage range: 24 … 240 VAC; Limiting continuous current: 2 A; 2-wire connection; Zero-voltage switching; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.2 mA	**857-714**	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.



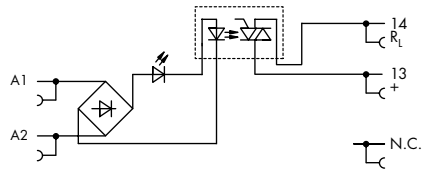
Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	20 … 28.8 VDC
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	2 A
Output voltage range	24 … 240 VAC
Voltage drop (output) max.	≤ 1.6 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	22 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	28.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–20 … +60 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508

» Accessories Page 170

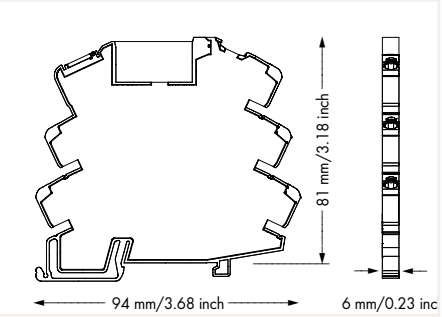
Solid-State Relay Module
857 Series

Similar to pictured device

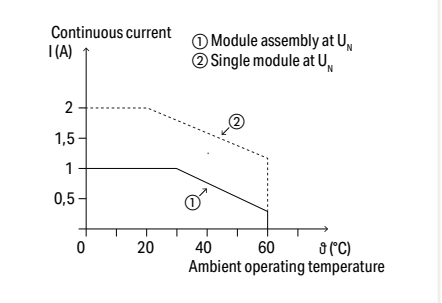


Solid-State Relay Module; Output voltage range: 24 … 240 VAC; Limiting continuous current: 2 A; 2-wire connection; Zero-voltage switching; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC/DC	3.9 mA	**857-717**	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

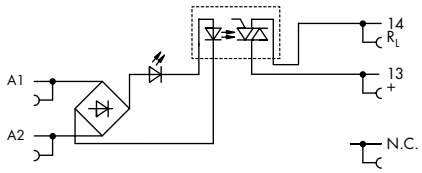


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 25 VAC/DC
Input voltage range (high level)	100 … 138 VAC/DC
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	2 A
Nominal output voltage	AC 230 V
Output voltage range	24 … 240 VAC
Voltage drop (output) max.	≤ 1.6 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	22 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	28.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–20 … +60 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508

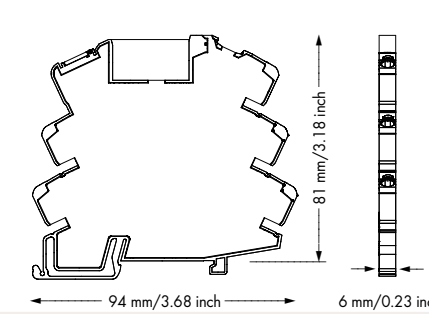
» Accessories Page 170

Solid-State Relay Module
857 Series

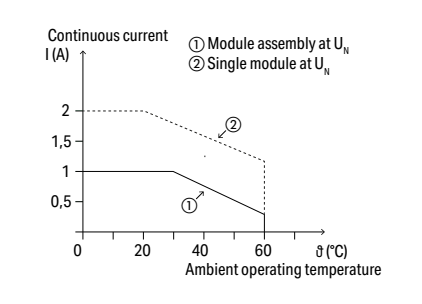


Solid-State Relay Module; Output voltage range: 24 … 240 VAC; Limiting continuous current: 2 A; 2-wire connection; Zero-voltage switching; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC/DC	3.2 mA	**857-718**	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

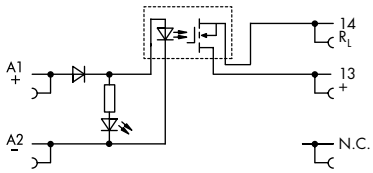


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 60 VAC/DC
Input voltage range (high level)	200 … 253 VAC/DC
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	2 A
Nominal output voltage	AC 230 V
Output voltage range	24 … 240 VAC
Voltage drop (output) max.	≤ 1.6 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	22 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	29.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–20 … +60 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508

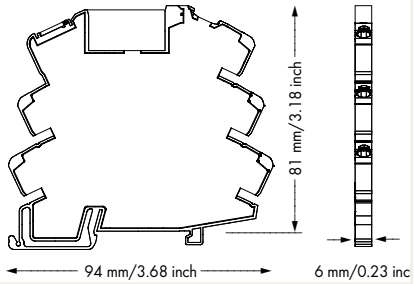
» Accessories Page 170

Solid-State Relay Module
857 Series

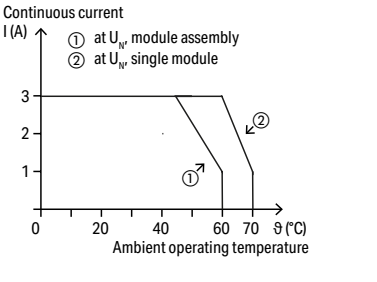


Solid-State Relay Module; Output voltage range: 0 … 24 VDC; Limiting continuous current: 3 A; 2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.2 mA	**857-724**	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

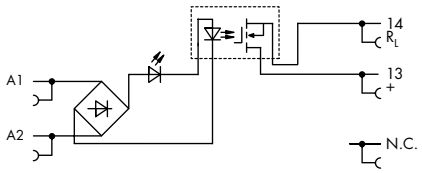


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	18.8 … 31.2 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	3 A
Nominal output voltage	DC 24 V
Output voltage range	0 … 24 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Switching current (min.)	50 µA
Inrush current (resistive) (max.)	(AC) 15 A / 10 ms
Turn-on time	≤ 100 µs
Turn-off time	≤ 600 µs
Switching frequency	≤ 350 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	28.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−20 … +70 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508; GL

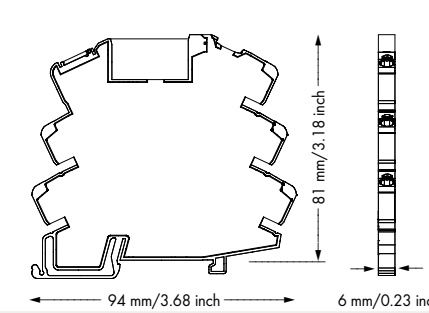
» Accessories Page 170

Solid-State Relay Module
857 Series

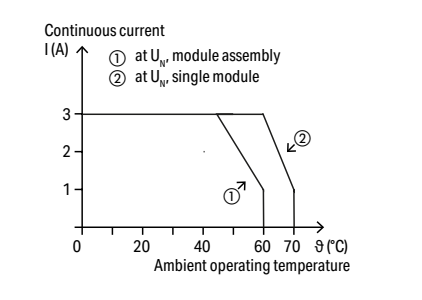


Solid-State Relay Module; Output voltage range: 0 … 24 VDC; Limiting continuous current: 3 A; 2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
115 VAC/DC	3.9 mA	857-727	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

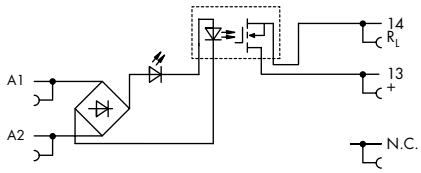


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 25 VAC/DC
Input voltage range (high level)	90 … 138 VAC/DC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	3 A
Nominal output voltage	24 VDC
Output voltage range	0 … 30 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Leakage current at rated voltage	≤ 1 µA
Switching current (min.)	50 µA
Inrush current (resisitve) (max.)	(AC) 15 A / 10 ms
Turn-on time	≤ 4.5 ms
Turn-off time	≤ 10 ms
Switching frequency	≤ 20 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–20 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508

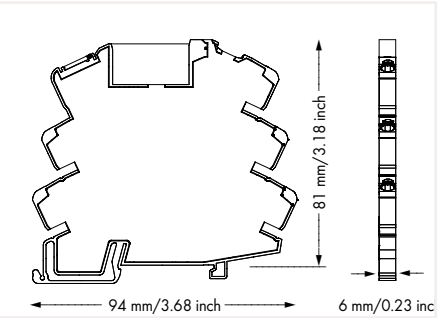
» Accessories Page 170

Solid-State Relay Module
857 Series

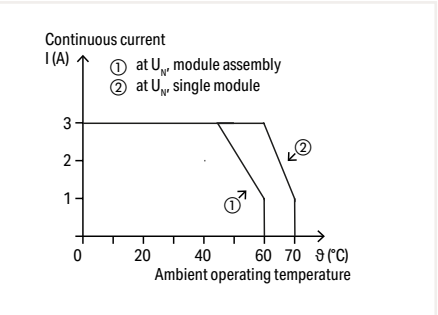


Solid-State Relay Module; Output voltage range: 0 … 24 VDC; Limiting continuous current: 3 A; 2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
230 VAC/DC	3.2 mA	**857-728**	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

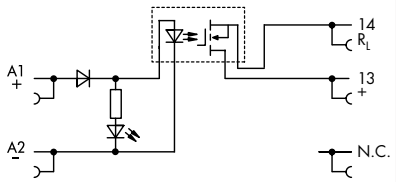


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 60 VAC/DC
Input voltage range (high level)	200 … 253 VAC/DC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	3 A
Nominal output voltage	DC 24 V
Output voltage range	0 … 24 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Leakage current at rated voltage	≤ 1 µA
Switching current (min.)	50 µA
Inrush current (resisitve) (max.)	(AC) 15 A / 10 ms
Turn-on time	≤ 4.5 ms
Turn-off time	≤ 10 ms
Switching frequency	≤ 20 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	31 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–20 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508

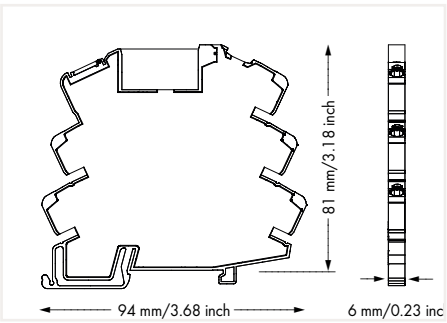
» Accessories Page 170

Solid-State Relay Module
857 Series

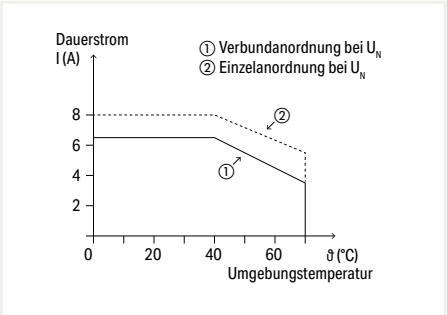


Solid-State Relay Module; Output voltage range: 1 … 30 VDC; Limiting continuous current: 8 A; 2-wire connection; for railway applications; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC (SELV)	12 mA	857-734	25



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

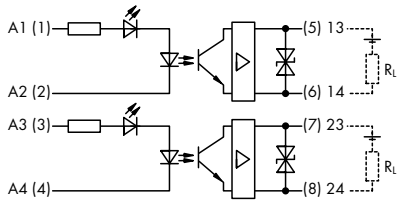


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 4 VDC
Input voltage range (high level)	16.8 … 30 VDC
Power loss (max.) $P_{l\,(max.)}$	0.3 W
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	8 A; 6 A (UL)
Nominal output voltage	24 VDC (SELV)
Output voltage range	1 … 30 VDC
Voltage drop (output) max.	≤ 0.8 V (DC)
Leakage current at rated voltage	≤ 1 µA
Switching current (min.).	10 mA
Turn-on time	≤ 60 µs
Turn-off time	≤ 250 µs
Switching frequency	≤ 500 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	none
Insulation type (control/load circuit)	Double insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Basic insulation
Insulation type (to any type of adjacent devices)	Adjacent devices are devices of the same design (series) that are arranged next to each other with the same orientation on the mounting rail. An end stop (249-116) must be fitted to devices of other types for compliance with the reinforced insulation requirements.
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	29.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 50121-4; UL 61010-2-201

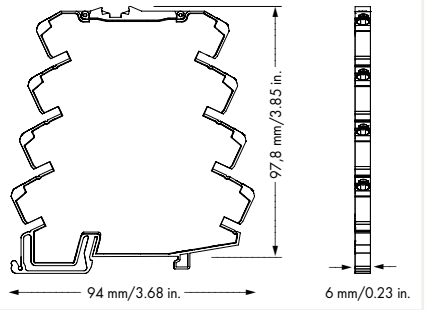
» Accessories Page 170

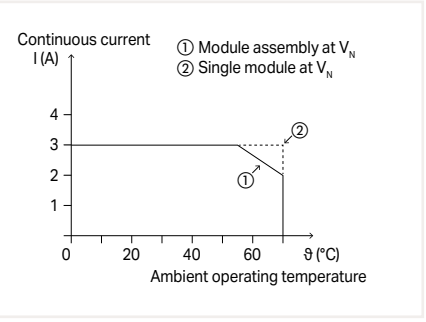
Optocoupler Module
857 Series



Optocoupler Module; 2-channel; Output voltage range: 3 … 31.2 VDC; Limiting continuous current: 3 A; 2-wire connection; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7.75 mA	**857-1430**	25



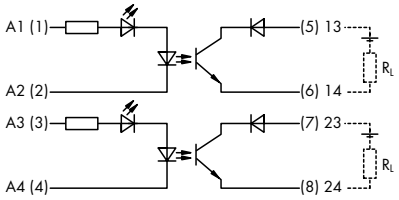


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	16.8 … 31.2 VDC
Load Circuit	
Circuit type	2-channel; 2-wire connection
Limiting continuous current	3 A
Nominal output voltage	24 VDC
Output voltage range	3 … 31.2 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Leakage current at rated voltage	≤ 250 µA
Turn-on time	≤ 25 µs
Turn-off time	≤ 250 µs
Switching frequency	≤ 300 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	4 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	31.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +85 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; GL; UL 508 (max. 70 °C/2 A)

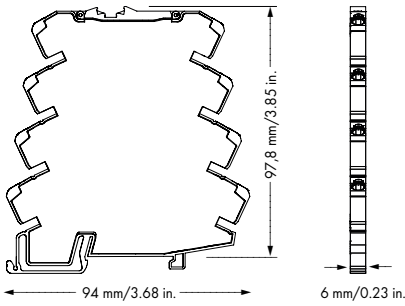
» Accessories Page 170

Optocoupler Module
857 Series



Optocoupler Module; 2-channel; Output voltage range: 9 … 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Status indicator: yellow; 6 mm wide

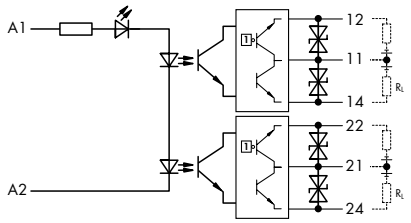
U_N	I_N	Item No.	Pack. Unit
24 VDC	5.6 mA	**857-1494**	25



Control Circuit	
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	16.8 … 31.2 VDC
Load Circuit	
Circuit type	2-channel; 2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC
Output voltage range	9 … 60 VDC
Voltage drop (output) max.	≤ 2 VDC
Leakage current at rated voltage	≤ 25 µA
Turn-on time	≤ 20 µs
Turn-off time	≤ 120 µs
Switching frequency	≤ 1.5 kHz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Dielectric strength channel/channel (AC, 1 min)	4 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	30.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature UL (operation at U_N)	–25 … +50 °C
Surrounding air temperature (storage)	–40 … +85 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508 (max. 50 °C/100 mA)

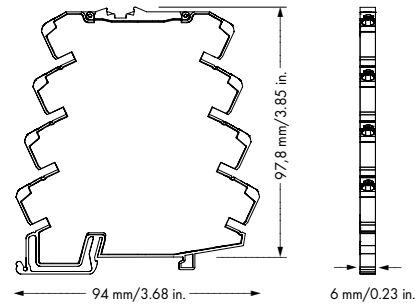
» Accessories Page 170

Optocoupler Module
857 Series



Optocoupler Module; 2-channel; Output voltage range: 9 … 60 VDC; Limiting continuous current: 0.5 A; 2 changeover contacts; Status indicator: yellow; 6 mm wide

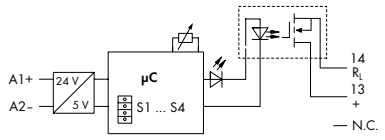
U_N	I_N	Item No.	Pack. Unit
24 VDC	5.9 mA	**857-1432**	25



Control Circuit	
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	16.8 … 30 VDC
Load Circuit	
Circuit type	2-channel; 2-wire connection; high-side switching
Limiting continuous current	0.5 A
Nominal output voltage	24 VDC
Output voltage range	9 … 60 VDC
Voltage drop (output) max.	≤ 1.5 VDC
Leakage current at rated voltage	≤ 1,5 mA
Switching current (min.)	0.5 mA
Turn-on time	≤ 25 µs
Turn-off time	≤ 250 µs
Switching frequency	≤ 1.5 kHz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	97.8 mm / 3.85 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	33 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +85 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-2001; UL 508 (max. 70 °C / 0.3 A)

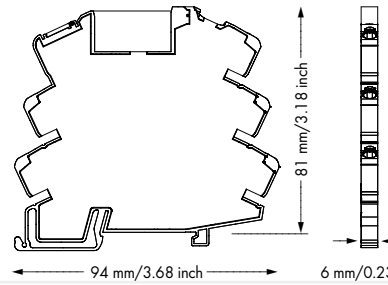
» Accessories Page 170

Solid-State Timer Relay Module
857 Series



Solid-State Relay Module; Output voltage range: 0 … 24 VDC; Limiting continuous current: 2 A; 2-wire connection; Multifunctional/multi-time; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.15 mA	857-624	25

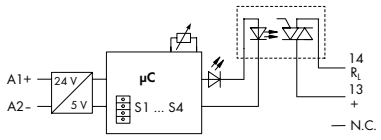


Features:
- 4 functions
- Function and time range adjustable via DIP switch

Control Circuit	
Input voltage range	–15 … +30 %
Time range	Adjustable: 0.1 … 10 s; 3 … 300 s; 0.3 … 30 min; 3 … 300 min
Reset time	50 ms
Repeat accuracy	±1 %
Functions	On-delay; Single-shot leading edge; On-delay and single-shot leading edge (1s fixed); flashing
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	2 A
Nominal output voltage	24 VDC
Output voltage range	0 … 30 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Leakage current at rated voltage	≤ 1 µA
Switching current (min.)	50 µA
Turn-on time	≤ 100 µs
Turn-off time	≤ 2 ms
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	29.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–20 … +60 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61812-1; EN 61373; EN 50121-3-2

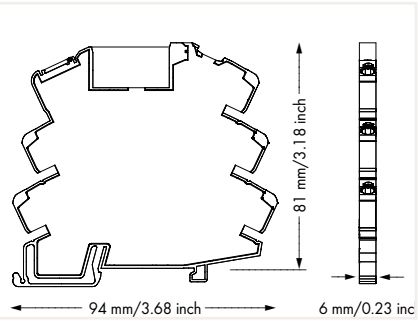
» Accessories Page 170

Solid-State Timer Relay Module
857 Series

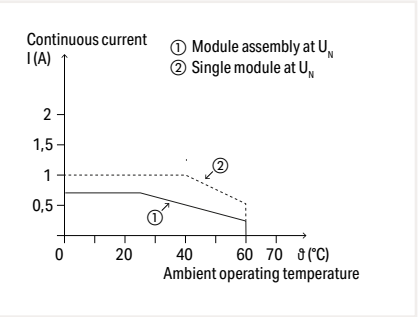


Solid-State Relay Module; Output voltage range: 24 … 230 VDC; Limiting continuous current: 1 A; 2-wire connection; Multifunctional/multi-time; Status indicator: yellow; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.15 mA	857-634	25



Features:
- 4 functions
- Function and time range adjustable via DIP switch



Current-Carrying Capacity Curve

Control Circuit	
Input voltage range	−15 … +30 %
Time range	Adjustable: 0.1 … 10 s; 3 … 300 s; 0.3 … 30 min; 3 … 300 min
Reset time	50 ms
Repeat accuracy	±1 %
Functions	On-delay; Single-shot leading edge; On-delay and single-shot leading edge (1s fixed); blinking
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	1 A
Nominal output voltage	230 VAC
Output voltage range	24 … 230 VAC
Voltage drop (output) max.	≤ 1 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	10 mA
Turn-on time	≤ 1 ms
Turn-off time	≤ 10 ms
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	29.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−20 … +60 °C
Surrounding air temperature (storage)	−40 … +70 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61812-1; EN 61373; EN 50121-3-2

» Accessories Page 170

Basic Solid-State Relay
857 Series

Basic Solid-State Relay; Output voltage range: 0 … 30 VDC; Limiting continuous current: 3 A; 5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	**857-161**	20

Control Circuit	
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	18.8 … 31.2 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	3 A
Nominal output voltage	24 VDC
Output voltage range	0 … 30 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Leakage current at rated voltage	≤ 1 µA
Switching current (min.)	50 µA
Inrush current (resistive) (max.)	(AC) 15 A / 10 ms
Turn-on time	≤ 100 µs
Turn-off time	≤ 600 µs
Switching frequency	≤ 350 Hz
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Physical Data	
Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch
Mechanical Data	
Mounting type	Pluggable relay module
Material Data	
Weight	3.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–30 … +80 °C
Surrounding air temperature (storage)	–40 … +100 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Basic Solid-State Relay
857 Series

Basic Solid-State Relay; Output voltage range: 24 … 240 VAC; Limiting continuous current: 2 A; 5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	**857-167**	20

Control Circuit	
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	20 … 28.8 VDC
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	2 A
Nominal output voltage	230 VAC
Output voltage range	24 … 240 VAC
Voltage drop (output) max.	≤ 1.6 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	22 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Physical Data	
Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch
Mechanical Data	
Mounting type	Pluggable relay module
Material Data	
Weight	3.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–30 … +80 °C
Surrounding air temperature (storage)	–40 … +100 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Basic Solid-State Relay
857 Series

Basic Solid-State Relay; Output voltage range: 0 … 48 VDC; Limiting continuous current: 0.1 A; 5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	**857-164**	20

Control Circuit	
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	16.8 … 30 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC
Output voltage range	0 … 48 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 1 µA
Switching current (min.)	50 µA
Turn-on time	≤ 100 µs
Turn-off time	≤ 600 µs
Switching frequency	≤ 1 kHz
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Physical Data	
Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch
Mechanical Data	
Mounting type	Pluggable relay module
Material Data	
Weight	3.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–30 … +80 °C
Surrounding air temperature (storage)	–40 … +100 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Basic Solid-State Relay
857 Series

Basic Solid-State Relay; Output voltage range: 0 … 30 VDC; Limiting continuous current: 3 A; 5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
60 VDC	3 mA	**857-162**	20

Control Circuit	
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	35 … 72 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	3 A
Nominal output voltage	24 VDC
Output voltage range	0 … 30 VDC
Voltage drop (output) max.	≤ 0.12 VDC
Leakage current at rated voltage	≤ 1 µA
Switching current (min.)	50 µA
Inrush current (max.)	15 A / 10 ms
Turn-on time	≤ 100 µs
Turn-off time	≤ 600 µs
Switching frequency	≤ 350 Hz
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Physical Data	
Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch
Mechanical Data	
Mounting type	Pluggable relay module
Material Data	
Weight	5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–30 … +80 °C
Surrounding air temperature (storage)	–40 … +100 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Basic Solid-State Relay
857 Series

Basic Solid-State Relay; Output voltage range: 0 … 48 VDC; Limiting continuous current: 0.1 A; 5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
60 VDC	2.8 mA	**857-165**	20

Control Circuit	
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	35 … 72 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC
Output voltage range	0 … 48 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 1 µA
Switching current (min.)	50 µA
Turn-on time	≤ 100 µs
Turn-off time	≤ 600 µs
Switching frequency	≤ 1 kHz
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Physical Data	
Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch
Mechanical Data	
Mounting type	Pluggable relay module
Material Data	
Weight	4.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–30 … +80 °C
Surrounding air temperature (storage)	–40 … +70 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Basic Solid-State Relay
857 Series

Basic Solid-State Relay; Output voltage range: 24 … 240 VAC; Limiting continuous current: 2 A; 5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
60 VDC	3.1 mA	**857-168**	20

Control Circuit	
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	35 … 72 VDC
Load Circuit	
Circuit type	2-wire connection; Zero-voltage-switching
Limiting continuous current	2 A
Nominal output voltage	230 VAC
Output voltage range	24 … 240 VAC
Voltage drop (output) max.	≤ 1.6 VAC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	22 µA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Switching frequency	50 Hz / 60 Hz
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Physical Data	
Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch
Mechanical Data	
Mounting type	Pluggable relay module
Material Data	
Weight	3.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–30 … +80 °C
Surrounding air temperature (storage)	–40 … +100 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m

Basic Solid-State Relay
857 Series

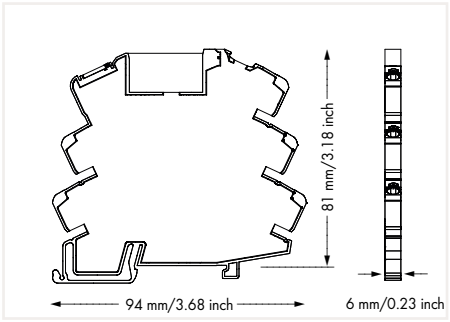
Basic Solid-State Relay; Output voltage range: 1 … 30 VDC; Limiting continuous current: 8 A; 5 mm wide; 15 mm high

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	**857-181**	20

Control Circuit	
Input voltage range (low level)	0 … 4 VDC
Input voltage range (high level)	16.9 … 30 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	8 A
Nominal output voltage	24 VDC (SELV)
Output voltage range	1 … 30 VDC
Voltage drop (output) max.	≤ 0.8 VDC
Leakage current at rated voltage	≤ 1 µA
Switching current (min.)	10 mA
Turn-on time	≤ 60 µs
Turn-off time	≤ 250 µs
Switching frequency	≤ 500 kHz
Safety and Protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Physical Data	
Width	5 mm / 0.197 inch
Height from the surface	15 mm / 0.591 inch
Depth	28 mm / 1.102 inch
Mechanical Data	
Mounting type	Pluggable relay module
Material Data	
Weight	3.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–30 … +80 °C
Surrounding air temperature (storage)	–40 … +100 °C
Relative humidity	5 … 95 % (no condensation permissive)
Operating altitude (max.)	2000 m

Relay Socket
857 Series

Relay Socket; for 5 mm basic relay; Status indicator: yellow		
U_N	Item No.	Pack. Unit
24 VAC/DC	857-104	25

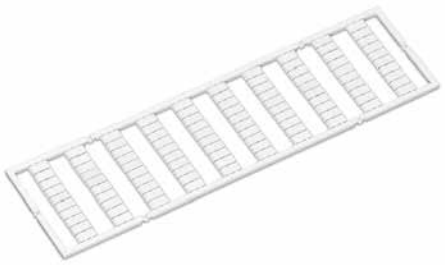


Load Circuit	
Limiting continuous current	6 A
Switching voltage (max.)	250 VAC
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	300 V
Rated surge voltage	4 kV
Circuit type	Mains circuits
Overvoltage category	III
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kVrms
Dielectric strength, open contact (AC, 1 min)	1 kVrms
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	81 mm / 3.189 inch
Depth	94 mm / 3.701 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	26.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Relative humidity	5 … 95 % (no condensation permissive)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; UR 508

Accessories
857 Series

Push-in type jumper bar; light gray; insulated; 18 A		
Description	**Item No.**	Pack. Unit
2-way	**859-402**	200 (8x25)
3-way	**859-403**	200 (8x25)
4-way	**859-404**	200 (8x25)
5-way	**859-405**	200 (8x25)
6-way	**859-406**	100 (4x25)
7-way	**859-407**	100 (4x25)
8-way	**859-408**	100 (4x25)
9-way	**859-409**	100 (4x25)
10-way	**859-410**	100 (4x25)
Item no. suffixes for colored push-in type jumper bars		
yellow	**... /000-029**	
red	**... /000-005**	
blue	**... /000-006**	

Comb-style jumper bar; insulated; for conductor entry		
Description	**Item No.**	Pack. Unit
2-way	**281-482**	100

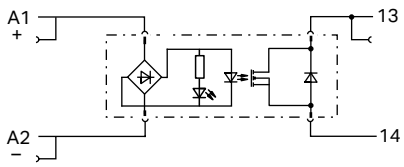


WMB marker card; 10 strips with 10 markers; white; with black printing		
Marking	**Item No.**	Pack. Unit
plain	**793-501**	5 cards
1 ... 10 (10 x)	**793-502**	5 cards
11 ... 20 (10 x)	**793-503**	5 cards
21 ... 30 (10 x)	**793-504**	5 cards
31 ... 40 (10 x)	**793-505**	5 cards
41 ... 50 (10 x)	**793-506**	5 cards
1 ... 50 (2 x)	**793-566**	5 cards

Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade		
	Item No.	Pack. Unit
	210-720	50

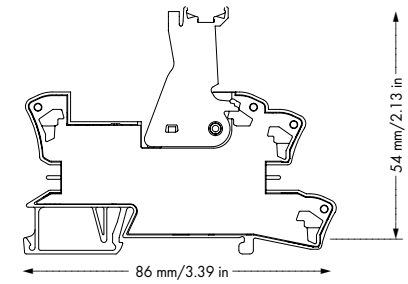
Solid-State Relay Module
788 Series

Similar to picture

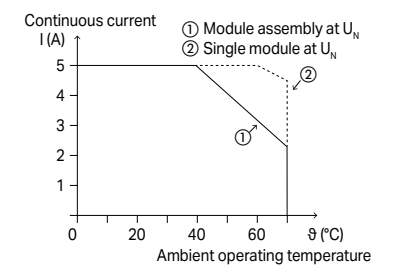


Solid-State Relay Module; Output voltage range: 0 … 35 VDC; Limiting continuous current: 5 A; 2-wire connection; Status indicator: green; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	20 mA	**788-710**	20



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

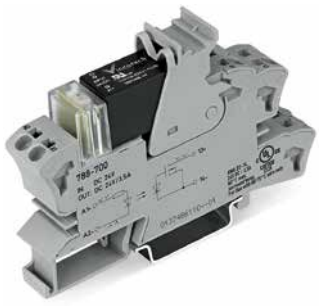


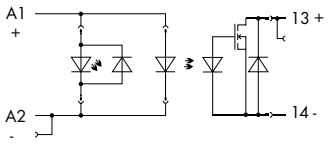
Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 3 VDC
Input voltage range (high level)	10 … 30 VDC
Power loss (max.) $P_{l\,(max.)}$	0.5 W
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	5 A; 4.5 A (UL)
Nominal output voltage	24 VDC
Output voltage range	0 … 35 VDC
Voltage drop (output) max.	≤ 0.3 VDC
Switching current (min.)	1 mA
Turn-on time	≤ 50 µs
Turn-off time	≤ 250 µs
Switching frequency	≤ 3 kHz
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Double insulation (safe isolation)
Insulation type (to any type of adjacent devices)	Basic insulation
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.13 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	35.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +70 °C
Surrounding air (operating) temperature for UL	−25 … +60 °C
Surrounding air temperature (storage)	−40 … +85 °C
Processing temperature	−25 … +50 °C
Max. temperature rise of connection cable	35 K
Relative humidity	95% (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 61010-2-201

» Accessories Page 186

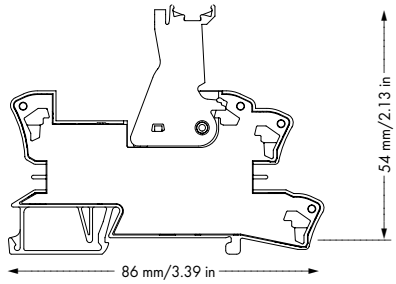
Solid-State Relay Module
788 Series





Solid-State Relay Module; Output voltage range: 0 … 24 VDC; Limiting continuous current: 3.5 A; 2-wire connection; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	788-700	20

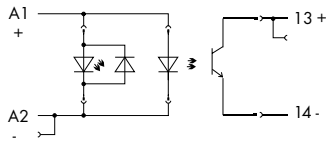


Note:
A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.

Control Circuit	
Input voltage range (low level)	0 … 8 VDC
Input voltage range (high level)	18 … 30 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	3.5 A
Nominal output voltage	24 VDC
Output voltage range	0 … 24 VDC
Voltage drop (output) max.	≤ 0.1 VDC
Turn-on time	≤ 50 µs
Turn-off time	≤ 600 µs
Switching frequency	≤ 100 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	41.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–20 … +60 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508

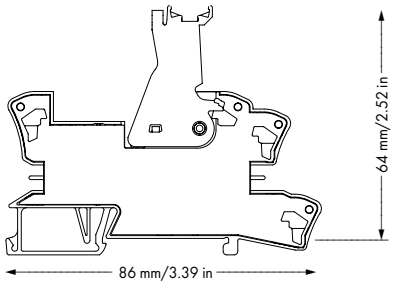
» Accessories Page 186

Solid-State Relay Module
788 Series

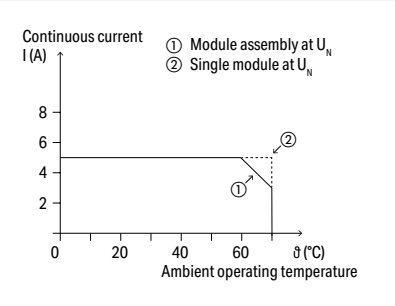


Solid-State Relay Module; Output voltage range: 0 … 30 VDC; Limiting continuous current: 5 A; 2-wire connection; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.3 mA	**788-701**	10



Note:
A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.



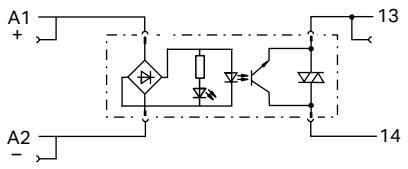
Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 2.5 VDC
Input voltage range (high level)	15 … 30 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	5 A
Nominal output voltage	24 VDC
Output voltage range	0 … 30 VDC
Voltage drop (output) max.	≤ 0.3 VDC
Turn-on time	≤ 50 µs
Turn-off time	≤ 600 µs
Switching frequency	≤ 100 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	47 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature UL (operation at U_N)	–40 … +40 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508 (max. 40 °C/4.7 A)

» Accessories Page 186

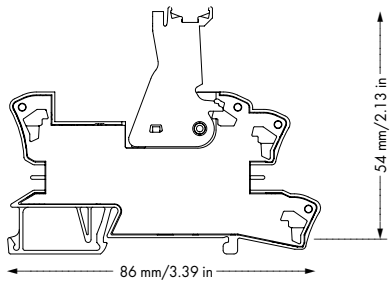
Solid-State Relay Module
788 Series

Similar to picture

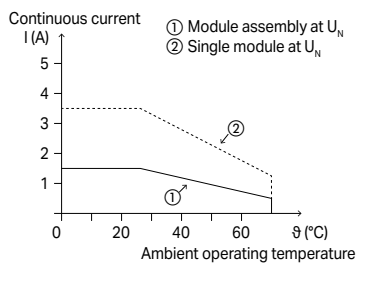


Solid-State Relay Module; Output voltage range: 12 … 275 VAC; Limiting continuous current: 3.5 A; 2-wire connection; Status indicator: green; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	13 mA	788-730	20



Note:
Optocouplers and solid-state relays are designed for use in signal processing networks that are not supplied by the low-voltage power grid.

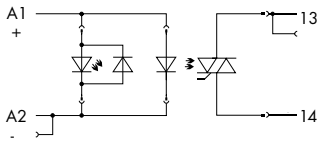


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 3 VDC
Input voltage range (high level)	10 … 30 VDC
Power loss (max.) $P_{l\,(max.)}$	0.5 W
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	3.5 A; 1.3 A (UL)
Nominal output voltage	230 VAC
Output voltage range	12 … 275 VAC
Voltage drop (output) max.	≤ 1.1 V
Switching current (min.)	1 mA
Turn-on time	≤ 10 µs
Turn-off time	≤ 10 µs
Switching frequency	50 / 60 kHz
Signaling	
Status indicator	Green LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Double insulation (safe isolation)
Insulation type (to any type of adjacent devices)	Basic insulation
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.13 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	42 g
Environmental Requirements	
Surrounding air temperature (operation at $_{UN}$)	-25 … +70 °C
Surrounding air temperature UL (operation at U_N)	-25 … +60 °C
Surrounding air temperature (storage)	-40 … +85 °C
Processing temperature	-25 … +50 °C
Max. temperature rise of connection cable	35 K
Relative humidity	95% (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

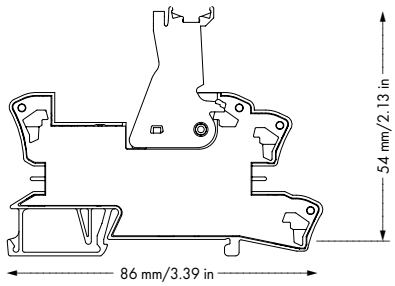
» Accessories Page 186

Solid-State Relay Module
788 Series



Solid-State Relay Module; Output voltage range: 24 … 240 VAC; Limiting continuous current: 1 A; 2-wire connection; Zero-voltage switching; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	788-720	20

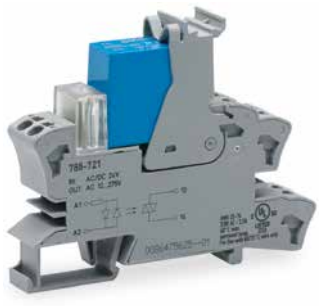


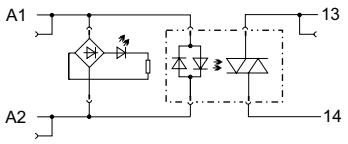
Note:
A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.

Control Circuit	
Input voltage range (low level)	0 … 4 VDC
Input voltage range (high level)	18 … 30 VDC
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	1 A
Nominal output voltage	230 VAC
Output voltage range	24 … 240 VAC
Voltage drop (output) max.	≤ 1.1 VAC
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Switching frequency	50 Hz / 60 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.75 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	41.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–20 … +60 °C
Surrounding air temperature UL (operation at U_N)	–20 … +40 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508 (max. 40 °C/2.5 A)

» Accessories Page 186

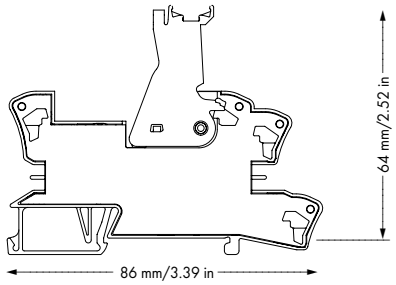
Solid-State Relay Module
788 Series



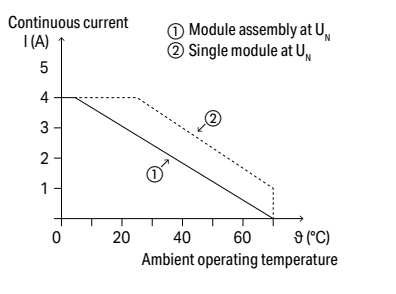


Solid-State Relay Module; Output voltage range: 12 … 275 VAC; Limiting continuous current: 4 A; 2-wire connection; Zero-voltage switching; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VAC/DC	10 mA	788-721	10



Note:
A separator plate (e.g., 209-191) must be used for voltages greater than 250 V between adjacent relay modules and for compliance with the reinforced insulation requirements.

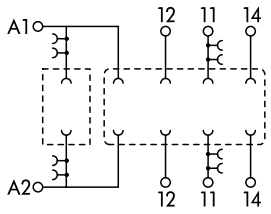


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 2.5 VAC/DC
Input voltage range (high level)	15 … 30 VAC/DC
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	4 A
Nominal output voltage	230 VAC
Output voltage range	12 … 275 VAC (50/60 Hz)
Voltage drop (output) max.	≤ 1.1 VAC
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Switching frequency	50 Hz / 60 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	4 kV_{rms}
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	49.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–20 … +70 °C
Surrounding air temperature UL (operation at U_N)	–20 … +40 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 61000-6-2; EN 61000-6-3; EN 61373; EN 61010-2-201; UL 508 (max. 40 °C/2.5 A)

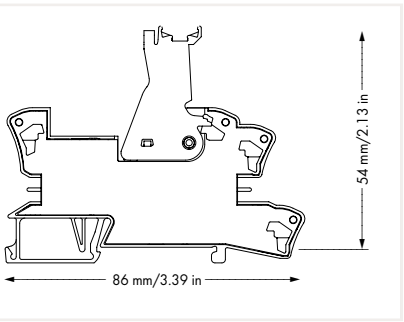
» Accessories Page 186

Relay Socket
788 Series



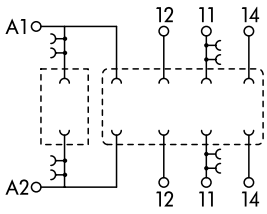
Relay Socket; 1 changeover contact;
for 15 mm basic relays

	Item No.	Pack. Unit
	788-100	20



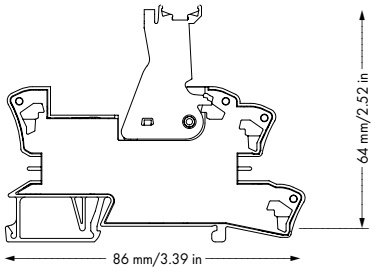
Control Circuit	
Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 … 250 VAC/DC (depends on relay)
Load Circuit	
Number of changeover/switchover contacts	1
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV_{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms} (depends on relay)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	54 mm / 2.126 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	31.25 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C (depends on relay)
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

Relay Socket
788 Series



Relay Socket; 1 changeover contact;
for 25 mm basic relays

	Item No.	Pack. Unit
	788-101	15

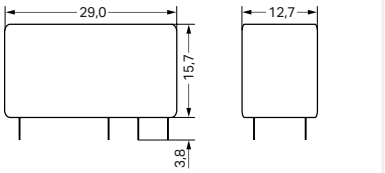


Control Circuit	
Nominal input voltage U_N	250 VAC/DC (depends on relay)
Input voltage range	0 … 250 VAC/DC (depends on relay)
Load Circuit	
Number of changeover/switchover contacts	1
Limiting continuous current	16 A
Switching voltage (max.)	250 VAC
Switching power (resistive) max.	4000 VA (AC)
Safety and Protection	
Rated voltage	250 V
Rated surge voltage	4 kV
Pollution degree	3
Dielectric strength, control/load circuit (AC, 1 min)	6 kV_{rms} (depends on relay)
Dielectric strength, open contact (AC, 1 min)	1 kV_{rms} (depends on relay)
Protection type	IP20
Connection Data	
Connection technology	Push-in CAGE CLAMP®
Solid conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Fine-stranded conductor	0.34 … 2.5 mm² / 22 … 14 AWG
Strip Length	9 … 10 mm / 0.35 … 0.39 inch
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	64 mm / 2.52 inch
Depth	86 mm / 3.386 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	31 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−40 … +70 °C (depends on relay)
Surrounding air temperature (storage)	−40 … +80 °C
Processing temperature	−25 … +50 °C
Standards and Specifications	
Standards/specifications	EN 60664-1

Basic solid-state relay
788 Series

Basic solid-state relay; Nominal input voltage 24 VDC; Output voltage range 0 … 35 VDC; Limiting continuous current 5 A; Module width 12 mm; Module height 15 mm

U_N	I_N	Item No.	Pack. Unit
24 VDC	11 mA	**788-754**	20

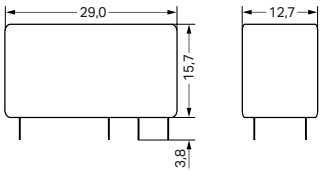


Control circuit	
Input voltage range (low level)	DC 0 … 9 V
Input voltage range (high level)	DC 10 … 30 V
Load circuit	
Circuit type	2-wire connection
Limiting continuous current	5 A
Nominal output voltage	DC 24 V
Output voltage range	DC 0 … 35 V
Voltage drop at output (max.)	≤ DC 0.3 V
Switching current (min.)	1 mA
Turn-on time	≤ 50 µs
Turn-off time	≤ 250 µs
Switching frequency	≤ 3 kHz
Signaling	
Status indicator	Green LED
Safety and protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kVrms
Physical data	
Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch
Mechanical data	
Mounting type	Pluggable module
Material data	
Weight	4 g
Environmental requirements	
Surrounding air temperature (operation at U_N)	-30 … 80 °C
Surrounding air temperature (storage)	-40 … 100 °C
Standards and specifications	
Standards/Specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

Basic solid-state relay
788 Series

Basic solid-state relay; Nominal input voltage 24 VDC; Output voltage range 12 … 275 VAC; Limiting continuous current 3 A; Module width 12 mm; Module height 15 mm

U_N	I_N	Item No.	Pack. Unit
24 VDC	12 mA	788-755	20



Control circuit	
Input voltage range (low level)	DC 0 … 9 V
Input voltage range (high level)	DC 10 … 30 V
Load circuit	
Circuit type	2-wire connection; Zero-voltage switching
Limiting continuous current	3.5 A
Inrush current (resistive) (max.)	(AC) 120 A
Nominal output voltage	AC 230 V
Output voltage range	AC 12 … 275 V
Voltage drop at output (max.)	≤ AC 1.1 V
Switching current (min.)	50 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Switching frequency	50 Hz / 60 Hz
Signaling	
Status indicator	Green LED
Safety and protection	
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kVrms
Physical data	
Width	12.7 mm / 0.5 inch
Height from the surface	15.7 mm / 0.618 inch
Depth	29 mm / 1.142 inch
Mechanical data	
Mounting type	Pluggable module
Material data	
Weight	4 g
Environmental requirements	
Surrounding air temperature (operation at U_N)	-30 … 80 °C
Surrounding air temperature (storage)	-40 … 100 °C
Standards and specifications	
Standards/Specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

Accessories

Accessories for relay modules; Operation status indicator: red

U_N	Power consumption at U_N	Item No.	Pack. Unit
24 VDC	2.4 mA	**788-120**	50(2x25)
48 VDC	1.9 mA	**788-121**	50(2x25)
110 VDC	1.9 mA	**788-122**	50(2x25)
24 VAC	2.1 mA	**788-123**	50(2x25)
115 VAC	1.7 mA	**788-124**	50(2x25)
230 VAC	1.6 mA	**788-125**	50(2x25)

Twin ferrule; Sleeve for 2 x 1 mm² / 2 x 18 AWG; red, insulated; 12 mm long

Color	Item No.	Pack. Unit
red	216-542	500

Comb-style jumper bar; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	**788-113**	200 (8x25)
3-way	**788-114**	100 (4x25)
4-way	**788-115**	100 (4x25)
6-way	**788-116**	100 (4x25)
7-way	**788-117**	100 (4x25)
2-way (1 to 3)	**788-118**	100 (4x25)

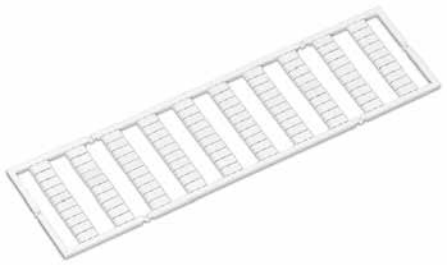
Push-in type jumper bar; light gray; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	**859-402**	200 (8x25)

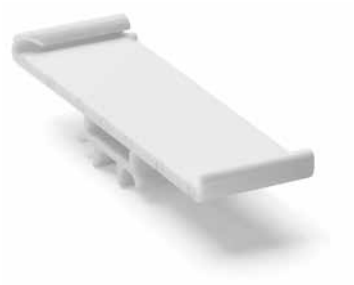
Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

	Item No.	Pack. Unit
	210-720	50

Accessories

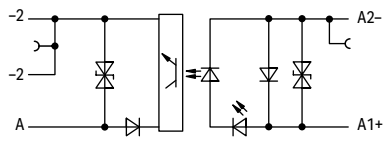


WMB marker card; 10 strips with 10 markers; white; with black printing		
Marking	Item No.	Pack. Unit
plain	793-501	5 cards
1 … 10 (10 x)	793-502	5 cards
11 … 20 (10 x)	793-503	5 cards
21 … 30 (10 x)	793-504	5 cards
31 … 40 (10 x)	793-505	5 cards
41 … 50 (10 x)	793-506	5 cards
1 … 50 (2 x)	793-566	5 cards



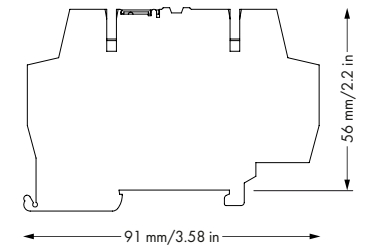
Group marker carrier; for WMB and Mini-WSB marker slots; 10 mm wide		
	Item No.	Pack. Unit
	209-145	100

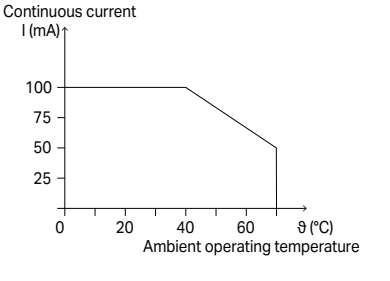
Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 7 … 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	4 mA	859-791	10



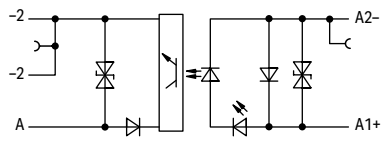


Current-Carrying Capacity Curve

Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	16 … 30 VDC
Nominal input current at U_N	4 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	7 … 60 VDC
Voltage drop (output) max.	≤ 1.5 VDC
Leakage current at rated voltage	≤ 30 µA
Turn-on time	≤ 20 µs
Turn-off time	≤ 120 µs
Switching frequency	≤ 3 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-40 … +70 °C
Surrounding air temperature (storage)	-40 … +70 °C
Processing temperature	-25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 61373; UL 508

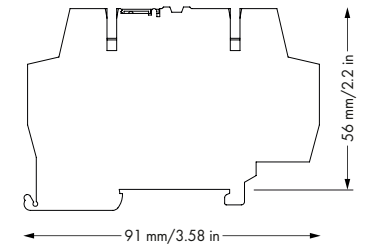
» Accessories Page 221

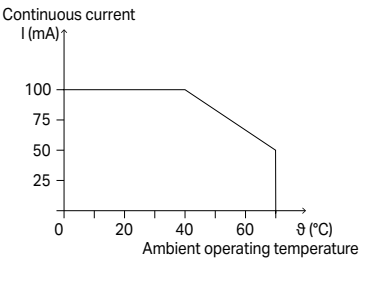
Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 9 … 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	4.2 mA	859-794	10



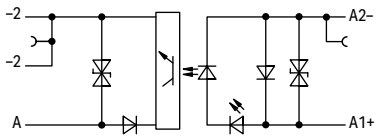


Current-Carrying Capacity Curve

Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	16 … 30 VDC
Nominal input current at U_N	4.2 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	9 … 60 VDC
Voltage drop (output) max.	≤ 2 VDC
Leakage current at rated voltage	≤ 25 µA
Turn-on time	≤ 20 µs
Turn-off time	≤ 120 µs
Switching frequency	≤ 1.5 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	17.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-40 … +70 °C
Surrounding air temperature (storage)	-40 … +70 °C
Processing temperature	-25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 61373; UL 508

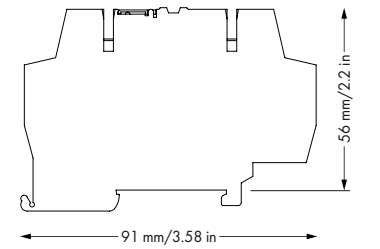
» Accessories Page 221

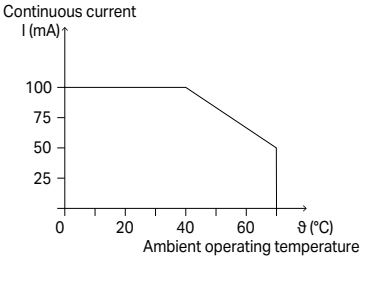
Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 3 … 30 VDC; Limiting continuous current: 0.1 A; 2-wire connection; for railway applications; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	17 mA	859-795	10



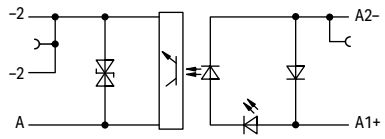


Current-Carrying Capacity Curve

Control Circuit	
Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 … 0.8 VDC
Input voltage range (high level)	2 … 6.25 VDC
Nominal input current at U_N	17 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	3 … 30 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 25 µA
Turn-on time	≤ 10 µs
Turn-off time	≤ 50 µs
Switching frequency	≤ 10 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-40 … +70 °C
Surrounding air temperature (storage)	-40 … +70 °C
Processing temperature	-25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-3; EN 61000-6-4; EN 50121-3-2; EN 61373; UL 508

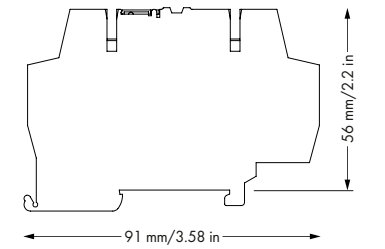
» Accessories Page 221

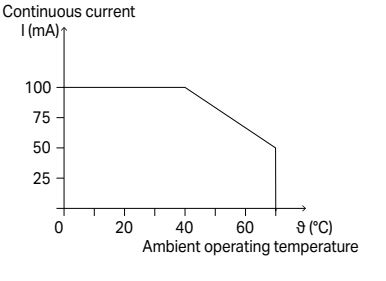
Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 3 … 30 VDC; Limiting continuous current: 0.1 A; 2-wire connection; for railway applications; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9.2 mA	859-796	10



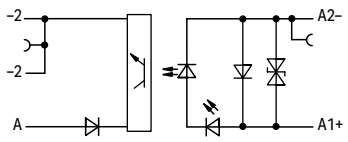


Current-Carrying Capacity Curve

Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	16.8 … 30 VDC
Nominal input current at U_N	9.2 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	3 … 30 VDC
Voltage drop (output) max.	≤ 1 VDC
Leakage current at rated voltage	≤ 25 µA
Turn-on time	≤ 10 µs
Turn-off time	≤ 50 µs
Switching frequency	≤ 10 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.13 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 61373; UL 508

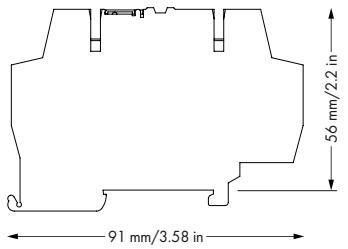
» Accessories Page 221

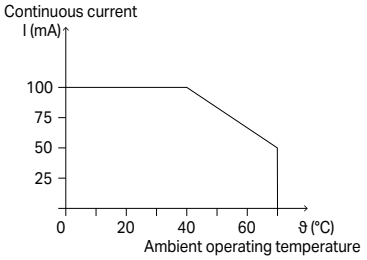
Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 9 … 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	4 mA	859-798	10



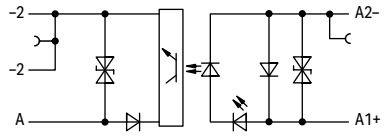


Current-Carrying Capacity Curve

Control Circuit	
Nominal input voltage U_N	12 VDC
Input voltage range (low level)	0 … 4.8 VDC
Input voltage range (high level)	8.4 … 15 VDC
Nominal input current at U_N	4 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	9 … 60 VDC
Voltage drop (output) max.	≤ 2 VDC
Turn-on time	≤ 20 µs
Turn-off time	≤ 120 µs
Switching frequency	≤ 1.5 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	17.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-40 … +70 °C
Surrounding air temperature (storage)	-40 … +70 °C
Processing temperature	-25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 61373

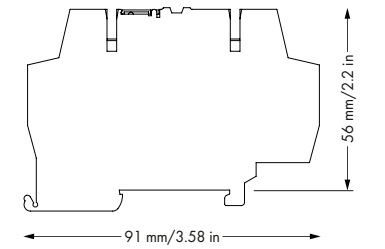
» Accessories Page 221

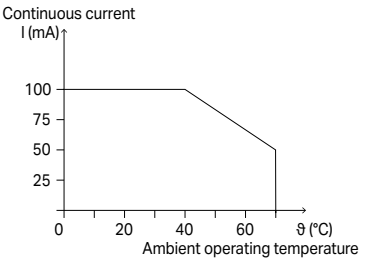
Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 3 … 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; for railway applications; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	7.5 mA	859-793	10



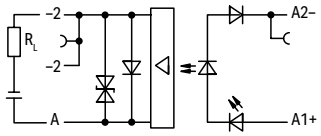


Current-Carrying Capacity Curve

Control Circuit	
Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 … 0.8 VDC
Input voltage range (high level)	2 … 6.25 VDC
Nominal input current at U_N	7.5 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output voltage range	3 … 60 VDC
Voltage drop (output) max.	≤ 2.5 VDC
Leakage current at rated voltage	≤ 25 µA
Turn-on time	≤ 20 µs
Turn-off time	≤ 120 µs
Switching frequency	≤ 1.5 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	17.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 50121-3-2; EN 61373; UL 508

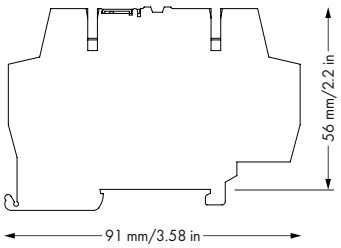
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 3 … 30 VDC; Limiting continuous current: 3 A; 2-wire connection; Status indicator: red; 6 mm wide

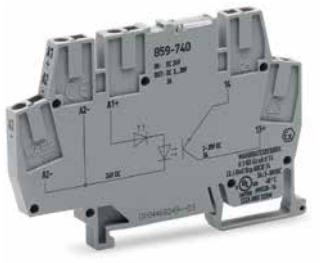
U_N	I_N	Item No.	Pack. Unit
24 VDC	14 mA	859-730	10

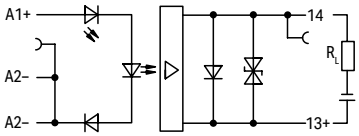


Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	15 … 27 VDC
Nominal input current at U_N	14 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	3 A
Peak output current	25 A
Output voltage range	3 … 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 25 µs
Turn-off time	≤ 450 µs
Switching frequency	≤ 350 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508

» Accessories Page 221

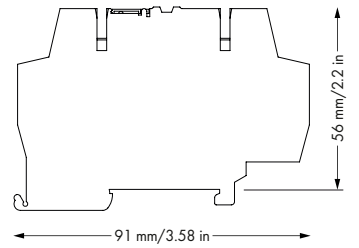
Optocoupler Module
859 Series





Optocoupler Module; Output voltage range: 3 … 30 VDC; Limiting continuous current: 3 A; 2-wire connection; Status indicator: yellow; 6 mm wide

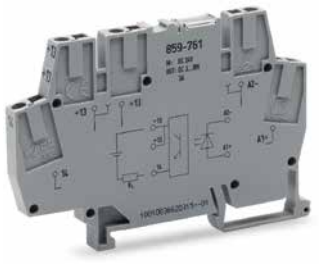
U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	859-740	10

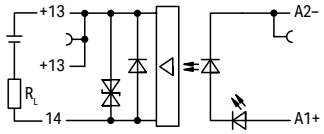


Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 9 VDC
Input voltage range (high level)	19 … 27 VDC
Nominal input current at U_N	7 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	3 A
Peak output current	25 A
Output voltage range	3 … 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 25 µs
Turn-off time	≤ 450 µs
Switching frequency	≤ 350 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

» Accessories Page 221

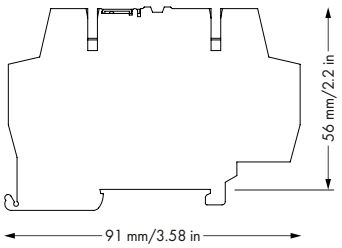
Optocoupler Module
859 Series





Optocoupler Module; Output voltage range: 3 … 30 VDC; Limiting continuous current: 3 A; 2-wire connection; Status indicator: red; 6 mm wide

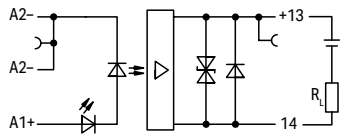
U_N	I_N	Item No.	Pack. Unit
24 VDC	14 mA	**859-761**	10



Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	15 … 27 VDC
Nominal input current at U_N	14 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	3 A
Peak output current	25 A
Output voltage range	3 … 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 25 µs
Turn-off time	≤ 450 µs
Switching frequency	≤ 350 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

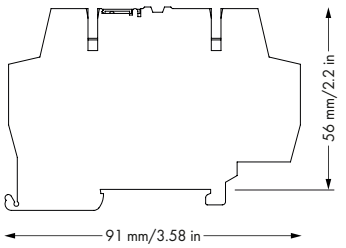
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 3 … 30 VDC; Limiting continuous current: 3 A; 2-wire connection; Status indicator: yellow; 6 mm wide

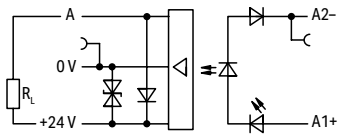
U_N	I_N	Item No.	Pack. Unit
24 VDC	7 mA	859-762	10



Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 9 VDC
Input voltage range (high level)	19 … 27 VDC
Nominal input current at U_N	7 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	3 A
Peak output current	25 A
Output voltage range	3 … 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 25 µs
Turn-off time	≤ 450 µs
Switching frequency	≤ 350 Hz
Signaling	
Status indicator	Yellow LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

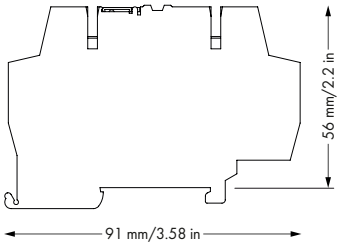
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 10 … 30 VDC; Limiting continuous current: 3 A; 3-wire connection; Low-side switching; Status indicator: red; 6 mm wide

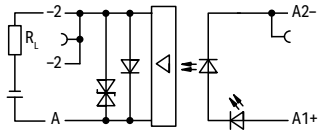
U_N	I_N	Item No.	Pack. Unit
24 VDC	4 mA	859-720	10



Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 3 VDC
Input voltage range (high level)	16 … 30 VDC
Nominal input current at U_N	4 mA
Load Circuit	
Circuit type	3-wire connection; low-side switching
Limiting continuous current	3 A
Peak output current	20 A
Output voltage range	10 … 30 VDC
Voltage drop (output) max.	≤ 0.5 VDC
Leakage current at rated voltage	≤ 25 µA
Turn-on time	≤ 30 µs
Turn-off time	≤ 75 µs
Rise time (t_{10-90})	16 µs
Drop-out time (t_{10-90})	20 µs
Switching frequency	≤ 1 kHz (< 0.5 A; ≤ 2 kHz / < 1 A; ≤ 1 kHz / < 2 A)
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508

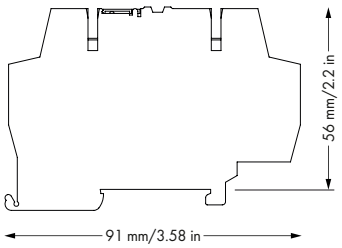
» Accessories Page 221

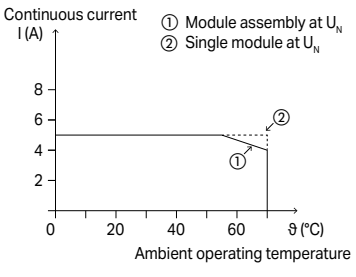
Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 3 … 30 VDC; Limiting continuous current: 5 A; 2-wire connection; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	3.5 mA	859-737	10



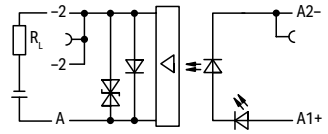


Current-Carrying Capacity Curve

Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	15 … 30 VDC
Nominal input current at U_N	3.5 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	5 A
Peak output current	25 A
Output voltage range	3 … 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 200 µs
Turn-off time	≤ 450 µs
Switching frequency	≤ 100 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	19.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-25 … +70 °C
Surrounding air temperature (storage)	-40 … +70 °C
Processing temperature	-25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

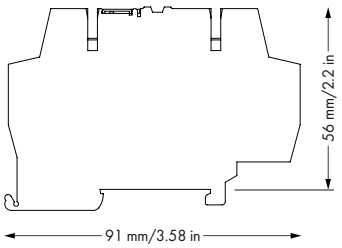
» Accessories Page 221

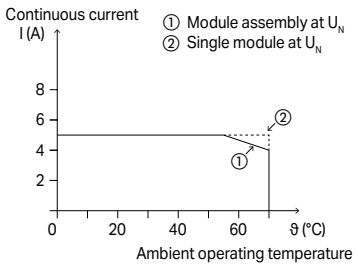
Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 3 … 30 VDC; Limiting continuous current: 5 A; 2-wire connection; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	7.2 mA	859-738	10



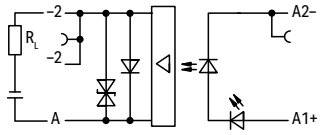


Current-Carrying Capacity Curve

Control Circuit	
Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 … 2 VDC
Input voltage range (high level)	4 … 6 VDC
Nominal input current at U_N	7.2 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	5 A
Peak output current	25 A
Output voltage range	3 … 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 200 µs
Turn-off time	≤ 450 µs
Switching frequency	≤ 100 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

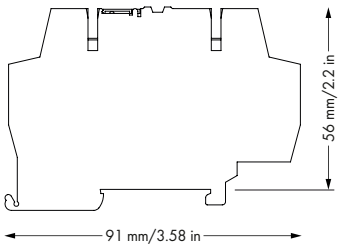
» Accessories Page 221

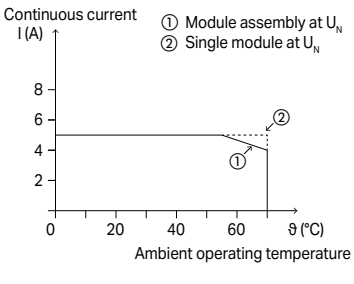
Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 3 … 30 VDC; Limiting continuous current: 5 A; 2-wire connection; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
12 VDC	3.2 mA	859-739	10



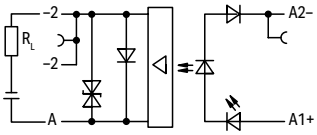


Current-Carrying Capacity Curve

Control Circuit	
Nominal input voltage U_N	12 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	9.6 … 14.4 VDC
Nominal input current at U_N	3.2 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	5 A
Peak output current	25 A
Output voltage range	3 … 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 200 µs
Turn-off time	≤ 450 µs
Switching frequency	≤ 100 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	19.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

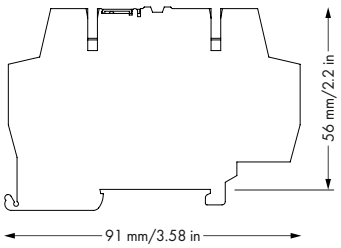
» Accessories Page 221

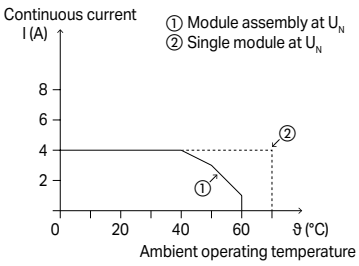
Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 10 … 53 VDC; Limiting continuous current: 4 A; 2-wire connection; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
12 … 48 VDC	5 mA	**859-744**	10



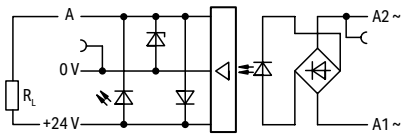


Current-Carrying Capacity Curve

Control Circuit	
Nominal input voltage U_N	12 … 48 VDC
Input voltage range (low level)	0 … 4 VDC
Input voltage range (high level)	10 … 53 VDC
Nominal input current at U_N	5 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	4 A
Peak output current	30 A
Output voltage range	3 … 53 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 200 µs
Turn-off time	≤ 420 µs
Switching frequency	≤ 100 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	19.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	-40 … +70 °C
Surrounding air temperature (storage)	-40 … +70 °C
Processing temperature	-25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

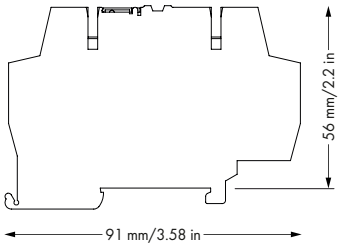
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 20 … 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; Low-side switching; Status indicator: red; 6 mm wide

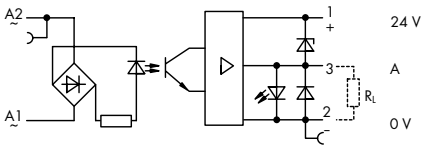
U_N	I_N	Item No.	Pack. Unit
230 VAC	0.6 mA	859-712	10



Control Circuit	
Nominal input voltage U_N	230 VAC
Input voltage range (low level)	0 … 90 VAC
Input voltage range (high level)	175 … 270 VAC
Nominal input current at U_N	0.6 mA
Load Circuit	
Circuit type	3-wire connection; low-side switching
Limiting continuous current	0.5 A
Output voltage range	20 … 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 µA
Output closed-circuit current (without load) max.	11 mA
Turn-on time	≤ 30 ms
Turn-off time	≤ 30 ms
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Circuit type	Mains circuits
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	20.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508

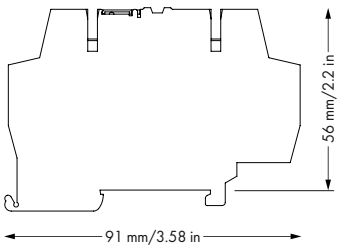
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 20 … 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; High-side switching; Status indicator: red; 6 mm wide

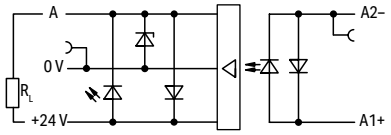
U_N	I_N	Item No.	Pack. Unit
230 VAC	0.6 mA	859-772	10



Control Circuit	
Nominal input voltage U_N	230 VAC
Input voltage range (low level)	0 … 90 VAC
Input voltage range (high level)	175 … 270 VAC
Nominal input current at U_N	0.6 mA
Load Circuit	
Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output voltage range	20 … 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 µA
Output closed-circuit current (without load) max.	12 mA
Turn-on time	≤ 30 ms
Turn-off time	≤ 30 ms
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Circuit type	Mains circuits
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	20.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508

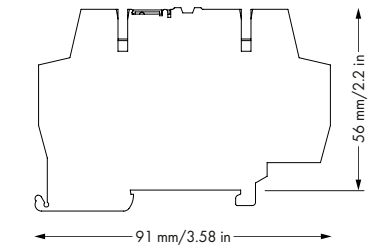
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 20 … 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; Low-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	9.6 mA	859-702	1

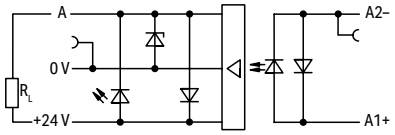


Control Circuit	
Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 … 1 VDC
Input voltage range (high level)	4 … 6.25 VDC
Nominal input current at U_N	9.6 mA
Load Circuit	
Circuit type	3-wire connection; low-side switching
Limiting continuous current	0.5 A
Output voltage range	20 … 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 µA
Output closed-circuit current (without load) max.	11 mA
Turn-on time	≤ 7 µs
Turn-off time	≤ 15 µs
Switching frequency	≤ 10 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508

» Accessories Page 221

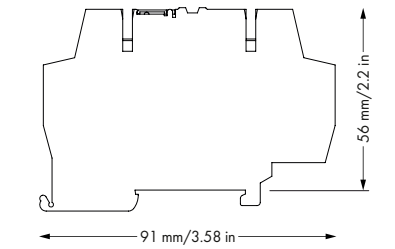
Optocoupler Module
859 Series

Similar to pictured device



Optocoupler Module; Output voltage range: 20 … 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; Low-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

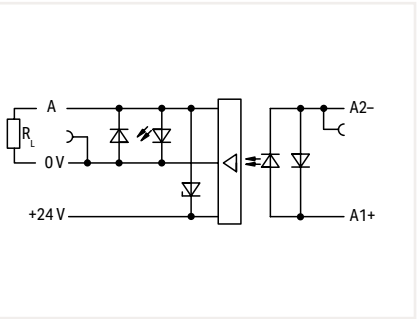
U_N	I_N	Item No.	Pack. Unit
24 VDC	7.7 mA	859-708	1



Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	19 … 30 VDC
Nominal input current at U_N	7.7 mA
Load Circuit	
Circuit type	3-wire connection; low-side switching
Limiting continuous current	0.5 A
Output voltage range	20 … 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 µA
Output closed-circuit current (without load) max.	11 mA
Turn-on time	≤ 10 µs
Turn-off time	≤ 10 µs
Switching frequency	≤ 10 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508

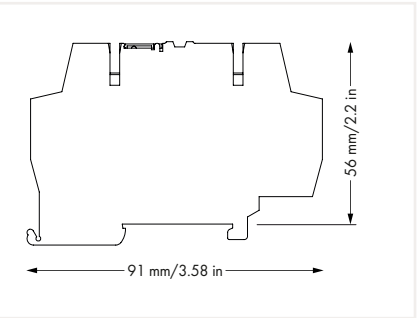
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 20 … 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; High-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

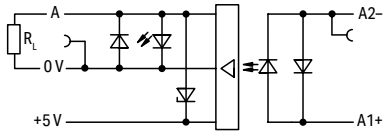
U_N	I_N	Item No.	Pack. Unit
5 VDC	10 mA	859-752	1



Control Circuit	
Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 … 1 VDC
Input voltage range (high level)	4 … 6 VDC
Nominal input current at U_N	10 mA
Load Circuit	
Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output voltage range	20 … 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 µA
Output closed-circuit current (without load) max.	12.5 mA
Turn-on time	≤ 15 µs
Turn-off time	≤ 30 µs
Switching frequency	≤ 10 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	17,8 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508

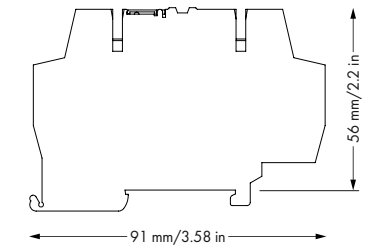
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 4 … 6.25 VDC; Limiting continuous current: 0.5 A; 3-wire connection; High-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

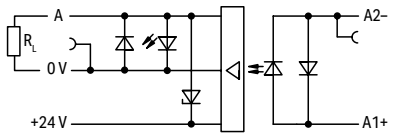
U_N	I_N	Item No.	Pack. Unit
24 VDC	11 mA	859-756	1



Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	18 … 30 VDC
Nominal input current at U_N	11 mA
Load Circuit	
Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output voltage range	4 … 6.25 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 µA
Output closed-circuit current (without load) max.	4.5 mA
Turn-on time	≤ 15 µs
Turn-off time	≤ 30 µs
Switching frequency	≤ 10 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.7 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508

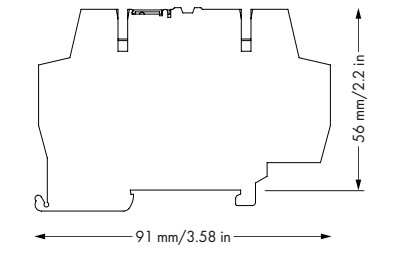
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 20 … 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; High-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

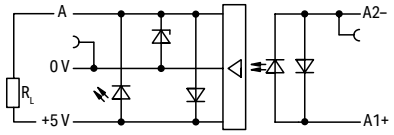
U_N	I_N	Item No.	Pack. Unit
24 VDC	8 mA	859-758	10



Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	18 … 30 VDC
Nominal input current at U_N	8 mA
Load Circuit	
Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output voltage range	20 … 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 µA
Output closed-circuit current (without load) max.	11 mA
Turn-on time	≤ 15 µs
Turn-off time	≤ 30 µs
Switching frequency	≤ 10 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508

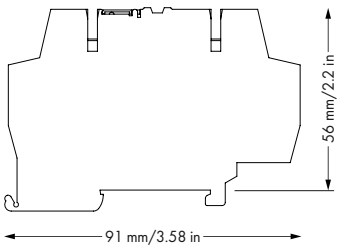
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 4 … 6.25 VDC; Limiting continuous current: 0.5 A; 3-wire connection; Low-side switching; Frequency: 10 kHz; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	11 mA	859-706	1

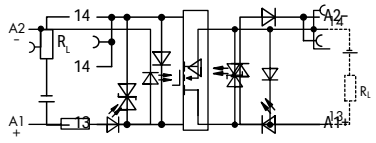


Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	18 … 30 VDC
Nominal input current at U_N	11 mA
Load Circuit	
Circuit type	3-wire connection; low-side switching
Limiting continuous current	0.5 A
Output voltage range	4 … 6.25 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 µA
Output closed-circuit current (without load) max.	7 mA
Turn-on time	≤ 7 µs
Turn-off time	≤ 15 µs
Switching frequency	≤ 10 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508

» Accessories Page 221

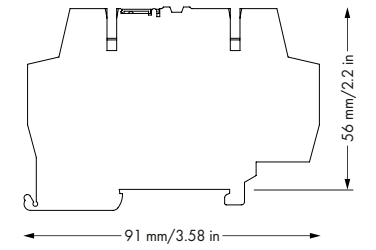
Optocoupler Module
859 Series

Similar to pictured device



Optocoupler Module; Output voltage range: 3 … 30 VDC; Limiting continuous current: 0.5 A; 2-wire connection; Status indicator: red; 6 mm wide

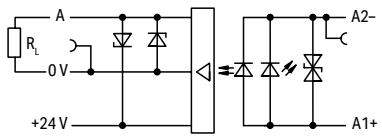
U_N	I_N	Item No.	Pack. Unit
12 VDC	9.2 mA	859-797	10



Control Circuit	
Nominal input voltage U_N	12 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	9 … 16 VDC
Nominal input current at U_N	9.2 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.5 A
Peak output current	2.7 A
Output voltage range	3 … 30 VDC
Voltage drop (output) max.	≤ 0.2 VDC
Turn-on time	≤ 15 µs
Turn-off time	≤ 100 µs
Switching frequency	≤ 2.5 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	18.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; UL 508

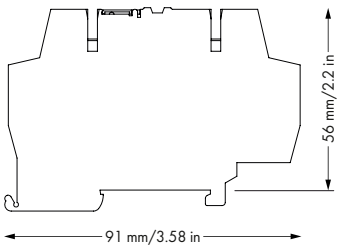
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 20 … 28.8 VDC; Limiting continuous current: 0.1 A; 3-wire connection; High-side switching; Frequency: 100 kHz; Status indicator: red; 6 mm wide

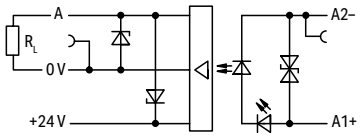
U_N	I_N	Item No.	Pack. Unit
5 VDC	16.5 mA	**859-753**	1



Control Circuit	
Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 … 1 VDC
Input voltage range (high level)	4 … 6.25 VDC
Nominal input current at U_N	16.5 mA
Load Circuit	
Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.1 A
Peak output current	0.8 A
Output voltage range	20 … 28.8 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 µA
Output closed-circuit current (without load) max.	7 mA
Turn-on time	≤ 0.5 µs
Turn-off time	≤ 5 µs
Switching frequency	≤ 100 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	15.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373; UL 508

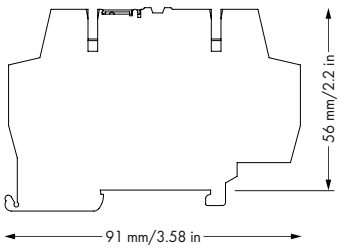
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 20 … 28.8 VDC; Limiting continuous current: 0.1 A; 3-wire connection; High-side switching; Frequency: 100 kHz; Status indicator: red; 6 mm wide

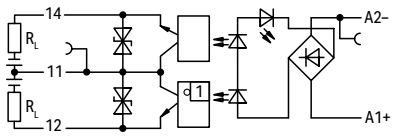
U_N	I_N	Item No.	Pack. Unit
24 VDC	9 mA	859-759	1



Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	20 … 30 VDC
Nominal input current at U_N	9 mA
Load Circuit	
Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.1 A
Peak output current	0.8 A
Output voltage range	20 … 28.8 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 10 µA
Output closed-circuit current (without load) max.	7 mA
Turn-on time	≤ 0.5 µs
Turn-off time	≤ 2 µs
Switching frequency	≤ 100 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	19.1 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; EN 61373

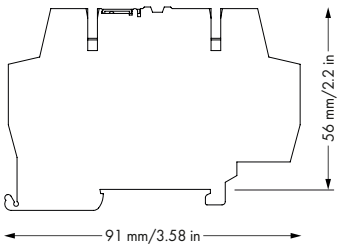
» Accessories Page 221

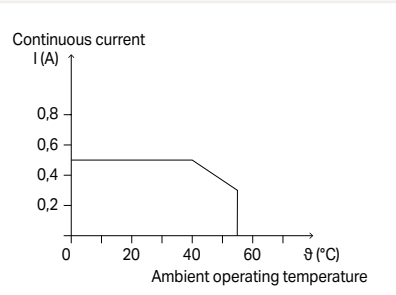
Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 3 … 30 VDC; Limiting continuous current: 0.5 A; 1 changeover contact; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	5.3 mA	859-732	1



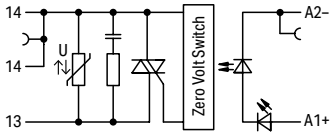


Current-Carrying Capacity Curve

Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	15 … 42 VDC
Nominal input current at U_N	5.3 mA
Load Circuit	
Circuit type	3-wire connection; changeover contact output
Limiting continuous current	0.5 A
Peak output current	4 A
Output voltage range	3 … 30 VDC
Voltage drop (output) max.	≤ 1.5 VDC
Leakage current at rated voltage	≤ 1.5 mA
Switching current (min.)	0.5 mA
Turn-on time	≤ 25 µs
Turn-off time	≤ 150 µs
Switching frequency	≤ 1.5 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Overvoltage category	II
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3.51 kV_{rms}
Insulation type (control/load circuit)	Basic insulation
Insulation type (adjacent devices)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	19.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–25 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; UL 508

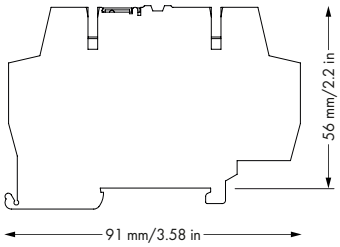
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 24 … 260 VAC; Limiting continuous current: 0.5 A; 2-wire connection; Zero-cross switching; Status indicator: red; 6 mm wide

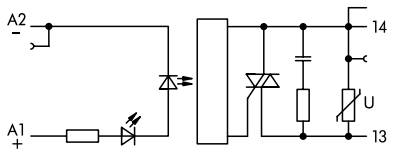
U_N	I_N	Item No.	Pack. Unit
24 VDC	6 mA	859-734	1



Control Circuit	
Nominal input voltage U_N	24 VDC
Input voltage range (low level)	0 … 5 VDC
Input voltage range (high level)	19 … 28.8 VDC
Nominal input current at U_N	6 mA
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	0.5 A
Peak output current	30 A
Output voltage range	24 … 260 VAC (50 … 60 Hz)
Voltage drop (output) max.	≤ 1.2 VAC
Leakage current at rated voltage	≤ 1 mA
Switching current (min.)	10 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Circuit type	Mains circuits
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	20.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; UL 508

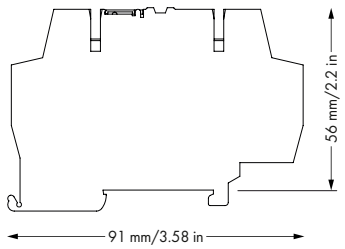
» Accessories Page 221

Optocoupler Module
859 Series



Optocoupler Module; Output voltage range: 24 … 260 VAC; Limiting continuous current: 0.5 A; 2-wire connection; Zero-cross switching; Status indicator: red; 6 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	7.7 mA	859-902	1



Control Circuit	
Nominal input voltage U_N	5 VDC
Input voltage range (low level)	0 … 1 VDC
Input voltage range (high level)	4 … 6.25 VDC
Nominal input current at U_N	7.7 mA
Load Circuit	
Circuit type	2-wire connection; zero-voltage switching
Limiting continuous current	0.5 A
Peak output current	30 A
Output voltage range	24 … 260 VAC (50 … 60 Hz)
Voltage drop (output) max.	≤ 1.2 VAC
Leakage current at rated voltage	≤ 1 mA
Switching current (min.)	50 mA
Turn-on time	≤ 10 ms
Turn-off time	≤ 10 ms
Mains frequency	50 Hz / 60 Hz
Signaling	
Status indicator	Red LED
Safety and Protection	
Rated voltage	300 V
Circuit type	Mains circuits
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Insulation type (control/load circuit)	Reinforced insulation (safe isolation)
Insulation type (between adjacent devices of the the same type)	Reinforced insulation (safe isolation)
Connection Data	
Connection technology	CAGE CLAMP®
Solid conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Fine-stranded conductor	0.08 … 2.5 mm² / 28 … 14 AWG
Strip Length	5 … 6 mm / 0.2 … 0.24 inch
Physical Data	
Width	6 mm / 0.236 inch
Height from upper-edge of DIN-rail	56 mm / 2.205 inch
Depth	91 mm / 3.583 inch
Mechanical Data	
Mounting type	DIN-35 rail
Material Data	
Weight	20.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +55 °C
Surrounding air temperature (storage)	–40 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61000-6-2; EN 61000-6-3; UL 508

» Accessories Page 221

Accessories

Operating tool with a partially insulated shaft; Type 2; (3.5 x 0.5) mm blade

	Item No.	Pack. Unit
	210-720	50

Felt-tip pen; for permanent marking

	Item No.	Pack. Unit
	210-110	200

Test pin; 1 mm Ø; with solder connection for test cable

	Item No.	Pack. Unit
	859-500	100

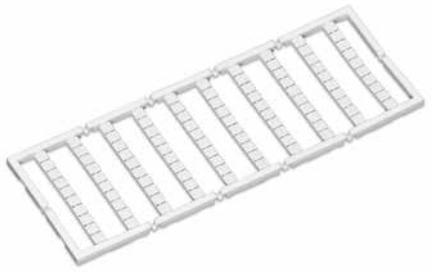
Accessories

End and intermediate plate; 1 mm thick

	Item No.	Pack. Unit
	859-525	100

Push-in type jumper bar; light gray; insulated; 18 A

Description	Item No.	Pack. Unit
2-way	859-402	200 (8x25)
3-way	859-403	200 (8x25)
4-way	859-404	200 (8x25)
5-way	859-405	200 (8x25)
6-way	859-406	100 (4x25)
7-way	859-407	100 (4x25)
8-way	859-408	100 (4x25)
9-way	859-409	100 (4x25)
10-way	859-410	100 (4x25)
Item no. suffixes for colored push-in type jumper bars		
yellow	... /000-029	
red	... /000-005	
blue	... /000-006	

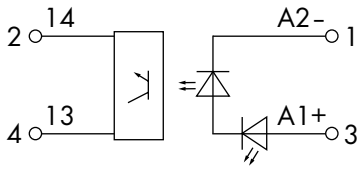


Mini-WSB marker card; Marker width: 5 mm; 10 strips with 10 markers/card

Marking	Item No.	Pack. Unit
plain	248-501	50
1 ... 10 (10 x)	248-502	50
11 ... 20 (10 x)	248-503	50
21 ... 30 (10 x)	248-504	50
31 ... 40 (10 x)	248-505	50
41 ... 50 (10 x)	248-506	50
1 ... 50 (2 x)	248-566	50
K1 ... K10	248-450	50
K11 ... K20	248-451	50
K100	248-452	50
U1 ... U10	248-453	50
U11 ... U20	248-454	50
U100	248-455	50

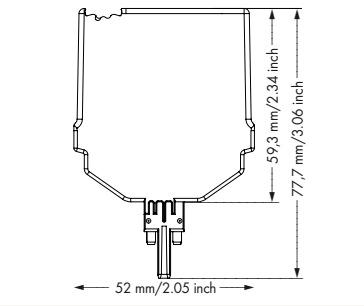
Solid-State Relay
2042 Series

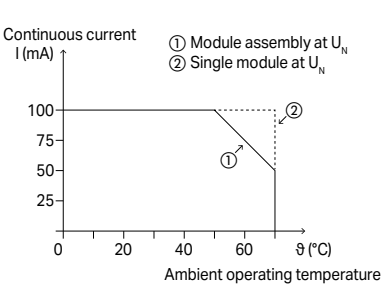
Similar to pictured device



Solid-state relay module; Nominal input voltage: 24 VDC; Output voltage range: 3 … 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Path; Frequency: 10 kHz; Green status indicator; Module width: 10 mm

U_N	I_N	Item No.	Pack. Unit
24 VDC (SELV)	7 mA	2042-7204	1



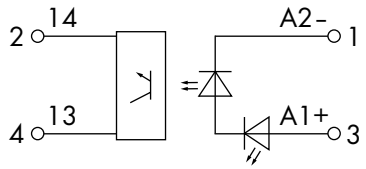


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	16.8 … 30 VDC
Input current range	6 … 8 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Nominal output voltage	24 VDC (SELV)
Output Voltage Range	3 … 60 VDC
Voltage drop (output) max.	≤ 1 VDC
Switching current (min.)	20 µA
Turn-on time	≤ 8 µs
Turn-off time	≤ 14 µs
Switching frequency	≤ 10 kHz
Signaling	
Status indicator	Green LED
Safety and Protection	
Pollution Degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Overvoltage category	II
Physical Data	
Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable relay module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	14.6 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +85 °C
Processing temperature	–25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3

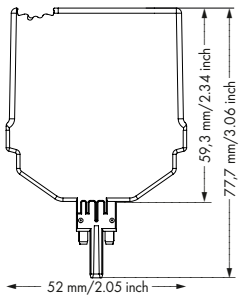
Solid-State Relay
2042 Series

Similar to pictured device



Solid-state relay module; Nominal input voltage: 24 VDC; Limiting continuous current: 4 A; Module width: 10 mm

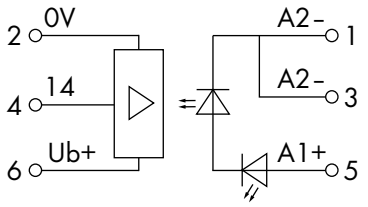
U_N	I_N	Item No.	Pack. Unit
24 VDC (SELV)	3 mA	2042-7504	1



Control Circuit	
Input voltage range (low level)	0 … 6 VDC
Input voltage range (high level)	10 … 53 VDC
Input current range	3 … 5 mA
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	4 A
Nominal output voltage	48 VDC (SELV)
Output Voltage Range	0 … 53 VDC
Voltage drop (output) max.	≤ 1 VDC
Switching current (min.)	20 µA
Turn-on time	≤ 12 µs
Turn-off time	≤ 32 µs
Switching frequency	≤ 300 Hz
Signaling	
Status indicator	Green LED
Safety and Protection	
Pollution Degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Protection type	IP20
Overvoltage category	II
Physical Data	
Width	10.3 mm / 0.406 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable relay module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	17.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +85 °C
Processing temperature	–25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373; EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3

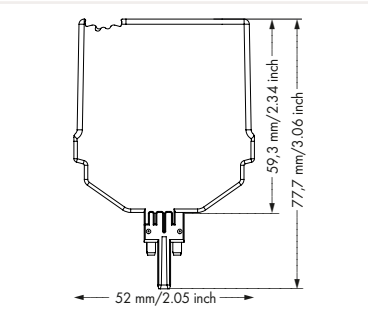
Solid-State Relay
2042 Series

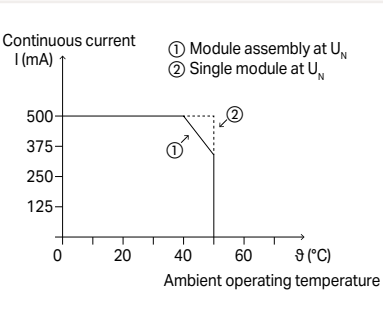
Similar to pictured device



Solid-state relay module; Nominal input voltage: 24 VDC; Limiting continuous current: 0.5 A; Path; Frequency: 100 kHz; Module width: 15 mm

U_N	I_N	Item No.	Pack. Unit
24 VDC (SELV)	7 mA	**2042-7304**	1



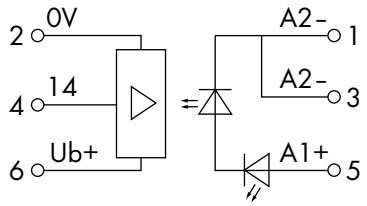


Current-Carrying Capacity Curve

Control Circuit	
Input voltage range (low level)	0 … 6 VDC
Input voltage range (high level)	16.8 … 30 VDC
Input current range	6 … 8 mA
Load Circuit	
Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Nominal output voltage	24 VDC (SELV)
Output Voltage Range	16.8 … 30 VDC
Voltage drop (output) max.	≤ 1 VDC
Switching current (min.)	20 µA
Turn-on time	≤ 2 µs
Turn-off time	≤ 4 µs
Switching frequency	≤ 100 kHz
Signaling	
Status indicator	Green LED
Safety and Protection	
Pollution Degree	2
Dielectric strength, control/load circuit (AC, 1 min)	3 kV_{rms}
Protection type	IP20
Overvoltage category	II
Physical Data	
Width	15.5 mm / 0.61 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable relay module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	70.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +50 °C
Surrounding air temperature (storage)	–40 … +85 °C
Processing temperature	–25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373, EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3

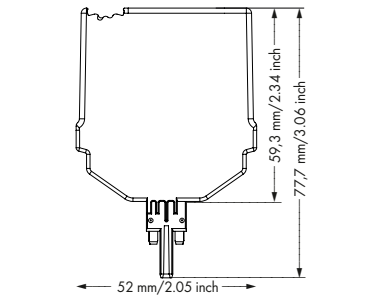
Solid-State Relay
2042 Series

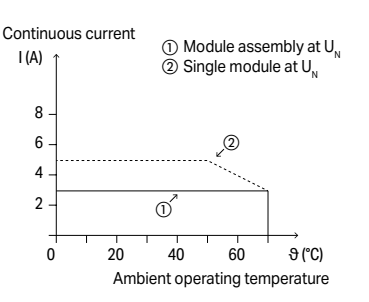
Similar to pictured device



Solid-state relay module; Nominal input voltage: 24 VDC; Output voltage range: 0 … 24 VDC; Limiting continuous current: 5 A; Module width: 15 mm

U_N	I_N	Item No.	Pack. Unit
24 VDC (SELV)	7 mA	2042-7604	1

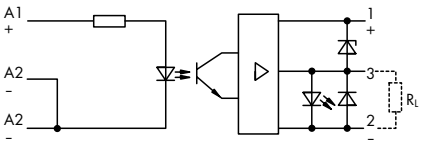




Current-Carrying Capacity Curve

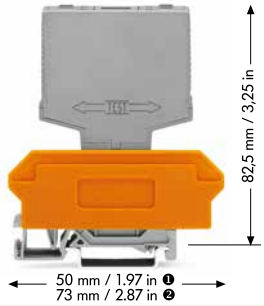
Control Circuit	
Input voltage range (low level)	0 … 10 VDC
Input voltage range (high level)	16.8 … 30 VDC
Input current range	6 … 8 mA
Load Circuit	
Circuit type	3-wire connection; high-side switching
Limiting continuous current	5 A
Nominal output voltage	24 VDC (SELV)
Output Voltage Range	0 … 24 VDC
Voltage drop (output) max.	≤ 1 VDC
Switching current (min.)	3 mA
Turn-on time	≤ 10 µs
Turn-off time	≤ 20 µs
Switching frequency	≤ 5 kHz
Signaling	
Status indicator	Green LED
Safety and Protection	
Pollution Degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Overvoltage category	II
Physical Data	
Width	15.5 mm / 0.61 inch
Height	77.7 mm / 3.059 inch
Height from the surface	59.3 mm / 2.335 inch
Depth	52 mm / 2.047 inch
Mechanical Data	
Mounting type	Pluggable relay module for TOPJOB® S Carrier Terminal Block
Material Data	
Weight	69.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–40 … +70 °C
Surrounding air temperature (storage)	–40 … +85 °C
Processing temperature	–25 … +50 °C
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 61010-2-201; EN 61373, EN 50121-3-2; EN 50121-4; EN 61000-6-2; EN 61000-6-3

Optocoupler Module
286 Series



Optocoupler Module; Output voltage range: 20 … 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection; High-side switching; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
5 VDC	14 mA	286-752/002-000	1



Control Circuit	
Input voltage range (high level)	2 … 6.25 VDC
Input current range	3.3 … 18.5 mA
Load Circuit	
Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output Voltage Range	20 … 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 2 µA
Output closed-circuit current (without load) max.	12 mA
Turn-on time	≤ 5 µs
Turn-off time	≤ 10 µs
Switching frequency	≤ 25 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	18.5 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +70 °C
Surrounding air temperature (storage)	–25 … +70 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

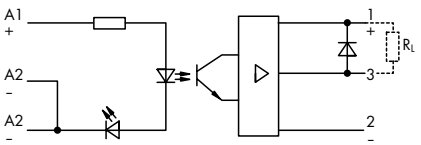
Item No.	Pack. Unit
280-609	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-763	25

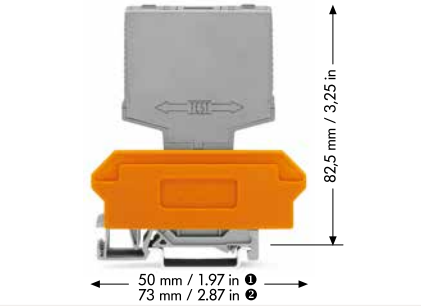
» Accessories Page 236

Optocoupler Module
286 Series



Optocoupler Module; Output voltage range: 15 … 40 VDC; Limiting continuous current: 5 A; 3-wire connection; Low-side switching; Frequency: 1 kHz; Status indicator: red; 15 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	13.5 mA	286-721	1



Control Circuit	
Input voltage range (high level)	15 … 30 VDC
Input current range	7.5 … 18 mA
Load Circuit	
Circuit type	3-wire connection; low-side switching
Limiting continuous current	5 A
Output Voltage Range	15 … 40 VDC
Voltage drop (output) max.	≤ 0.5 VDC
Leakage current at rated voltage	≤ 2 µA
Turn-on time	≤ 20 µs
Turn-off time	≤ 80 µs
Switching frequency	≤ 1 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	29.2 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +40 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

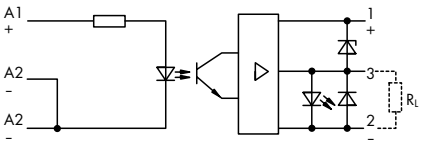
Item No.	Pack. Unit
280-609	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-763	25

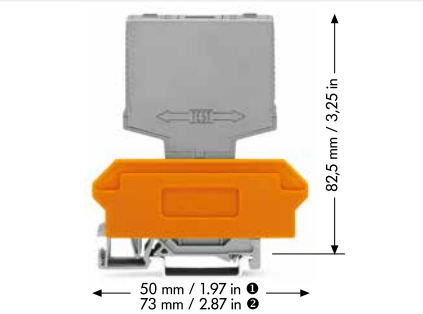
» Accessories Page 236

Optocoupler Module
286 Series



Optocoupler module; Nominal input voltage: 24 VDC; Output voltage range: 15 … 30 VDC; Limiting continuous current: 4 A; 3-wire connection/high-side switching; Red status indicator; Module width: 15 mm; gray

U_N	I_N	Item No.	Pack. Unit
24 VDC	14 mA	286-723	1



Control Circuit	
Input voltage range (high level)	15 … 30 VDC
Input current range	7.6 … 15 mA
Load Circuit	
Circuit type	3-wire connection; high-side switching
Limiting continuous current	4 A
Output Voltage Range	15 … 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 2 µA
Output closed-circuit current (without load) max.	12 mA
Turn-on time	≤ 15 µs
Turn-off time	≤ 25 µs
Switching frequency	≤ 2.5 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	26.8 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +40 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

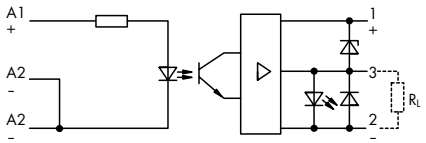
Item No.	Pack. Unit
280-609	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-763	25

» Accessories Page 236

Optocoupler Module
286 Series



Optocoupler module; Nominal input voltage: 24 VDC; Output voltage range: 20 … 30 VDC; Limiting continuous current: 0.5 A; 3-wire connection/high-side switching; Frequency: 25 kHz; Red status indicator; Module width: 15 mm; gray

U_N	I_N	Item No.	Pack. Unit
24 VDC	15 mA	286-752	1

Control Circuit	
Input voltage range (high level)	12 … 30 VDC
Input current range	5 … 20 mA
Load Circuit	
Circuit type	3-wire connection; high-side switching
Limiting continuous current	0.5 A
Output Voltage Range	20 … 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 2 µA
Output closed-circuit current (without load) max.	12 mA
Turn-on time	≤ 7 µs
Turn-off time	≤ 15 µs
Switching frequency	≤ 25 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	15 mm / 0.591 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	17.9 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +40 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 6-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-619	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

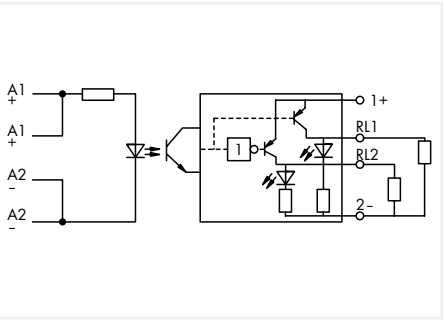
Item No.	Pack. Unit
280-609	30

Terminal block for pluggable modules; 12-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-763	25

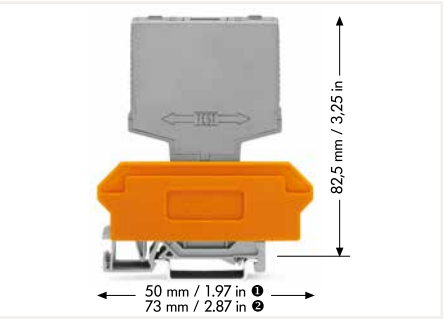
» Accessories Page 236

Optocoupler Module
286 Series



Optocoupler Module; with 2 inverted outputs; Output voltage range: 20 … 30 VDC; Limiting continuous current: 0.5 A; Frequency: 2.5 kHz; 20 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	9 mA	286-790	1



Control Circuit	
Input voltage range (high level)	20 … 30 VDC
Load Circuit	
Circuit type	2-wire connection; 2 inverted outputs
Limiting continuous current	0.5 A
Output Voltage Range	20 … 30 VDC
Voltage drop (output) max.	≤ 1.2 VDC
Leakage current at rated voltage	≤ 2 µA
Turn-on time	≤ 4 µs
Turn-off time	≤ 15 µs
Switching frequency	≤ 2.5 kHz
Signaling	
Status indicator	Red LED
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	32 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +40 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20

Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

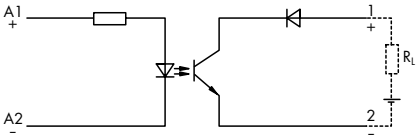
Item No.	Pack. Unit
280-628	20

Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-764	20

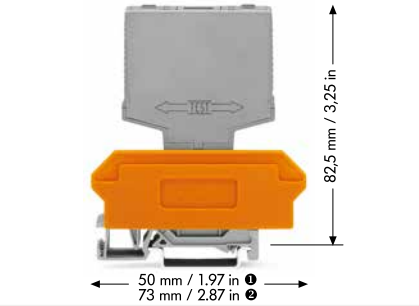
» Accessories Page 236

Optocoupler Module
286 Series



Optocoupler module; Nominal input voltage: 24 VDC; Output voltage range: 20 … 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Frequency: 3 kHz; Red status indicator; Module width: 10 mm; gray

U_N	I_N	Item No.	Pack. Unit
24 VDC	14 mA	286-791	1



Control Circuit	
Input voltage range (high level)	15 … 30 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output Voltage Range	20 … 60 VDC
Voltage drop (output) max.	≤ 2 VDC
Leakage current at rated voltage	≤ 2 µA
Turn-on time	≤ 10 µs
Turn-off time	≤ 50 µs
Switching frequency	≤ 3 kHz
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	15.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	−25 … +40 °C
Surrounding air temperature (storage)	−25 … +40 °C
Processing temperature	−25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-618	40

Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

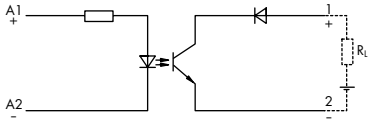
Item No.	Pack. Unit
280-608	40

Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-762	30

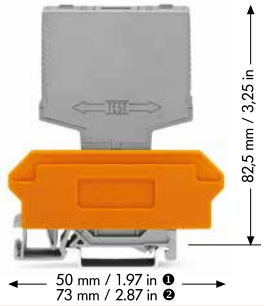
» Accessories Page 236

Optocoupler Module
286 Series



Optocoupler module; Nominal input voltage: 24 VDC; Output voltage range: 20 … 60 VDC; Limiting continuous current: 0.1 A; 2-wire connection; Red status indicator; Module width: 10 mm; gray

U_N	I_N	Item No.	Pack. Unit
24 VDC	4 mA	286-794	1



Control Circuit	
Input voltage range (high level)	18 … 30 VDC
Load Circuit	
Circuit type	2-wire connection
Limiting continuous current	0.1 A
Output Voltage Range	20 … 60 VDC
Voltage drop (output) max.	≤ 2 VDC
Leakage current at rated voltage	≤ 2 µA
Turn-on time	≤ 80 µs
Turn-off time	≤ 100 µs
Switching frequency	≤ 1.5 kHz
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	10 mm / 0.394 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	16.3 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +60 °C
Surrounding air temperature (storage)	–25 … +40 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 4-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-618	40

Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

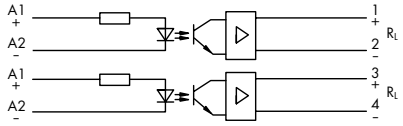
Item No.	Pack. Unit
280-608	40

Terminal block for pluggable modules; 8-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-762	30

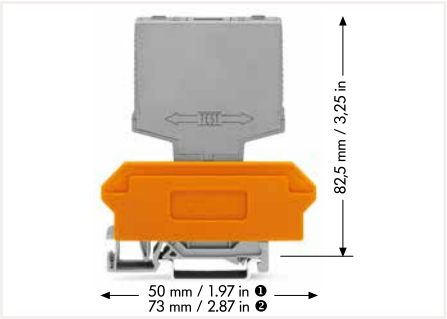
» Accessories Page 236

Dual-Channel Optocoupler Module
286 Series



Dual-Channel Optocoupler Module; Output voltage range: 20 … 30 VDC; Limiting continuous current: 0.25 A; Frequency: 1.5 kHz; 20 mm wide

U_N	I_N	Item No.	Pack. Unit
24 VDC	15 mA	286-792	1



Control Circuit	
Input voltage range (high level)	7.5 … 30 VDC
Load Circuit	
Circuit type	2-channel; 2-wire connection
Limiting continuous current	0.25 A
Output Voltage Range	20 … 30 VDC
Voltage drop (output) max.	≤ 2.5 VDC
Leakage current at rated voltage	≤ 3 µA
Turn-on time	≤ 60 µs
Turn-off time	≤ 120 µs
Switching frequency	≤ 1.5 kHz
Safety and Protection	
Pollution degree	2
Dielectric strength, control/load circuit (AC, 1 min)	2.5 kV_{rms}
Protection type	IP20
Physical Data	
Width	20 mm / 0.787 inch
Height from upper-edge of DIN-rail	82.5 mm / 3.25 inch
Depth	52 mm / 1.654 inch
Mechanical Data	
Mounting type	Pluggable relay module for terminal block for pluggable modules
Material Data	
Weight	23.4 g
Environmental Requirements	
Surrounding air temperature (operation at U_N)	–25 … +40 °C
Surrounding air temperature (storage)	–25 … +40 °C
Processing temperature	–25 … +50 °C
Relative humidity	5 … 95 % (no condensation permissible)
Operating altitude (max.)	2000 m
Standards and Specifications	
Standards/specifications	EN 60664-1

Accessories

Terminal block for pluggable modules; 8-pole; with 2-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-638	20

Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

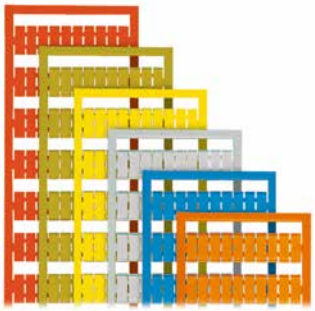
Item No.	Pack. Unit
280-628	20

Terminal block for pluggable modules; 16-pole; with 4-conductor terminal blocks; with marker carrier; with orange separator; for 35 x 15 mm and 35 x 7.5 mm DIN-rails; 2.5 mm²

Item No.	Pack. Unit
280-764	20

» Accessories Page 236

Accessories



WSB marker card; WSB marker width: 4 mm; 10 strips with 10 markers/card

Marking	Item No.	Pack. Unit
K	209-782	50
1 ... 10 (10 x)	209-702	50
A1; A2; 13; 14	209-952	50
A1; A2; 11; 12	209-953	50
11; 12; 14; A1; A2; A2; 11; 12; 14	209-994	50
12; A1; A2; 24; 11; 14; 21; 22	209-995	50
A1; A1; A2; A2; 11; 12; 13; 14; 23; 24	209-693	50
12; A1; A2; 23; 24; 11; 13; 14; 21; 22	209-691	50
12; A1; A2; 23; 24; 11; 13; 14; 33; 34	209-690	50
14; A1; A2; 33; 34; 13; 23; 24; 43; 44	209-692	50
A1; A2; 32; 31; 34; 42; 41; 12; 11; 14; 22; 21; 24; 44	249-656	50
L+; 1; L-; L-; 11; 12; 13; 14	209-954	50
A1; A2; A3; 11; 12; 14	249-607	50
A1; A1; A2; A2; 12; 11; 11; 14	209-996	50
A1; A1; St; A2; A2; 12; 11; 11; 14	209-601	50
U1; U2; U3; U4; 0V; 12; 11; 11; 14; 14	209-951	50
U	209-789	50
A1; A2; A2; 1; 3; 2	209-685	50
A1; A2; A2; 1; 2; 2	209-686	50
A1+; A1+; A2-; A2-; 1; RL1; RL2; 2	209-955	50
A1+; A1+; A2-; A2-; 1+; 1+; A; 2-	249-651	50
+/-	209-552	50
1; 2; 3; 0V; +UB; OUT; ERR.; 0V	249-622	50
1; 2; 0V; +UB; OUT; ERR.; 0V	249-623	50
Lin; Lin; Lout; Lout; 24V; UA; UA; 0V	209-957	50
Lin; Lin; Lout; 11; 14; 14; Lin; Lin; Lout	249-654	50
Iin; Iin; Iout; Iout; 24V; 11; 12; 14; 0V	209-997	50
S	209-682	50
V	209-784	50
F1 ... F10	209-787	50
D	209-783	50
+; -; 1; 2; 3; 13; 14; 4; 5; 6	249-608	50
L; N; Ackn.; Failure; Test; N; 14; 24	249-606	50
A1; A2; Ackn.; Failure; 12; 11; 11; 14	249-653	50

WSB marker card; plain; WSB marker width: 4 mm; 10 strips with 10 markers/card

Color	Item No.	Pack. Unit
white	209-701	100
yellow	209-701/000-002	100
red	209-701/000-005	100
blue	209-701/000-006	100
gray	209-701/000-007	100
orange	209-701/000-012	100
light green	209-701/000-017	100
green	209-701/000-023	100
violet	209-701/000-024	100