















WAGO Accessories and WAGO Tools

WAGO Accessories and WAGO Tools

			Page
	Shield Clamping Saddles	790 Series	624
	Spring-Equipped Shield Clamping Saddles	790 Series	627
	Busbar Carriers	790 Series	629
	Marking Systems		640
	DIN-Rails, Collective Jumper Carriers and Rail-Mount Terminal Block Covers		656
	End Stops for DIN-35 and DIN-15 Rails		658
	Operating tools		664
	Cable Strippers		666
	Crimping Tools for Ferrules		670
	Cable Cutter		676
	"Alu-Plus" Contact Paste		677
	Test and Measurement Devices		678

Shield Connection System

790 Series

Installation



Carrier with grounding foot* (790-113), 45 mm long, busbar 90° to the rail

*for all shield clamping saddle sizes



Carrier with grounding foot* (790-114), 45 mm long, busbar parallel to the rail

*for all shield clamping saddle sizes



Carrier with grounding foot* (790-115), 125 mm long, busbar parallel to the rail

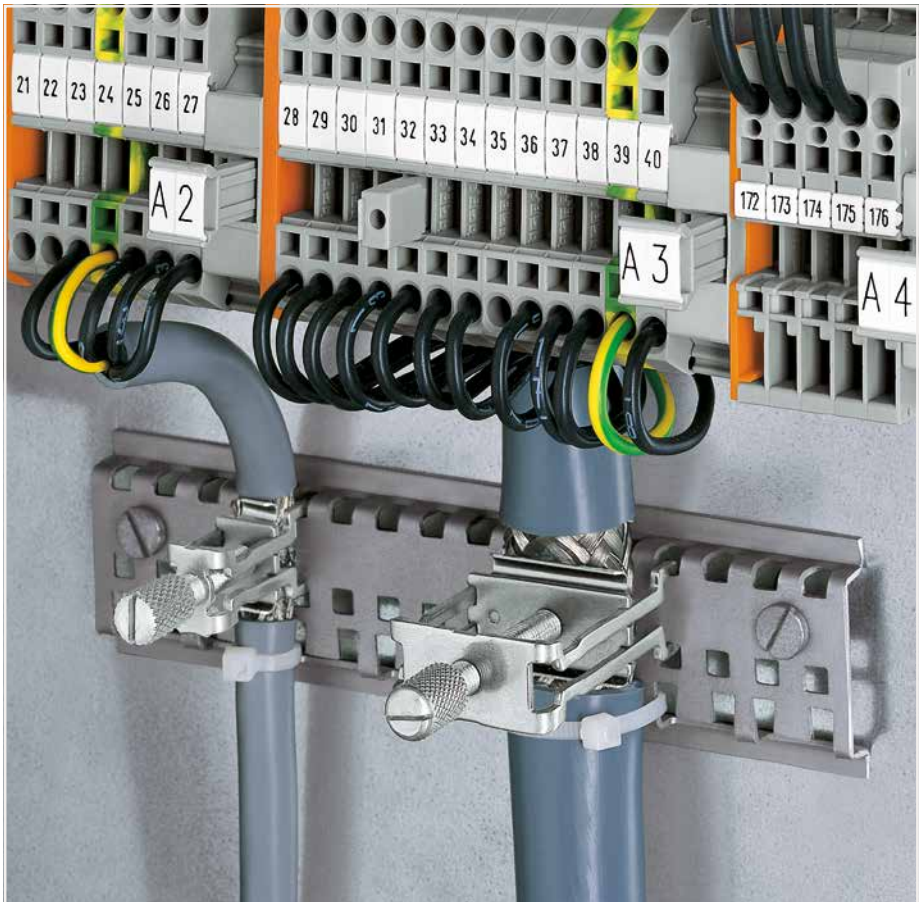
*for all shield clamping saddle sizes



Securing a spacer sleeve to a specialty slotted DIN-rail.



Securing an additional shield clamping saddle.



Tightening/removing a shield clamping saddle.



After connection, tighten the knurled screw to complete the installation. Recommended tightening torque: 0.5 Nm

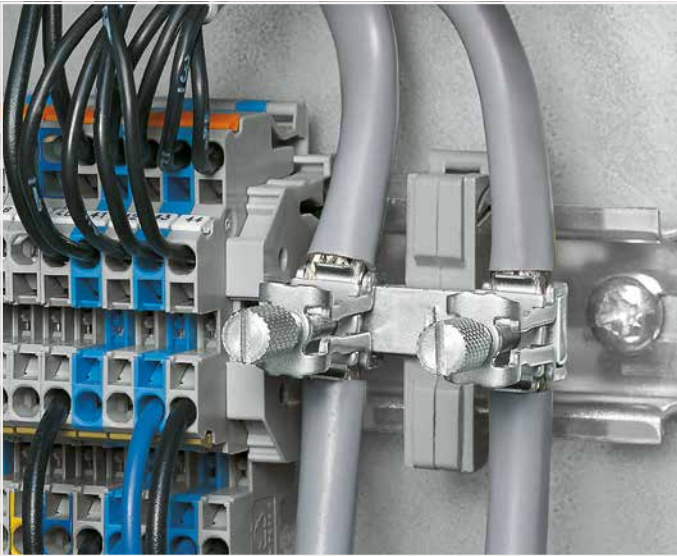


To remove the clamping saddle, unscrew until ratcheted mechanism is released, then slightly tip saddle and remove the clamping saddle.

Shield Connection System

790 Series

Installation



Carrier with grounding foot – busbar parallel to the rail



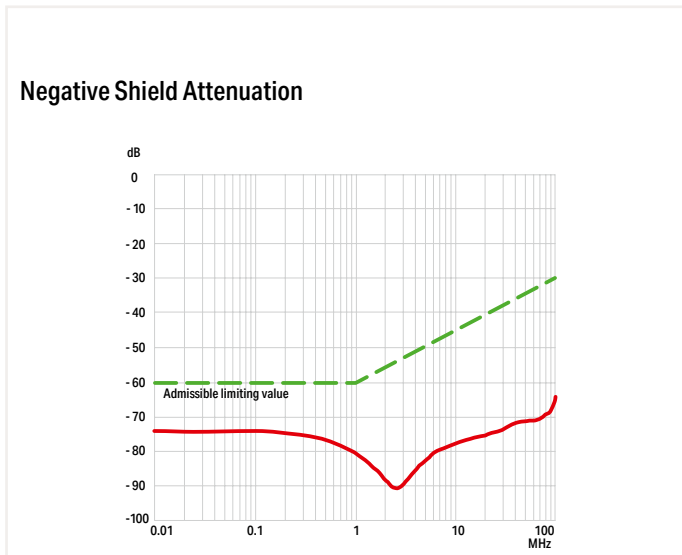
Insulated mounting carriers for a common shield reference potential, independent of housing potential



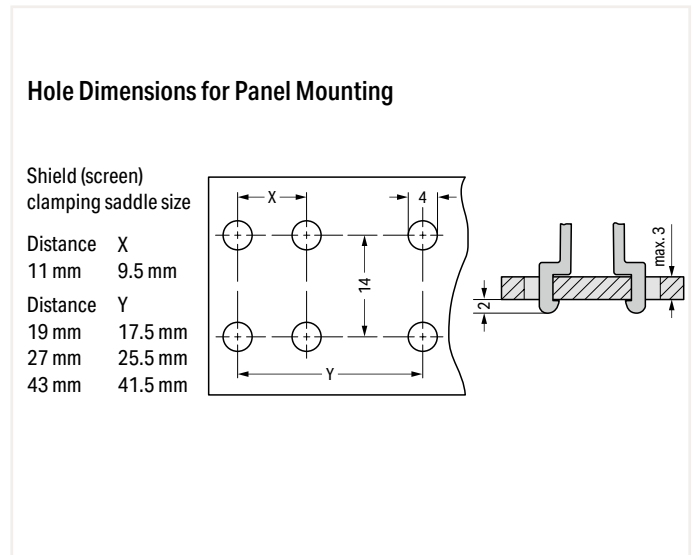
U-shaped (10 x 3) mm copper busbar



Snap shield clamping saddles into any metal plate (max. thickness: 3 mm).

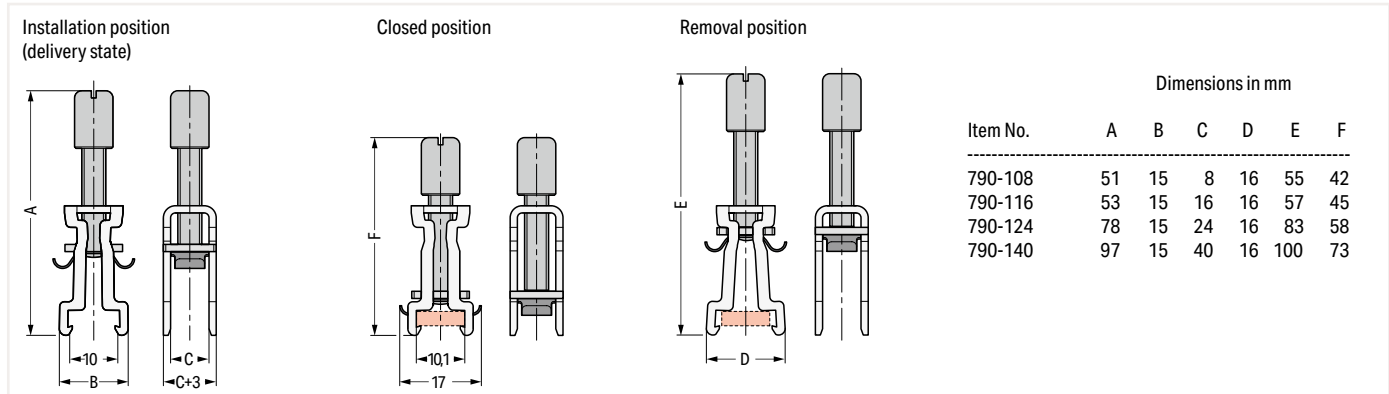


The shield connection system is highly effective because the clamping unit can be brought very close to the unshielded part of the cable.



Additionally, the spring material is part of the clamping saddle, providing a good electrical connection (the system also acts as a partial strain relief). The spring element integrated in the shield clamping saddle compensates for deformation and settling that results from a connected shield.

Shield Clamping Saddles 790 Series



Item No.	Dimensions in mm					
	A	B	C	D	E	F
790-108	51	15	8	16	55	42
790-116	53	15	16	16	57	45
790-124	78	15	24	16	83	58
790-140	97	15	40	16	100	73

Shield clamping saddle; 11 mm wide; Connectable shield diameter: 3 ... 8 mm
 Note: Cannot be used for connecting ground conductors!

Item No.	Pack. Unit
790-108	50 (10)

Shield clamping saddle; 19 mm wide; Connectable shield diameter: 7 ... 16 mm
 Note: Cannot be used for connecting ground conductors!

Item No.	Pack. Unit
790-116	50 (10)

Shield clamping saddle; 27 mm wide; Connectable shield diameter: 6 ... 24 mm
 Note: Cannot be used for connecting ground conductors!

Item No.	Pack. Unit
790-124	50 (10)

Accessories; for Shield Clamping Saddles

Carrier with grounding foot; Busbar parallel to the rail; 15 mm long; Copper (10 x 3) mm; for shield clamping saddles (790-108)

790-110	25
---------	----

Carrier with grounding foot; Busbar parallel to the rail; 25 mm long; Copper (10 x 3) mm; for shield clamping saddles (790-108; 790-116) and shield clamps (791-111; 791-117)

790-112	25
---------	----

Carrier with grounding foot; Busbar 90° to the DIN-rail; 45 mm long; Copper (10 x 3) mm; for shield clamping saddles (790 Series)

790-113	25
---------	----

Carrier with grounding foot; Busbar parallel to the DIN-rail; 45 mm long; Copper (10 x 3) mm; for shield clamping saddles (790 Series) and shield clamps (791 Series)

790-114	25
---------	----

Carrier with two grounding feet; Busbar parallel to the DIN-rail; 125 mm long; Copper (10 x 3) mm

790-115	25
---------	----

DIN-rail; specialty slotted; 1000 mm long; tin-plated

790-145	
---------	--

Spacer sleeve; steel; for DIN-rail; specialty slotted; for M5-size screw;

790-144	200 (100)
---------	-----------

Insulated mounting foot; for busbar with M4 x 8 mm screw

790-100	50 (25)
---------	---------

Insulated mounting foot; for busbar with (3.5 x 9) mm sheet metal screw

790-101	50 (25)
---------	---------

Busbar; tin-plated; 1000 mm long; copper (10 x 3) mm

210-133	1
---------	---

Busbar; tin-plated; 30 mm long; copper (10 x 3) mm

790-133	20
---------	----

Busbar; tin-plated; 50 mm long; copper (10 x 3) mm

790-134	20
---------	----

U-shaped busbar; Copper (10 x 3) mm; for 5 I/O; for 750 Series I/O Modules

790-190	25 (5)
---------	--------

U-shaped busbar; Copper (10 x 3) mm; for 8 I/O; for 750 Series I/O Modules

790-191	25
---------	----

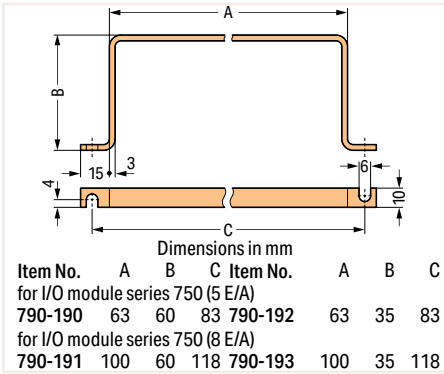
U-shaped busbar; Copper (10 x 3) mm; for 5 I/O; for 750 Series I/O Modules

790-192	25
---------	----

U-shaped busbar; Copper (10 x 3) mm; for 8 I/O; for 750 Series I/O Modules

790-193	25
---------	----

14



Shield clamping saddle; 43 mm wide; Connectable shield diameter: 22 ... 40 mm
 Note: Cannot be used for connecting ground conductors!

Item No.	Pack. Unit
790-140	50 (10)



Carrier with grounding foot* (790-114), 45 mm long, busbar parallel to the rail



Carrier with grounding foot* (790-115), 125 mm long, busbar parallel to the rail

*for all shield clamping saddle sizes

*for all shield clamping saddle sizes

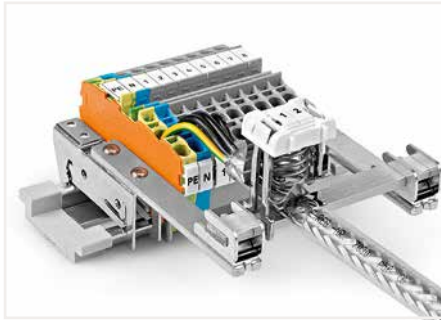
Spring-Equipped Shield Clamping Saddles

790 Series

Installation



Shield clamping saddles are available in three different sizes for shield diameters ranging from 3 to 20 mm.



Application example



Compress the clamping saddle until fully engaged.



Mounting a clamping saddle on a specialty slotted DIN-rail (790-145).
When releasing the saddle, do not place your finger under the clamping spring!



Removing the shield clamping saddle.



Shield clamping saddle contacts shield conductor and specialty slotted DIN-rail (790-145).



Labeling using a marking strip.



Labelling using WMB markers.

Spring-Equipped Shield Clamping Saddles 790 Series



Delivery position		Mounting position		Dimensions in mm				
Item No.	A	B	C	D	E*			
790-208	30	29.9	8	12.4	25.8			
790-216	34.6	28.3	16	21.8	30.2			
790-220	45.6	28.3	24	30	41.2			

*Height with WMB marker

Shield clamping saddle; 12.4 mm wide; Connectable shield diameter: 3 ... 8 mm
Note: Cannot be used for connecting ground conductors and strain relief!

Item No.	Pack. Unit
790-208	50

Shield clamping saddle; 21.8 mm wide; Connectable shield diameter: 6 ... 16 mm
Note: Cannot be used for connecting ground conductors and strain relief!

Item No.	Pack. Unit
790-216	25

Shield clamping saddle; 30 mm wide; Connectable shield diameter: 6 ... 20 mm
Note: Cannot be used for connecting ground conductors and strain relief!

Item No.	Pack. Unit
790-220	25

Accessories; for Shield Clamping Saddles

Carrier with grounding foot; Busbar parallel to the rail; 15 mm long; Copper (10 x 3) mm; for shield clamping saddles (790-108)

Item No.	Pack. Unit
790-110	25

Carrier with grounding foot; Busbar parallel to the rail; 25 mm long; Copper (10 x 3) mm; for shield clamping saddles (790-108; 790-116) and shield clamps (791-111; 791-117)

Item No.	Pack. Unit
790-112	25

Carrier with grounding foot; Busbar 90° to the DIN-rail; 45 mm long; Copper (10 x 3) mm; for shield clamping saddles (790 Series)

Item No.	Pack. Unit
790-113	25

Carrier with grounding foot; Busbar parallel to the DIN-rail; 45 mm long; Copper (10 x 3) mm; for shield clamping saddles (790 Series) and shield clamps (791 Series)

Item No.	Pack. Unit
790-114	25

Carrier with two grounding feet; Busbar parallel to the DIN-rail; 125 mm long; Copper (10 x 3) mm

Item No.	Pack. Unit
790-115	25

DIN-rail; specialty slotted; 1000 mm long; tin-plated

Item No.	Pack. Unit
790-145	

Spacer sleeve; steel; for DIN-rail; specialty slotted; for M5-size screw;

Item No.	Pack. Unit
790-144	200 (100)

Busbar; tin-plated; 1000 mm long; copper (10 x 3) mm

Item No.	Pack. Unit
210-133	1

Busbar; tin-plated; 30 mm long; copper (10 x 3) mm

Item No.	Pack. Unit
790-133	20

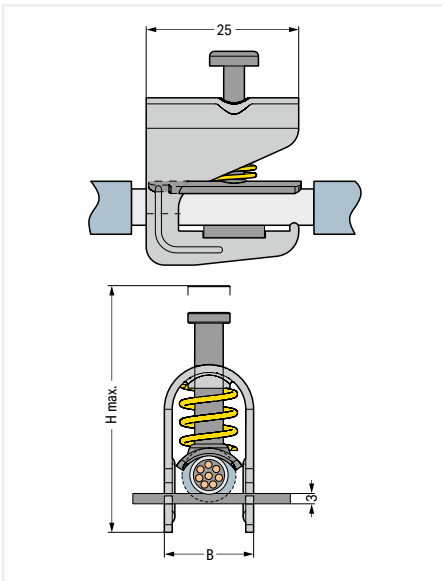
Busbar; tin-plated; 50 mm long; copper (10 x 3) mm

Item No.	Pack. Unit
790-134	20

Shield Clamp and Shield Termination 791 and 709 Series



Dimensions in mm



Shield clamp; Connectable shield diameter: 1.5 ... 6.5 mm; Height (max.): 40 mm; 10 mm wide
Note: Cannot be used for connecting ground conductors!

Item No.	Pack. Unit
791-107	50

Shield clamp; Connectable shield diameter: 5 ... 11 mm; Height (max.): 47 mm; 17 mm wide
Note: Cannot be used for connecting ground conductors!

791-111	50
---------	----

Shield clamp; Connectable shield diameter: 10 ... 17 mm; Height (max.): 63 mm; 23 mm wide
Note: Cannot be used for connecting ground conductors!

791-117	50
---------	----

Shield clamp; Connectable shield diameter: 16 ... 24 mm; Height (max.): 78 mm; 30 mm wide
Note: Cannot be used for connecting ground conductors!

791-124	50
---------	----

Shield termination; includes cable ties for 5 ... 10 mm shield diameter; 60 mm long

Item No.	Pack. Unit
709-350	100 (25)

Shield termination; includes cable ties for 5 ... 10 mm shield diameter; 150 mm long

709-352	100 (25)
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Fit the shield termination to the shield cable.

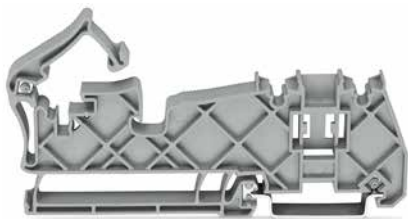


Secure both shield cable and shield termination to the strain relief plate using cable ties.

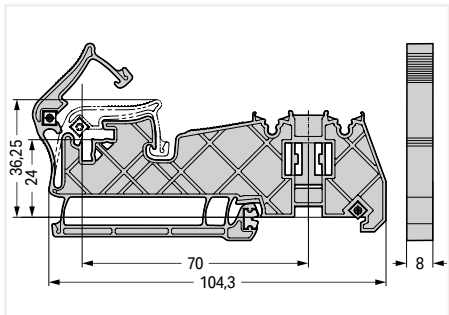


Shield termination connected to an X-COM® female plug

Busbar Carriers 790 Series



Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; no contact to DIN-rail; insulated

Item No.	Pack. Unit
790-400	20



Snapping the busbar carrier onto DIN-35 rail.



Vertical mounting position of the busbar



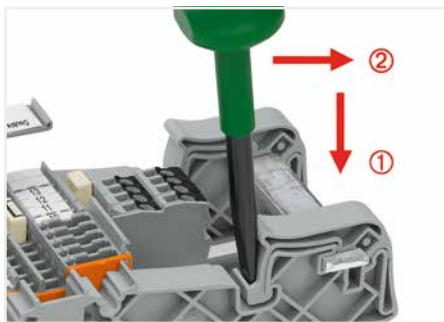
Place the busbar in the carrier holder.



Horizontal mounting position of the busbar



Snap the mounting bracket into position.



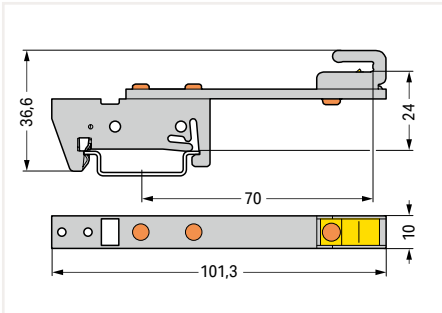
Release the mounting bracket by pushing the operating tool down ① and then forward ②.

Busbar Carriers

790 Series



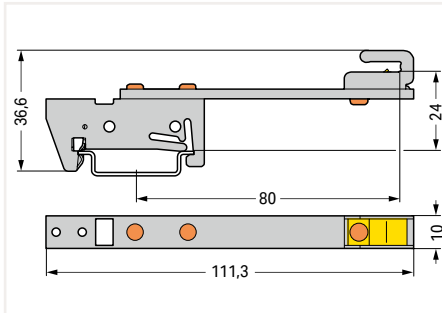
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; single side; straight; 70 mm between center of DIN-rail and busbar carrier

Item No.	Pack. Unit
790-300	10

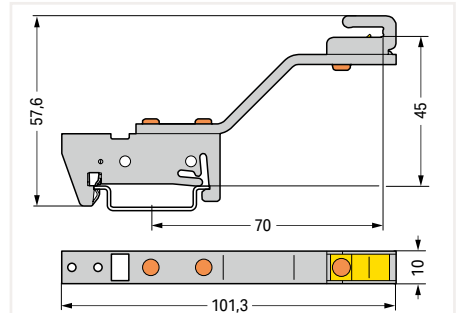
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; single side; straight; 80 mm between center of DIN-rail and busbar carrier

Item No.	Pack. Unit
790-302	10

Dimensions in mm

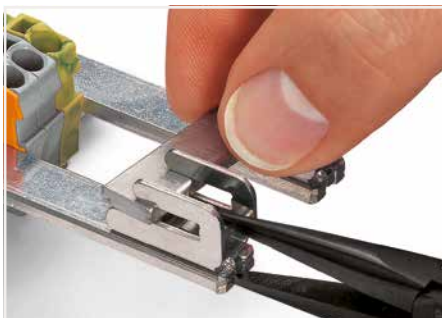


Busbar carrier; for (10 x 3) mm copper busbars; single side; angled; 70 mm between center of DIN-rail and busbar carrier

Item No.	Pack. Unit
790-301	10



Remove the busbar carrier using an operating tool (type 3, 5.5 x 0.8 mm blade).



To remove the busbar, compress the spring using pliers.



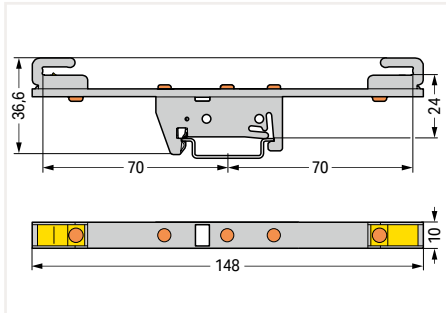
Place the busbar in the busbar carrier.

Busbar Carriers

790 Series



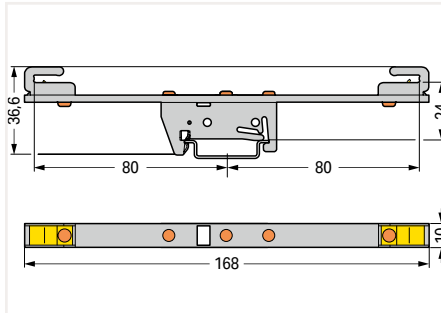
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; both sides; straight; 70 mm between center of DIN-rail and busbar carrier

Item No.	Pack. Unit
790-310	10

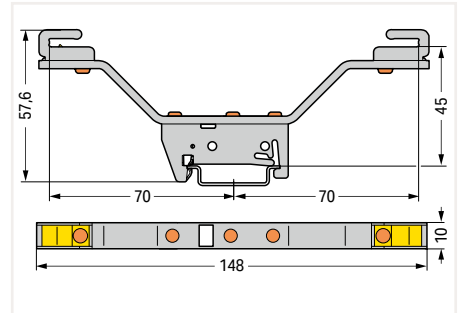
Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; both sides; straight; 80 mm between center of DIN-rail and busbar carrier

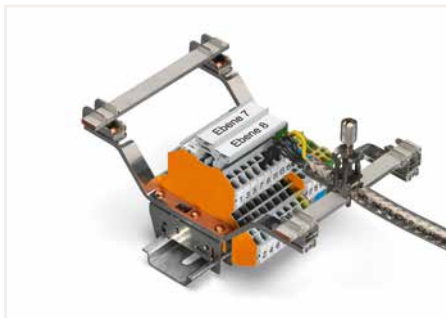
Item No.	Pack. Unit
790-312	10

Dimensions in mm



Busbar carrier; for (10 x 3) mm copper busbars; both sides; angled; 70 mm between center of DIN-rail and busbar carrier

Item No.	Pack. Unit
790-311	10

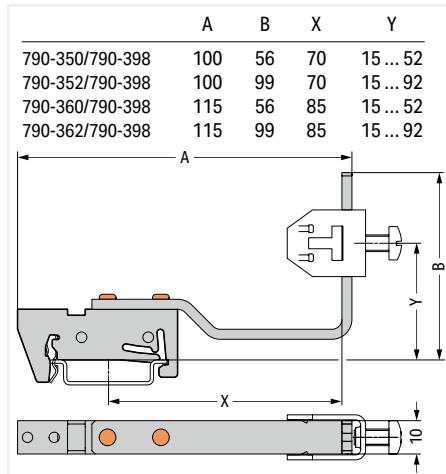


Application example

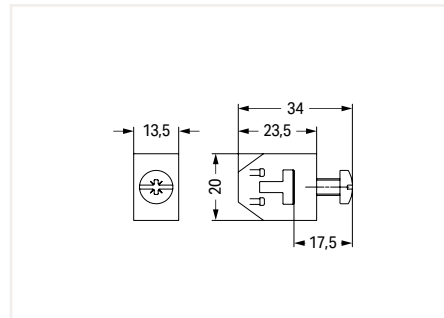
Busbar Carrier with a T-Connector (Flexible) and T-Connector 790 Series



Dimensions in mm



Dimensions in mm



Horizontal mounting position of the busbar



Vertical mounting position of the busbar

Busbar carrier with a T-connector; flexible; for (10 x 3) mm copper busbars; 70 mm between center of DIN-rail and busbar carrier; 56 mm high

	Item No.	Pack. Unit
	790-350/790-398	12

T-connector; connects two (10 x 3) mm copper busbars

	Item No.	Pack. Unit
	790-398	

Busbar carrier with a T-connector; flexible; for (10 x 3) mm copper busbars; 70 mm between center of DIN-rail and busbar carrier; 99 mm high

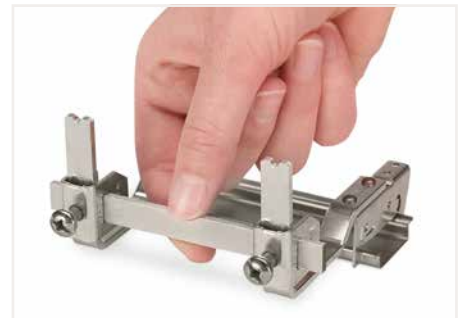
	790-352/790-398	12
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Busbar carrier with a T-connector; flexible; for (10 x 3) mm copper busbars; 85 mm between center of DIN-rail and busbar carrier; 56 mm high

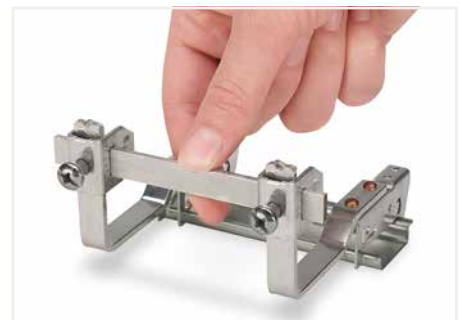
	790-360/790-398	12
--	-----------------	----

Busbar carrier with a T-connector; flexible; for (10 x 3) mm copper busbars; 85 mm between center of DIN-rail and busbar carrier; 99 mm high

	790-362/790-398	12
--	-----------------	----



The height of the busbar can be adjusted.

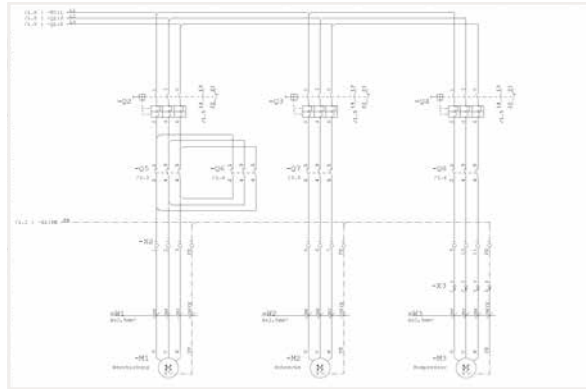


Secure the busbar by tightening the screws at the required position.

Smart Data

Supports Workflow from Control Cabinet Planning to Installation

Electrical Planning
 Directly import data from a CAE circuit diagram into the Smart Designer engineering software or output marking data on Smart Printer



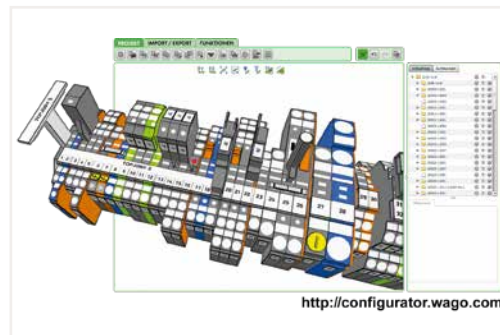
Technical and Commercial Item Data
 Classified by ETIM and eCl@ss – also in Advanced Format

Mechanical Planning
 CAD export into all standard CAD formats and in different granularities



Smart Designer

- Free online configuration and ordering software for all electrical interconnect and automation components
- No installation required
- Available worldwide – 24 hours a day
- Item data is always updated
- Auto-audit feature checks product compatibility via programmed database
- Design in full 3-D



Smart Script

- XML-based software for all WAGO labeling materials
- Data import from CAE systems
- Font size check
- Material selection wizard



Configuration made easy – <http://configurator.wago.com>

Smart Printer

The Fastest Marking System



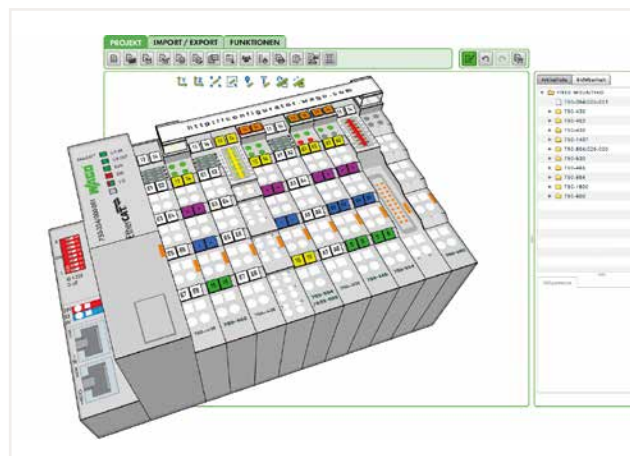
Smart Script



www.wago.com/printer

Smart Script
Import from CAE systems or create customized marking.

Smart Designer

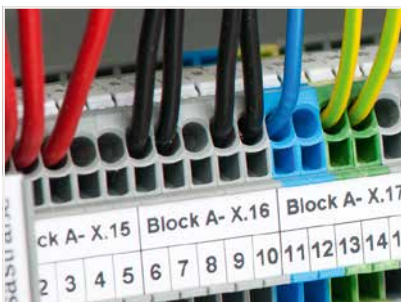


Smart Designer
After designing, print labeling materials directly from the project via Smart Printer



- Smart Printer
- Compact and easy-to-use
 - Quickly print and install marking strips
 - Cost-effective marking from beginning to end

Terminal Block Marking



Multi-line marking strips for clear, detailed control cabinet labels

- WMB Inline markers on a reel are suitable for various terminal block sizes – just one marker size for all standard applications
- Same profile across all WAGO Rail-Mount Terminal Blocks TOPJOB® S ensures quick labeling

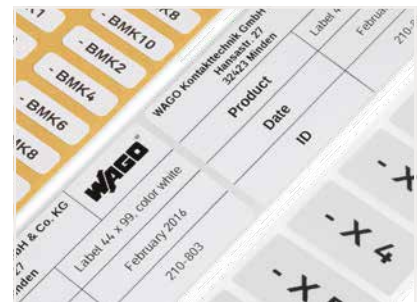
Cable and Conductor Marking



Different versions available:

- Marking sleeves, self-laminating labels, conductor markers for thread-on mounting or shrink tubes
- Large variety of marking surface sizes

Device Marking

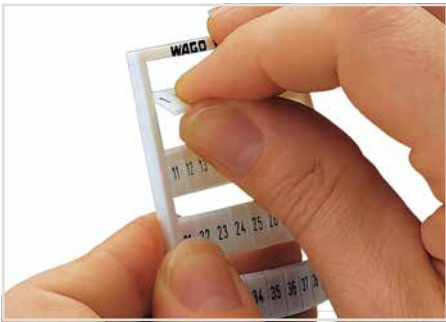


Broad selection of label types (e.g., printable fabric), push-button markers and type plates optimizes marking for devices and control cabinets

- Labels and markers are available in a variety of colors and sizes

Marking Systems

Description and Installation



Separating a strip from the WMB or WMB marker card.



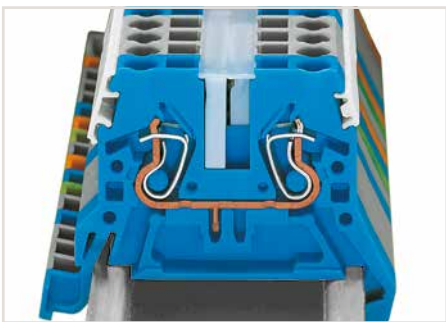
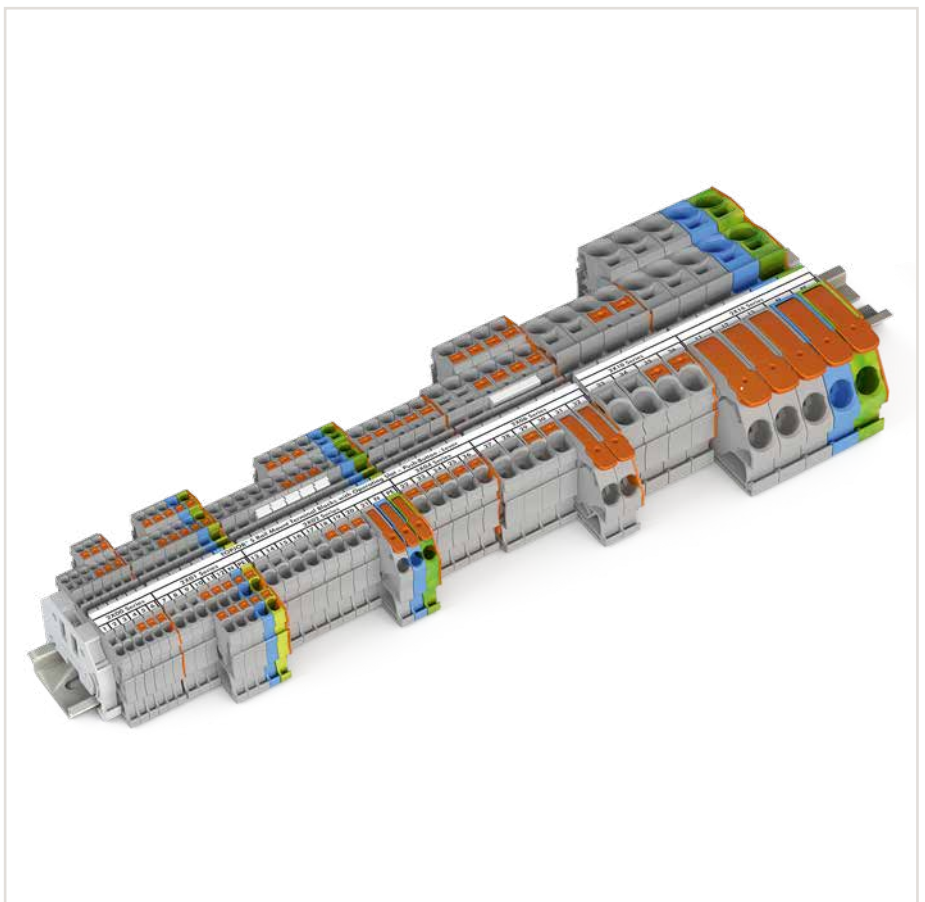
Stretching a WMB marker strip.



Separating an individual marker from the strip – for larger terminal blocks.



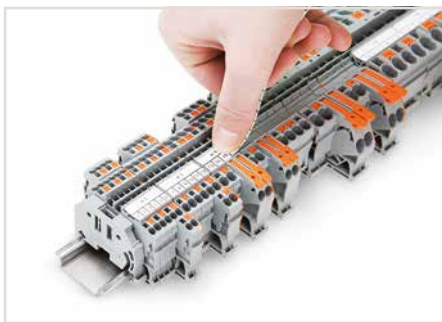
Marking via Mini-WSB Quick Marking System.



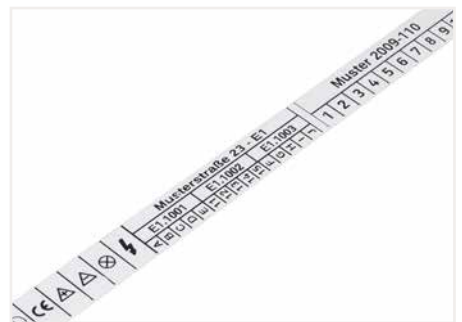
WMB markers in Mini-WSB marker slots
 Translucent marking strip
 Mini-WSB markers



Printing a marking strip (2009-110) via Smart Printer.



Snapping a marking strip into the marker slot.



Marking strip – multi-line printing



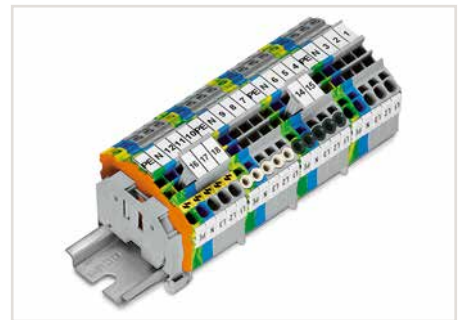
Snapping a marking strip into the marker slot.



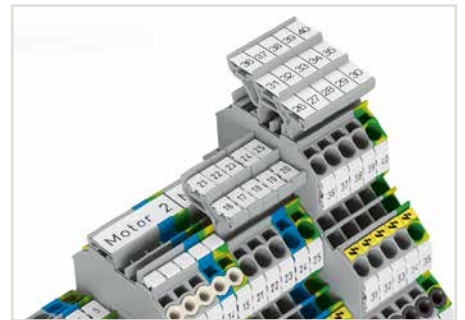
Snapping a WMB strip into the marker slot of the double marker carrier.



WMB "decade" marking



Group marker carriers for WAGO Rail-Mount Terminal Blocks TOPJOB® S – can be snapped into jumper slots.



Double- and triple-deck marker carriers can be retrofitted into the jumper contact slot of double- and triple-deck terminal blocks.



Height adjustable group marker carrier (2009-163) for marking strips (2009-110)



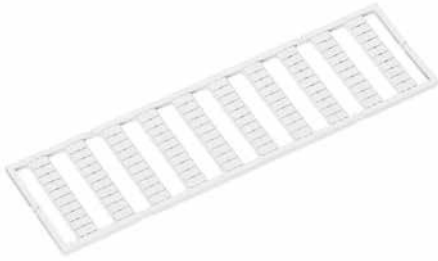
Height-adjustable group marker carrier



Additional group marking

Marking System

Terminal Block Width: 3.5 mm, 4 ... 4.2 mm and from 5 mm



Use		
Marker width	Can be snapped onto the following terminal block series	
	for continuous marking	that will be separated
3.5 mm	2000, 2020	-
4 ... 4.2 mm	279, 2001	-
5 ... 5.2 mm	270, 280, 780, 869, 870, 880, 2002, 2003, 2022	Terminal blocks with spacing > 5 ... 5.2 mm
5 ... 17.5 mm	270, 280, 780, 869, 870, 880	281 ... 285, 781 ... 785, 2002, 2004, 2005, 2006, 2007, 2010, 2016, 2022

WMB marker card; plain; 10 strips with 10 markers/card					
Color	5 mm Item No.	5 ... 5.2 mm Item No.	4 ... 4.2 mm Item No.	3.5 mm Item No.	Pack. Unit
○ white	793-501	793-5501	793-4501	793-3501	5
● yellow	793-501/000-002	793-5501/000-002	793-4501/000-002		5
● red	793-501/000-005	793-5501/000-005	793-4501/000-005		5
● blue	793-501/000-006	793-5501/000-006	793-4501/000-006		5
○ gray	793-501/000-007	793-5501/000-007	793-4501/000-007		5
● orange	793-501/000-012	793-5501/000-012	793-4501/000-012		5
● light green	793-501/000-017	793-5501/000-017	793-4501/000-017		5
● green	793-501/000-023	793-5501/000-023	793-4501/000-023		5
● violet	793-501/000-024	793-5501/000-024	793-4501/000-024		5



Use		
Marker width	Can be snapped onto the following terminal block series	
	for continuous marking	that will be separated
3.5 mm	2000, 2020	-
4 ... 4.2 mm	279, 2001	-
5 ... 5.2 mm	270, 280, 780, 869, 870, 880, 2002, 2003, 2022	Terminal blocks with spacing > 5 ... 5.2 mm

WMB Inline; plain; 2,300 WMB markers (3.5 mm)/reel		
Color	3.5 mm Item No.	Pack. Unit
○ white	2009-113	1

WMB Inline; plain; 2,000 WMB markers (4 mm)/reel; stretchable 4 ... 4.2 mm		
Color	4 ... 4.2 mm Item No.	Pack. Unit
○ white	2009-114	1

WMB Inline; plain; 1,500 WMB markers (5 mm)/reel; stretchable 5 ... 5.2 mm		
Color	5 ... 5.2 mm Item No.	Pack. Unit
○ white	2009-115	1

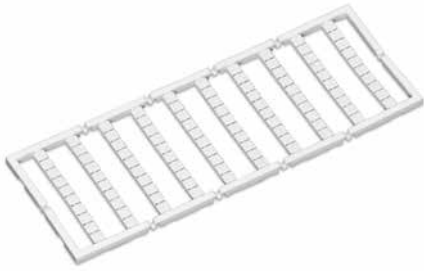


Use		
	Can be snapped onto the following terminal block series	
	2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2010, 2016, 2020, 2022	

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

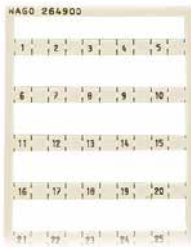
Mini-WSB Quick Marking System

Terminal Block Width: 5 mm



Use		
Marker width	Can be snapped onto the following terminal block series	
	for continuous marking	that will be separated
5 mm	264, 270, 869, 880, 769, 870, 218, 233 ... 236, 243, 250, 252 ... 257, 735 ... 742, 745, 746, 804, 805, 806, 816, 831, 750, 753, 2002, 2003, 2022	745, 746, 2004, 2006, 2007, 2010, 2016

Mini-WSB marker card; plain; 10 strips with 10 markers/card		
Color	Item No.	Pack. Unit
<input type="radio"/> white	248-501	5
<input type="radio"/> yellow	248-501/000-002	5
<input type="radio"/> red	248-501/000-005	5
<input type="radio"/> blue	248-501/000-006	5
<input type="radio"/> gray	248-501/000-007	5
<input type="radio"/> orange	248-501/000-012	5
<input type="radio"/> light green	248-501/000-017	5
<input type="radio"/> green	248-501/000-023	5
<input type="radio"/> violet	248-501/000-024	5



Mini-WSB marker card; with marking; not stretchable; horizontal marking; snap-on type		
Marking	Item No.	Pack. Unit
<input type="radio"/> 1, , 2, , 3, , 4, , 5, ; to 46, , 47, , 48, , 49, , 50, ; (each 1x)	264-900	5
<input type="radio"/> U, , V, , W, , N, , PE, ; (10x)	264-901	5
<input type="radio"/> L1, , L2, , L3, , N, , PE, ; (10x)	264-902	5
<input type="radio"/> 1, , 1, , 1, , 1, , 1, ; (10x)	264-903	5
<input type="radio"/> 2, , 2, , 2, , 2, , 2, ; (10x)	264-904	5
<input type="radio"/> 3, , 3, , 3, , 3, , 3, ; (10x)	264-905	5



Use		
Marker width	Can be snapped onto the following terminal block series	
	for continuous marking	that will be separated
5 mm	264, 270, 869, 880, 769, 870, 218, 233 ... 236, 243, 250, 252 ... 257, 735 ... 742, 745, 746, 804, 805, 806, 816, 831, 750, 753, 2002, 2003, 2022	745, 746, 2004, 2005, 2006, 2007, 2010, 2016

Mini-WSB Inline; plain; 1,700 markers (5 mm)/reel; stretchable 5 ... 5.2 mm		
Color	Item No.	Pack. Unit
<input type="radio"/> white	2009-145	1

Marking Card; Self-Adhesive Marking Strips



- Strip length: 182 mm

Marking strip; plain; as DIN A4 sheet		
	Item No.	Pack. Unit
<input type="radio"/> Strip height: 2.3 mm; 100 self-adhesive strips per card	210-331	100
<input type="radio"/> Strip height: 3 mm; 80 self-adhesive strips per card	210-332	100
<input type="radio"/> Strip height: 5 mm; 48 self-adhesive strips per card	210-334	100
<input type="radio"/> Strip height: 6 mm; 40 self-adhesive strips per card	210-333	100
<input type="radio"/> Strip height: 9 mm; 25 self-adhesive strips per card	210-335	100

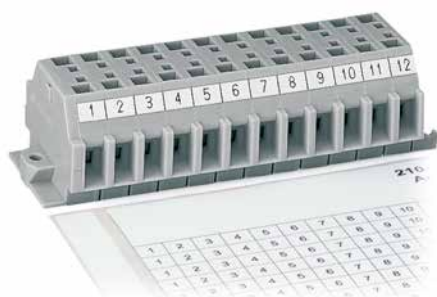


- Horizontal marking
- Strip length: 182 mm
- Strip height: 6 mm

Marking strip; as DIN A4 sheet; for 2-conductor terminal strips (260 Series)		
Marking	Item No.	Pack. Unit
<input type="radio"/> 1 ... 10 (120 x)	210-333/500-002	100
<input type="radio"/> 11 ... 20 (120 x)	210-333/500-003	100
<input type="radio"/> 21 ... 30 (120 x)	210-333/500-004	100
<input type="radio"/> 31 ... 40 (120 x)	210-333/500-005	100
<input type="radio"/> 41 ... 50 (120 x)	210-333/500-006	100
<input type="radio"/> 51 ... 60 (120 x)	210-333/500-007	100
<input type="radio"/> 61 ... 70 (120 x)	210-333/500-008	100
<input type="radio"/> 71 ... 80 (120 x)	210-333/500-009	100
<input type="radio"/> 81 ... 90 (120 x)	210-333/500-010	100
<input type="radio"/> 91 ... 100 (120 x)	210-333/500-011	100
<input type="radio"/> 1 ... 50 (20 x)	210-333/500-021	100
<input type="radio"/> L1 (1440 x)	210-333/500-074	100
<input type="radio"/> L2 (1440 x)	210-333/500-075	100
<input type="radio"/> L3 (1440 x)	210-333/500-076	100
<input type="radio"/> N (1440 x)	210-333/500-077	100
<input type="radio"/> PE (1440 x)	210-333/500-078	100
<input type="radio"/> PEN (1440 x)	210-333/500-079	100
<input type="radio"/> only grid spacing	210-333/500-001	100

Marking strip; for 4-conductor terminal strips (260 Series)		
<input type="radio"/> 1 ... 10 (80 x)	210-333/800-002	100
<input type="radio"/> 11 ... 20 (80 x)	210-333/800-003	100
<input type="radio"/> 21 ... 30 (80 x)	210-333/800-004	100
<input type="radio"/> 31 ... 40 (80 x)	210-333/800-005	100
<input type="radio"/> 41 ... 50 (80 x)	210-333/800-006	100
<input type="radio"/> 51 ... 60 (80 x)	210-333/800-007	100
<input type="radio"/> 61 ... 70 (80 x)	210-333/800-008	100
<input type="radio"/> 71 ... 80 (80 x)	210-333/800-009	100
<input type="radio"/> 81 ... 90 (80 x)	210-333/800-010	100
<input type="radio"/> 91 ... 100 (80 x)	210-333/800-011	100
<input type="radio"/> 1 ... 40 (20 x)	210-333/800-209	100
<input type="radio"/> L1 (880 x)	210-333/800-074	100
<input type="radio"/> L2 (880 x)	210-333/800-075	100
<input type="radio"/> L3 (880 x)	210-333/800-076	100
<input type="radio"/> N (880 x)	210-333/800-077	100
<input type="radio"/> PE (880 x)	210-333/800-078	100
<input type="radio"/> PEN (880 x)	210-333/800-079	100
<input type="radio"/> only grid spacing	210-333/800-001	100

Marking Card; Self-Adhesive Marking Strips



- Horizontal marking
- Strip length: 182 mm
- Strip height: 6 mm

Marking strip; as DIN A4 sheet; for 2-conductor terminal strips (261 Series)

Marking	Item No.	Pack. Unit
<input type="radio"/> 1 ... 12 (80 x)	210-333/600-103	100
<input type="radio"/> 13 ... 24 (80 x)	210-333/600-104	100
<input type="radio"/> 25 ... 36 (80 x)	210-333/600-105	100
<input type="radio"/> 37 ... 48 (80 x)	210-333/600-106	100
<input type="radio"/> 41 ... 50 (80 x)	210-333/600-006	100
<input type="radio"/> 51 ... 60 (80 x)	210-333/600-007	100
<input type="radio"/> 61 ... 70 (80 x)	210-333/600-008	100
<input type="radio"/> 71 ... 80 (80 x)	210-333/600-009	100
<input type="radio"/> 81 ... 90 (80 x)	210-333/600-010	100
<input type="radio"/> 91 ... 100 (80 x)	210-333/600-011	100
<input type="radio"/> 1 ... 50 (20 x)	210-333/600-021	100
<input type="radio"/> L1 (1200 x)	210-333/600-074	100
<input type="radio"/> L2 (1200 x)	210-333/600-075	100
<input type="radio"/> L3 (1200 x)	210-333/600-076	100
<input type="radio"/> N (1200 x)	210-333/600-077	100
<input type="radio"/> PE (1200 x)	210-333/600-078	100
<input type="radio"/> PEN (1200 x)	210-333/600-079	100
<input type="radio"/> only grid spacing	210-333/600-001	100

Marking strip; for 4-conductor terminal strips (261 Series)

<input type="radio"/> 1 ... 16 (40 x)	210-333/1000-202	100
<input type="radio"/> 17 ... 32 (40 x)	210-333/1000-204	100
<input type="radio"/> 33 ... 48 (40 x)	210-333/1000-206	100
<input type="radio"/> 49 ... 64 (40 x)	210-333/1000-110	100
<input type="radio"/> 65 ... 80 (40 x)	210-333/1000-111	100
<input type="radio"/> 81 ... 96 (40 x)	210-333/1000-112	100
<input type="radio"/> 97 ... 112 (40 x)	210-333/1000-113	100
<input type="radio"/> 1 ... 36 (20 x)	210-333/1000-208	100
<input type="radio"/> L1 (720 x)	210-333/1000-074	100
<input type="radio"/> L2 (720 x)	210-333/1000-075	100
<input type="radio"/> L3 (720 x)	210-333/1000-076	100
<input type="radio"/> N (720 x)	210-333/1000-077	100
<input type="radio"/> PE (720 x)	210-333/1000-078	100
<input type="radio"/> PEN (720 x)	210-333/1000-079	100
<input type="radio"/> only grid spacing	210-333/1000-001	100

Marking Card; Self-Adhesive Marking Strips



- Horizontal marking
- Strip length: 182 mm
- Strip height: 6 mm

Marking strip; as DIN A4 sheet; for 2-conductor terminal strips (262 Series)

Marking	Item No.	Pack. Unit
<input type="radio"/> 1 ... 20 (40 x)	210-333/700-020	100
<input type="radio"/> 21 ... 40 (40 x)	210-333/700-108	100
<input type="radio"/> 41 ... 60 (40 x)	210-333/700-109	100
<input type="radio"/> 1 ... 50 (20 x)	210-333/700-021	100
<input type="radio"/> L1 (1040 x)	210-333/700-074	100
<input type="radio"/> L2 (1040 x)	210-333/700-075	100
<input type="radio"/> L3 (1040 x)	210-333/700-076	100
<input type="radio"/> N (1040 x)	210-333/700-077	100
<input type="radio"/> PE (1040 x)	210-333/700-078	100
<input type="radio"/> PEN (1040 x)	210-333/700-079	100
<input type="radio"/> only grid spacing	210-333/700-001	100

Marking strip; for 4-conductor terminal strips (262 Series)

<input type="radio"/> 1 ... 12 (40 x)	210-333/1200-103	100
<input type="radio"/> 13 ... 24 (40 x)	210-333/1200-104	100
<input type="radio"/> 25 ... 36 (40 x)	210-333/1200-105	100
<input type="radio"/> 37 ... 48 (40 x)	210-333/1200-106	100
<input type="radio"/> 49 ... 60 (40 x)	210-333/1200-107	100
<input type="radio"/> 1 ... 24 (20 x)	210-333/1200-203	100
<input type="radio"/> L1 (600 x)	210-333/1200-074	100
<input type="radio"/> L2 (600 x)	210-333/1200-075	100
<input type="radio"/> L3 (600 x)	210-333/1200-076	100
<input type="radio"/> N (600 x)	210-333/1200-077	100
<input type="radio"/> PE (600 x)	210-333/1200-078	100
<input type="radio"/> PEN (600 x)	210-333/1200-079	100
<input type="radio"/> only grid spacing	210-333/1200-001	100

Group Marker Carrier and Marker Carrier TOPJOB® S



Group marker carrier; snap-on type for jumper slot; gray

	Item No.	Pack. Unit
○ 5 mm wide	2009-191	50 (25)
○ 10 mm wide	2009-192	50 (25)
○ 15 mm wide	2009-193	50 (25)

Marker carrier; for lateral marker slots; 5 mm wide

Color	Item No.	Pack. Unit
○ gray	2009-198	200 (25)

2009-193 Group Marker Carrier (equipped with marking strips) for all 2001 to 2016 Series TOPJOB® S Rail-Mount Terminal Blocks.

Do not use on an end plate!

Group marker carrier; snap-on type for jumper slot; gray

○ 10 mm wide	2009-196	50 (25)
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Marker carrier; for jumper slots of double-deck, double-disconnect terminal blocks (2002 Series); 5 mm wide

Color	Item No.	Pack. Unit
○ gray	2002-160	50 (25)

Marker carrier; for jumper slots (2002 Series); 5 mm wide

Color	Item No.	Pack. Unit
○ gray	2002-161	100 (25)

Using marker carriers for marking strips (2002-161) in jumper slots.



Using marker carriers for marking strips (2009-198) in lateral marker slots.

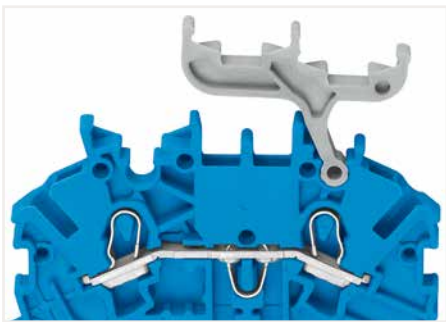
Multilevel Marker Carrier TOPJOB® S



Double-deck marker carrier; pivoting		
Color	Item No.	Pack. Unit
○ gray	2000-121	50 (25)

Double-deck marker carrier; pivoting		
Color	Item No.	Pack. Unit
○ gray	2002-121	50 (25)

Triple-deck marker carrier; pivoting		
Color	Item No.	Pack. Unit
○ gray	2002-131	50 (25)



Double-deck terminal blocks:
A double-deck marker carrier (2000-121) can be retrofitted to double-deck terminal blocks without a marker carrier.

Group Marker Carriers (Adjustable in Height) and Laterally Movable Marking System



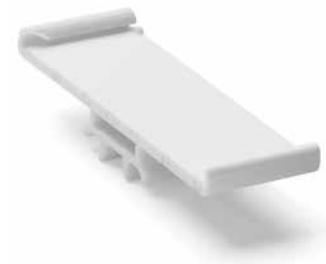
Group marker carrier; fits into jumper slot of rail-mount terminal blocks; for terminal block width 4 ... 6 mm; for up to 3 WMB markers or 8 branch markers; 15 mm wide

Color	Item No.	Pack. Unit
<input type="radio"/> gray	209-140	50 (25)



Group marker carrier; snaps onto screwless 249-116 and 249-117 End Stops (center or side mounting); 10 mm wide

Color	Item No.	Pack. Unit
<input type="radio"/> white	209-112	50 (25)



Group marker carrier; for WMB and Mini-WSB marker slots; 10 mm wide

Color	Item No.	Pack. Unit
<input type="radio"/> white	209-145	100 (25)

Group marker carrier; fits into jumper slot of rail-mount terminal blocks; for up to 2 WMB markers or 5 branch markers; 10 mm wide

<input type="radio"/> gray	209-141	50 (25)
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Group marker carrier; fits into jumper slot of rail-mount terminal blocks; for up to 1 WMB markers or 2 branch markers; 5 mm wide


<input type="radio"/> gray	209-142	50 (25)
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Accessories; item-specific


Marker; from white cardboard; for self-marking; 100 markers/sheet

 white	209-113	1
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Selbstklebeschild; zum Selbstbeschriften; 7 x 25 Stück/Bogen

 white	210-345	1
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Schutzstreifen

 transparent	209-114	50
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Group marker carriers (209-141 and 209-112)

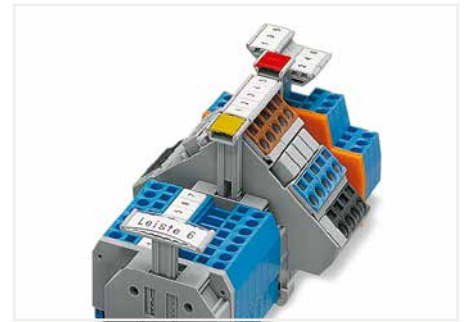


Group marking on N-busbar carrier used as an end stop



Group marker carrier (209-145)

Group Marker Carriers (Adjustable in Height) and Laterally Movable Marking System



Height-adjustable group marker carrier; snaps onto end stops (249-116 and 249-117), adjustable in height from 43.5 to 59.5 mm; for 1 marker or self-adhesive marker and transparent protection cover; 10 mm wide

Color	Item No.	Pack. Unit
○ gray	249-119	50 (25)

Carrier-through element; height-adjustable; snaps onto end stops (249-116 and 249-117)

Color	Item No.	Pack. Unit
○ gray	709-118	50 (25)

Receptacles for:
 1 x marker
 2 x WMB Multi marker or
 1 x WFB continuous marking strip

Height-adjustable group marker carrier; snaps onto end stops (249-116 and 249-117), adjustable in height from 43.5 to 59.5 mm; for 2 WMB markers or 1 continuous strip; 10 mm wide

○ gray	249-118	100 (25)
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Carrier-end element; height-adjustable; snaps onto end stops (249-116 and 249-117)

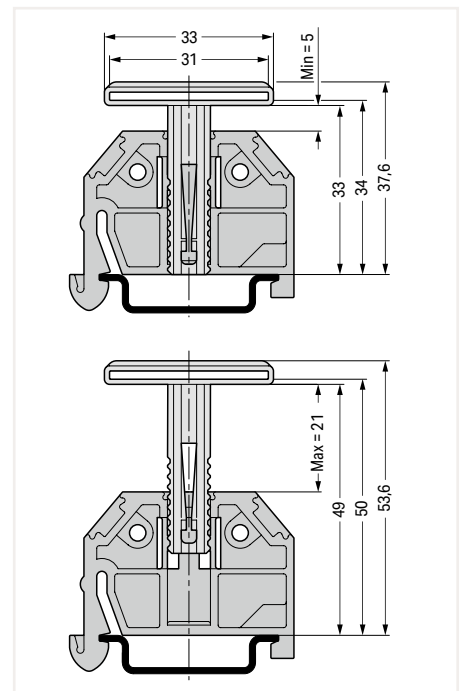
○ gray	709-119	50 (25)
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Height-adjustable group marker carrier; snaps onto end stops (249-116 and 249-117), adjustable in height from 42.2 to 58.2 mm; with marking surface; 6 mm wide

○ white	249-120	50 (25)
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Height-adjustable group marker carrier; snaps onto end stops (249-116 and 249-117), adjustable in height from 45 to 61 mm; for 9 WMB markers or 1 marking strip TOPJOB® S; 12.2 mm wide

○ gray	2009-163	50 (25)
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Dimensions in mm

Accessories; item-specific

Marking strip receptacle; folded; 1 m long; 16 mm wide; 1.7 mm thick

transparent	709-120	1
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Marking card; with 14 marking strips; DIN A4

	709-193	1
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Height adjustable group marker carrier (2009-163) for marking strips (2009-110)



This laterally movable marking system can be used as an additional group marker carrier or continuous marking strip carrier for terminal strips or single-deck rail-mount terminal blocks, e.g., for:

- DIN-35 rail-mount terminal strips (264 Series)
- Single-deck rail-mount terminal blocks (279 to 284 Series) with a maximum height of 49 mm (1.93 inch) from upper-edge of DIN-rail (please observe conductor radius)

Group Marker Carrier and Double Marker Carrier



Group marker carrier; angled; e.g., for transformer terminal blocks (282 Series)

Color	Item No.	Pack. Unit
○ gray	209-144	50 (25)

Double marker carrier; for center I/O module marking; for WSB and WMB marking systems; 4 mm wide

Color	Item No.	Pack. Unit
○ gray	209-128	200 (100)

Group marker carrier; straight; e.g., for 2- and 3-conductor terminal blocks (282 Series)

Color	Item No.	Pack. Unit
○ gray	209-143	50 (25)

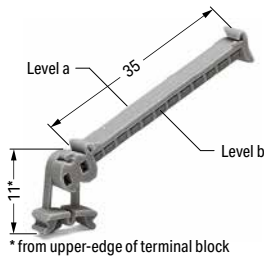


This group marker carrier (209-144) makes it possible to mark subgroups in confined places. They can be snapped into unused jumper contact slots of the terminal block housing. Labeling is performed via WMB Multi markers.



Snapping a WMB marker strip into the marker slot of the double marker carrier.

Group Marker Carrier (Pivoting) and WFB Continuous Marking Strip



Pivoting group marker carrier

Color	Item No.	Pack. Unit
○ gray	249-105	50 (25)

Zubehör; artikelspezifisch

Marker; 4 x 30 markers/sheet

white	209-183	1
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Protective marker cover

transparent	209-184	50
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Carrier for WFB continuous marking strip; snaps into marker slot

Color	Item No.	Pack. Unit
○ gray	209-185	200 (25)

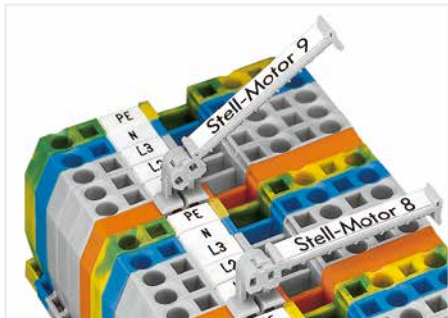
Accessories; item-specific

WFB continuous marking strip; 1000 mm long; for self-marking; e.g., with felt-tip pen

transparent	210-612	10
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Felt-tip pen; for permanent marking

	210-110	200 (1)
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This pivoting group marker carrier has been developed for group marking of rail-mount terminal blocks and incorporates many customer requirements.

- Can be used in all multiprofile marker slots for rail-mount terminal blocks from 5 mm (0.197 inch) on or in spacer housings as shown above.
- Pivotal in seven different stable positions, providing the best visual angle in case of difficult mounting conditions



WFB continuous marking strip
Customized ink pen marking



Carrier for WFB Continuous marking strips, to be fixed every 10th terminal block.

Thermal Transfer Printer Smart Printer



Open the printer.



Printer – open



Accessories for unwinding material



Insert the ink ribbon.



Prepare the marking material.



Insert and secure the appropriate roller into the printer.



Printer has several interfaces:
USB, ETHERNET, serial COM port



Fast, cost-effective and easy to use –
printing WMB Inline markers via Smart Printer

Thermal Transfer Printer and Cutter Smart Printer



Smart Printer; WMB Inline markers; Marking strips; Conductor markers and labels; Resolution: 300 dpi

Item No.	Pack. Unit
258-5000	1

Smart Printer

includes:

- Power supply and cable
- USB cable
- 1 x marking strip reel (2009-110)
- 1 x WMB Inline marker reel (2009-115)
- 2 x roller (258-5006 + 258-5007)
- 1 x reel holder
- 1 x ink ribbon (258-5005)

Technical Data

Printing method	Thermal transfer
Print head	Glass layer, spring-mounted
Print speed (max.)	127 mm/s (WAGO recommends 50.8 mm/s)
Print width (max.)	47 mm
Print length (max.)	762 mm
Print resolution	300 dpi (12 pixels/mm)
See-through/reflective sensor	Yes, centrally mounted
Operating display	Color TFT LCD with navigation button
Memory	8 MB Flash, 16 MB SDRAM
Interfaces	USB, RS-232, ETHERNET 10/100 Mbps, USB Host
Operating voltage	100 ... 240 VAC, 50 ... 60 Hz (automatic adjustment)
Dimensions (mm) W x H x D	135 x 175 x 245
Weight	2000 g (without printing material)
Operating temperature	5 ... 40 °C (41 ... 104 °F)
Storage temperature	-20 ... 50 °C (-4 ... 122 °F)
Safety approvals	CE (EMC)
Ink ribbon (see also Full Line Catalog, Volume 6, Marking)	External roll diameter: 40 mm; Internal core diameter: 12.7 mm (0.5 inch); Max. length: 110 m; Max. width: 58 mm



Cutter for Smart Printer; for marking strips only; not suitable for WMB Inline markers

Item No.	Pack. Unit
258-5030	1

Hardware requirements:

- Printer model: Smart Printer
- From manufacturing month/year: 0814 – August 2014
- Firmware version: 1.UW7i
- Printer driver: Version 7.4.2

Software requirements:

- Smart Script: Version 3.88.9.0 or higher
- WAGO printer settings: Version 2.4.0.0 or higher

Approved print material to be cut:

- Marking strips: 2009-110, 709-177, 709-178, 757-901/000-005
- Self-adhesive marking strips: 210-702, 210-870 ... -877
- Cable tie markers: 211-835 ... -836, 211-836/000-002
- Self-laminating labels: 211-855 ... -857
- Conductor markers for thread-on mounting: 211-861 ... -863
- Type labels: 210-801 ... -804, 210-812
- Continuous labels: 210-831 ... -834
- Label for circuit identification: 210-813

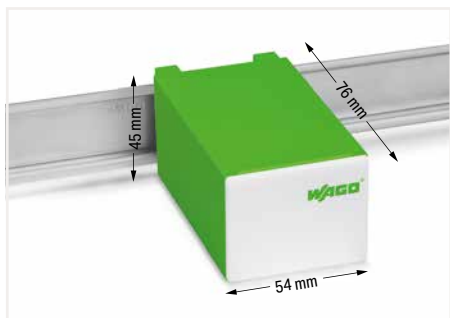
Dimensions of printing materials:

- Width (max.): 46 mm
- Thickness (max.): 250 µm

Technical Data

Width	60 mm
Height	107 mm
Depth	131 mm
Weight	1050 g

Control Cabinet Outlet and Switch Cabinet Drawer 709 Series



Technical Data

Ratings per	DIN VDE 0620-1
Voltage type	AC
Rated voltage	250 V
Rated surge voltage	2 kV
Rated current	16 A

Connection Data

Connection technology	Push-in CAGE CLAMP®
Actuation type	Type 2 (3.5 x 0.5) mm blade
Actuation direction	Operation parallel to conductor entry
Connectable conductor materials	Copper
Solid conductor	0.2 ... 2.5 mm / 24 ... 14 AWG
Stranded conductor	0.2 ... 2.5 mm / 24 ... 14 AWG
Fine-stranded conductor	0.2 ... 2.5 mm / 24 ... 14 AWG
Strip length	9 ... 10 mm / 0.35 ... 0.39 inch
Number of poles	3

Mechanical Data

Mounting type	DIN-35 rail
Protection type	IP20
Potential marking	L PE N

Material Data

Material group	I
Insulation material	Polyamide 66 (PA 66)
Flammability class per UL94	V0
Clamping spring material	Chrome nickel spring steel (CrNi)
Contact material	Copper alloy
Contact plating	Sn

Environmental Requirements

Continuous operating temperature from	-35 °C
Continuous operating temperature up to	85 °C

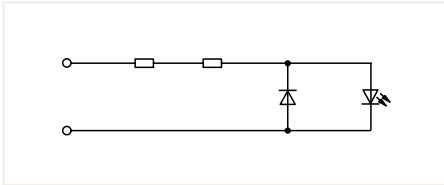
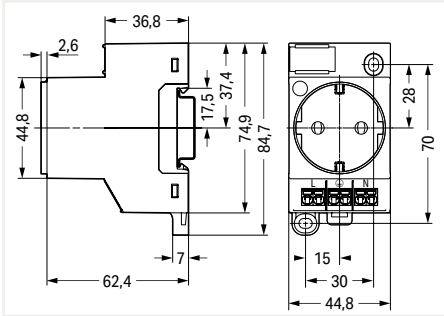
- ❶ The outlets are available in three colors to identify different circuits:
- 709-581 gray (standard)
 - 709-582 yellow (permanently energized)
 - 709-583 red (UPS)

Approvals and corresponding ratings,
visit www.wago.com

Control Cabinet Outlet and Switch Cabinet Drawer 709 Series



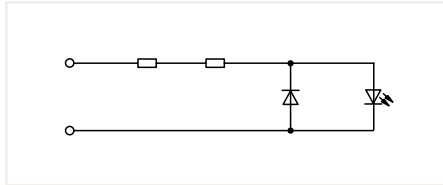
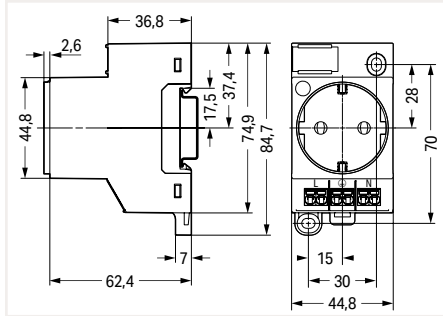
Dimensions in mm



Control cabinet outlet; for DIN-35 rail and screw mounting; for plug Type F, CEE 7/4 (SCHUKO®); used in Germany, the Netherlands, Austria; with status LED; with Push-in CAGE CLAMP® double connection

Color	Item No.	Pack. Unit
○ light gray	709-581 1	1

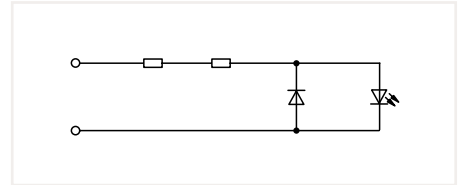
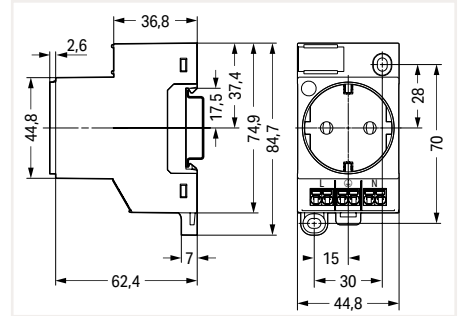
Dimensions in mm



Control cabinet outlet; for DIN-35 rail and screw mounting; for plug Type F, CEE 7/4 (SCHUKO®); used in Germany, the Netherlands, Austria; with status LED; with Push-in CAGE CLAMP® double connection

Color	Item No.	Pack. Unit
● yellow	709-582 1	1

Dimensions in mm

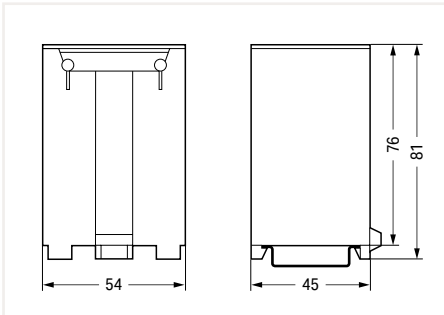


Control cabinet outlet; for DIN-35 rail and screw mounting; for plug Type F, CEE 7/4 (SCHUKO®); used in Germany, the Netherlands, Austria; with status LED; with Push-in CAGE CLAMP® double connection

Color	Item No.	Pack. Unit
● red	709-583 1	1



Dimensions in mm



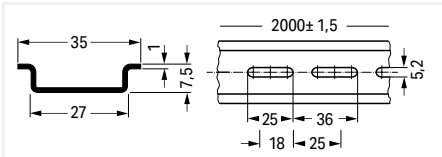
Switchgear cabinet drawer; DIN-35 rail-mount drawer

Item No.	Pack. Unit
709-591	1

DIN-Rail; Rail End Cap; Angled Support Bracket and Collective Jumper Carrier



Dimensions in mm



Steel DIN-rail; I_N 76 A (based on 1 m length); 35 x 7.5 mm; 1 mm thick; 2 m long; per EN 60715

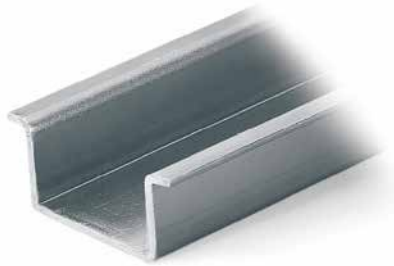
	Item No.	Pack. Unit
unslotted	210-113	10 (1)

Hole width: 25 mm; Hole spacing: 36 mm

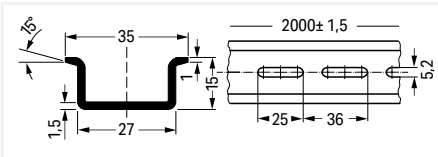
slotted	210-112	10 (1)
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Hole width: 18 mm; Hole spacing: 25 mm

slotted	210-115	1
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Dimensions in mm

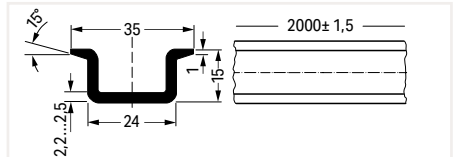


Steel DIN-rail; I_N 125 A (based on 1 m length); 35 x 15 mm; 1.5 mm thick; 2 m long; similar to EN 60715

	Item No.	Pack. Unit
unslotted	210-114	10 (1)
slotted	210-197	10 (1)



Dimensions in mm

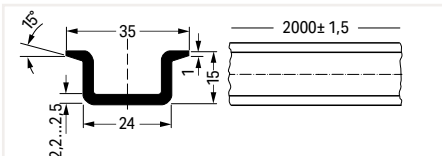


Steel DIN-rail; I_N 125 A (based on 1 m length); 35 x 15 mm; 2.3 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
unslotted	210-118	10 (1)



Dimensions in mm

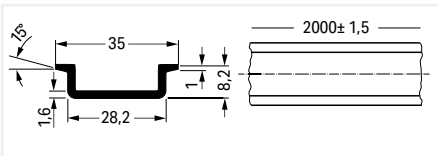


Copper DIN-rail; I_N 309 A (based on 1 m length); 35 x 15 mm; 2.3 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
unslotted	210-198	10 (1)



Dimensions in mm



Aluminum DIN-rail; I_N 76 A (based on 1 m length); 35 x 8.2 mm; 1.6 mm thick; 2 m long; similar to EN 60715

	Item No.	Pack. Unit
unslotted	210-196	20 (1)



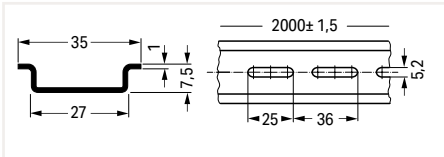
Rail end cap; for DIN-35 rail (7.5 mm high)

Color	Item No.	Pack. Unit
○ gray	209-109	50 (25)

14



Dimensions in mm

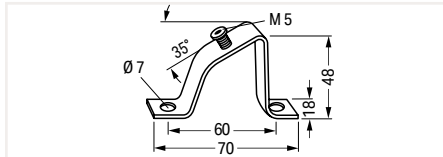


Steel DIN-rail; I_n 76 A (based on 1 m length); 35 x 7.5 mm; 1 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
unslotted	210-505	1
slotted	210-504	1



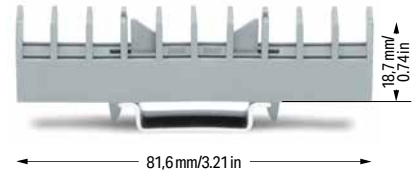
Dimensions in mm



Angled support bracket; without screw

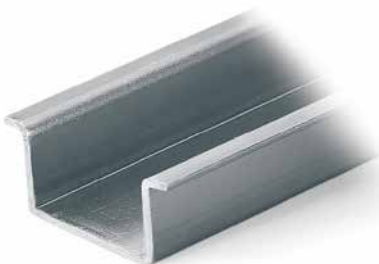
	Item No.	Pack. Unit
	210-148	10

Screw M5 x 8		
	210-149	100 (20)

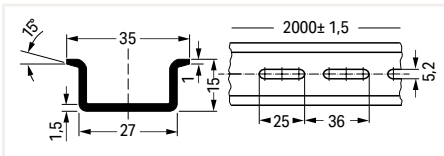


Collective jumper carrier; for DIN-35 rail; compatible with jumpers for transverse switching terminal block (282-811) and longitudinal switching disconnect terminal block (282-821). The collective carrier can be snapped onto DIN-35 rails. It stores jumpers during maintenance.

Color	Item No.	Pack. Unit
○ gray	282-369	25



Dimensions in mm

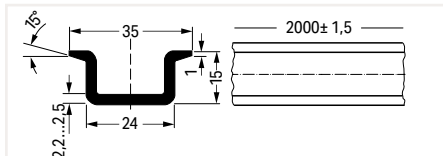


Steel DIN-rail; I_n 125 A (based on 1 m length); 35 x 15 mm; 1.5 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
unslotted	210-506	1
slotted	210-508	1



Dimensions in mm



Carrier rail; plastic
Not suited for use with ground terminal blocks!

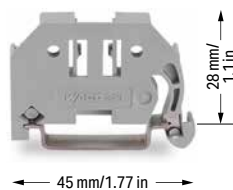
	Item No.	Pack. Unit
	210-509	10 (1)



Collective carrier for adjacent jumpers; for DIN-35 rail; for adjacent jumpers (279 to 284 Series); for banana plugs (215 Series). The collective carrier can be snapped onto DIN-35 rails. It stores adjacent jumpers and banana plugs during maintenance.

Color	Item No.	Pack. Unit
○ gray	209-100	50 (25)

Screwless End Stop; for DIN-35 Rail 249 Series



Screwless end stop; for DIN-35 rail; 6 mm wide

Color	Item No.	Pack. Unit
○ gray	249-116	100 (25)

Screwless end stop; for DIN-35 rail; 10 mm wide

○ gray	249-117	50 (25)
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Simply snap on – that's it!



Simply snap on – that's it!

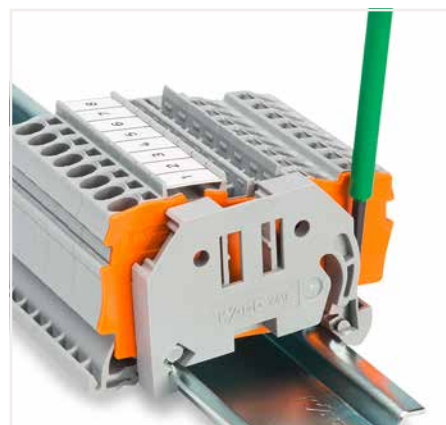


Screwless end stop; for DIN-35 rail; 14 mm wide

Color	Item No.	Pack. Unit
○ gray	249-197	10



Simply snap on – that's it!



Removing an end stop from the DIN-rail.

Snap on – that's it! Assembling the WAGO Screwless End Stop is as simple and quick as snapping a rail-mount terminal block onto the rail.

Tool free!

A tool-free design allows rail-mount terminal blocks to be safely and economically secured against any movement on all DIN-35 rails per DIN EN 60715 (35 x 7.5 mm; 35 x 15 mm).

Screwless!

The "secret" to a perfect fit lies in the two small clamping plates which keep the end stop in position, even if the rails are mounted vertically.

Simply snap on – that's it!

In addition, costs are significantly reduced when using large numbers of end stops.

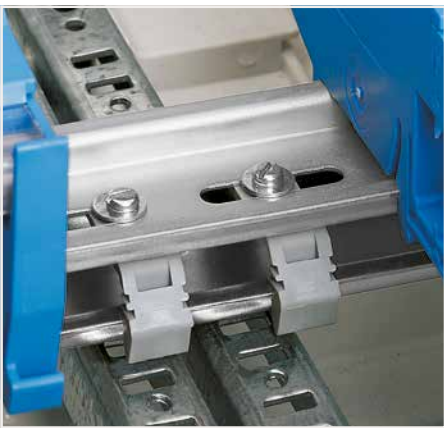
Additional benefit: Three marker slots for all WAGO Rail-Mount Terminal Block Marking Systems and one snap-in hole for WAGO's adjustable height group marker carriers offer individual marking options.

Mounting Foot



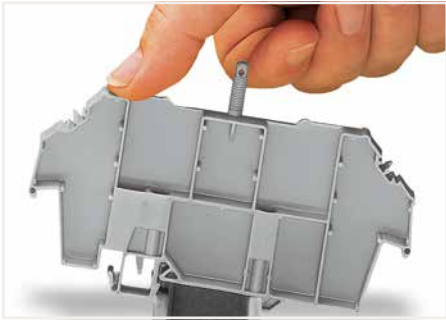
Mounting foot; for isolated DIN-35 rail mounting

Color	Item No.	Pack. Unit
<input type="radio"/> gray	209-106	25



Isolated mounting of a carrier rail in a distribution box for protection class II

Sealable, Transparent Covers for Rail-Mount Terminal Blocks 709 Series Description and Installation



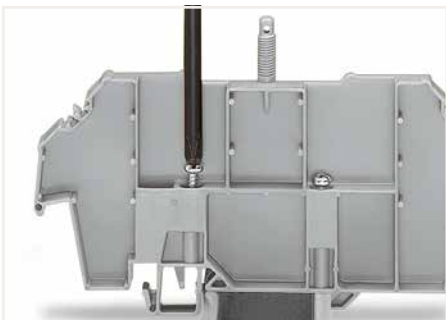
Snapping a cover carrier onto the DIN-rail.



Application example:
Cover (type 1) without safety warning



Application example:
Cover (type 1) with safety warning



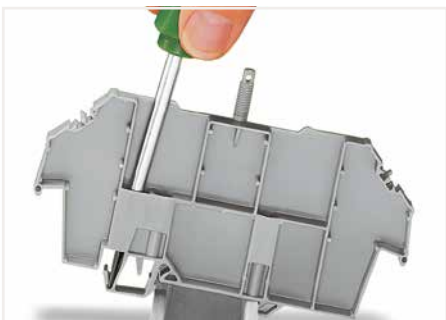
Tightening both securing screw (left) and mounting screw (right).



Application example:
Cover (type 2) with safety warning



Securing screw – prevents lifting off from the rail.
Mounting screw – prevents the cover carrier from being moved on the rail.



Removing a cover carrier from the DIN-rail.



Inserting a marking strip into the cover.




Cover with lead seals:
Using covers without lead seals,
the thread dome-head can be broken off.


Sealable, Transparent Cover; for Rail-Mount Terminal Blocks 709 Series




Cover; Type 1; for cover carrier (type 1); 1 m long		
Color	Item No.	Pack. Unit
transparent	709-153	10

Cover; Type 2; for cover carrier (type 2); 1 m long		
Color	Item No.	Pack. Unit
transparent	709-154	10

Accessories			
Marking card; with 6 marking strips; for group marking or safety instructions			
	plain	709-183	1

Spare mounting/securing screw; for cover		
		209-196 200 (25)

Spare knurled nut; for cover		
		210-549 100 (25)



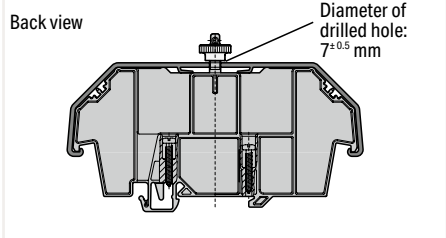
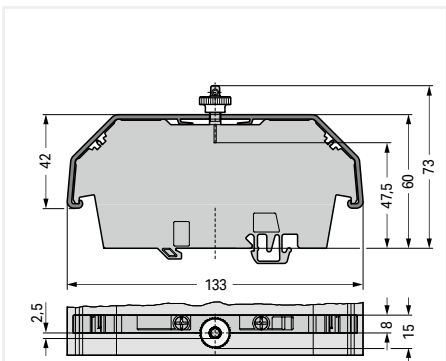
Cover carrier; Type 1; incl. mounting/securing screws and knurled nut; for rail-mount terminal blocks (279 to 282, 880 Series); for "Mini" rail-mount terminal blocks (264 Series); for sensor/actuator terminal blocks (270 Series)

Cover carrier; Type 2; incl. mounting/securing screws and knurled nut; for rail-mount terminal blocks (283 to 285 Series); for double- and triple-deck terminal blocks (279 to 281 Series); for TOPJOB® rail-mount terminal blocks (780 to 785 and 775 Series); for sensor/actuator terminal blocks (280 Series); for disconnect/test terminal blocks for transformer circuits (282 Series)

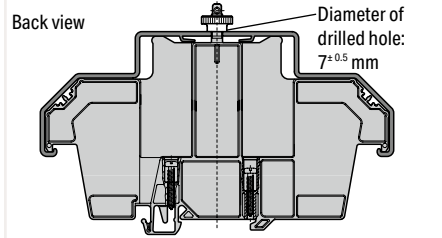
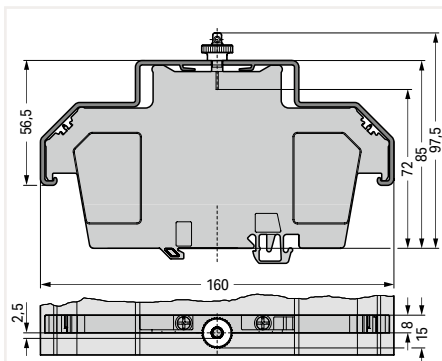
Color	Item No.	Pack. Unit
○ gray	709-167	10

Color	Item No.	Pack. Unit
○ gray	709-168	10

Dimensions in mm




Dimensions in mm





Sealable, Transparent Cover; for Rail-Mount Terminal Blocks 709 Series




Cover; Type 3; for cover carrier (type 3); 1 m long		
Color	Item No.	Pack. Unit
transparent	709-156	10

Accessories			
Marking card; with 6 marking strips; for group marking or safety instructions			
	plain	709-183	1

Marking strip; plain; 11 mm wide; 50 m reel			
	white	2009-110	1

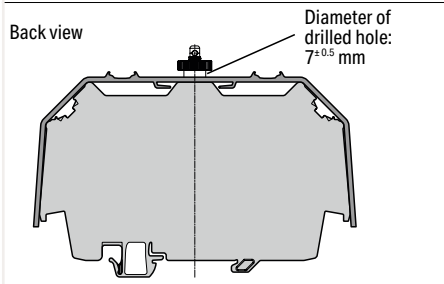
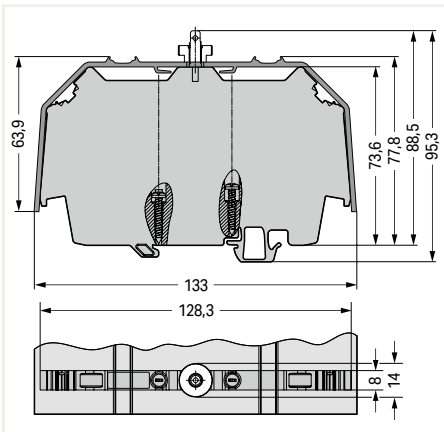
Spare mounting/securing screw; for cover			
		209-196	200 (25)

Spare knurled nut; for cover			
		210-549	100 (25)



Cover carrier; Type 3; for rail-mount terminal blocks (2000 to 2016 Series, 2102 to 2116 Series, 2200 to 2216 Series); for transformer terminal blocks (2007 Series)		
Color	Item No.	Pack. Unit
○ gray	709-169	10

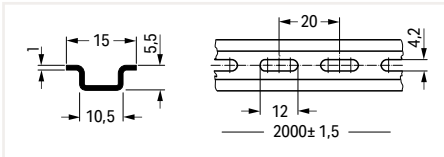
Dimensions in mm



DIN-Rail and End Stop; for DIN-15 Rail



Dimensions in mm

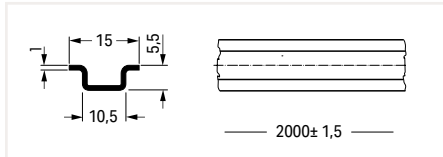


Steel DIN-rail; I_n 57 A (based on 1 m length); 15 x 5.5 mm; 1 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
slotted	210-111	10 (1)



Dimensions in mm



Aluminum DIN-rail; I_n 57 A (based on 1 m length); 15 x 5.5 mm; 1 mm thick; 2 m long; similar to EN 60715

	Item No.	Pack. Unit
unslotted	210-296	10 (1)

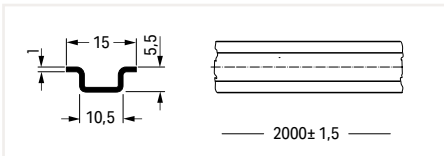


Screwless end stop; for DIN-15 rail; 6 mm wide; for WMB markers

Color	Item No.	Pack. Unit
○ gray	249-101	25



Dimensions in mm



Steel DIN-rail; I_n 57 A (based on 1 m length); 15 x 5.5 mm; 1 mm thick; 2 m long; per EN 60715

	Item No.	Pack. Unit
unslotted	210-295	1

Operating Tool



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

Item No.	Pack. Unit
210-719	50 (1)



Operating tool; Blades: 3.5 mm and 2.5 mm; for installation terminal blocks (TOPJOB® S)

Item No.	Pack. Unit
2009-309	50 (1)



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

Item No.	Pack. Unit
210-647	50 (1)

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

210-720	50 (1)
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Operating tool; Blades: 3.5 mm and 5.5 mm; for installation terminal blocks (TOPJOB® S)

2009-310	50 (1)
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Operating tool with a partially insulated shaft; (2.5 x 0.4) mm blade; short; angled

210-648	50 (1)
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Operating tool with a partially insulated shaft; Type 3, (5.5 x 0.8) mm blade

210-721	25 (1)
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Operating tool with a partially insulated shaft; (3.5 x 0.5) mm blade; short

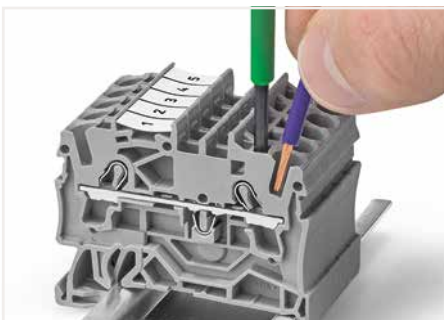
210-657	50 (1)
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Set of operating tools with a partially insulated shaft; Type 1, (2.5 x 0.4) mm blade; Type 2, (3.5 x 0.5) mm blade; Type 3, (5.5 x 0.8) mm blade

210-722	1
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Operating tool with a partially insulated shaft; (3.5 x 0.5) mm blade; short; angled

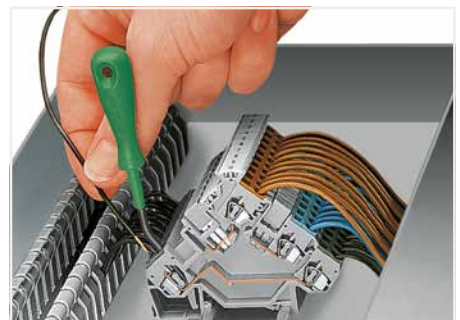
210-658	50 (1)
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The blade of this operating tool with a partially insulated shaft is ideal for operating front-entry terminal blocks.



Open the clamping unit using an operating tool.



This operating tool with blade dimensions per DIN 5264 is ideal for front-entry sensor/actuator terminal blocks (280 Series).



Set of operating tools in a box (210-722)

Operating Tool



Operating tool; insulated; for 279 Series

	Item No.	Pack. Unit
1-way	209-129	100 (1)
2-way	279-432	100 (1)
3-way	279-433	100 (1)
10-way	279-440	30 (1)



Operating pliers; for side-entry rail-mount terminal blocks (281, 282, 283 and 284 Series)

	Item No.	Pack. Unit
	210-141	1



T-wrench with a partially insulated shaft

	Item No.	Pack. Unit
	285-172	1

Operating tool; insulated; for 264 Series (1- and 2-way only), 280, 281 Series (up to 3-way only)

	Item No.	Pack. Unit
1-way	209-130	100 (1)
2-way	280-432	100 (1)
3-way	280-433	100 (1)
4-way	280-434	40 (1)
5-way	280-435	40 (1)
6-way	280-436	30 (1)
7-way	280-437	30 (1)
8-way	280-438	30 (1)
9-way	280-439	30 (1)
10-way	280-440	30 (1)

Operating pliers; for side-entry rail-mount terminal blocks (279 and 280 Series)

	Item No.	Pack. Unit
	210-143	1

T-wrench with a partially insulated shaft and anti-rotation protection

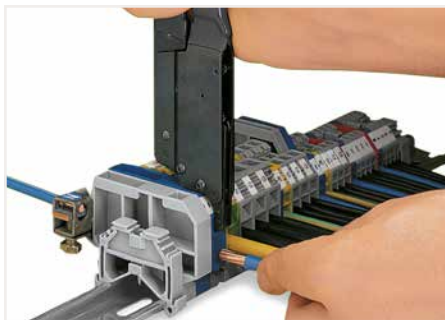
	Item No.	Pack. Unit
	285-173	1

Operating tool; insulated; for 281 Series

	Item No.	Pack. Unit
5-way	281-440	40 (1)



Commoning front-entry disconnect terminal blocks via comb-style jumper bar using a 10-pole operating tool.



When operating the handles beyond the locked position, the ratchet allows the tool to open and be removed from the terminal block.
The operating pliers are placed into the upper operating slot of the rail-mount terminal block and the clamp is hooked into the lateral operating slot. The contact is fully opened by pressing the handles together until they engage. This will allow both hands to be used for wiring the terminal blocks.



T-wrench with a partially insulated shaft and anti-rotation protection (285-173)

Cable Stripper



Never use this tool on or near live electrical circuits!

Cable knife; for Ø 8 ... 28 mm / 0.31 ... 1.10 inch; with a unique, changeable cable bracket system; including cable bracket

Item No.	Pack. Unit
206-1403	1

Cable knife set; for Ø 4 ... 70 mm / 0.16 ... 2.75 inch; including all cable brackets in a Sortimo® Box


Item No.	Pack. Unit
206-1400	1




To replace the cable bracket, use the new bracket as an operating tool and pull it upwards.

Item-Specific Accessories


Cable bracket; for Ø 4 ... 16 mm / 0.16 ... 0.63 inch

	206-1411	1
----------------------------------------------------------------------------------	----------	---


Cable bracket; for Ø 8 ... 28 mm / 0.31 ... 1.10 inch

	206-1412	1
----------------------------------------------------------------------------------	----------	---


Cable bracket; for Ø 27 ... 35 mm / 1.06 ... 1.38 inch

	206-1413	1
------------------------------------------------------------------------------------	----------	---

Cable bracket; for Ø 35 ... 50 mm / 1.38 ... 1.97 inch


	206-1414	1
------------------------------------------------------------------------------------	----------	---

Cable bracket; for Ø 50 ... 70 mm / 1.97 ... 2.75 inch


	206-1415	1
------------------------------------------------------------------------------------	----------	---

Accessories

Spare inside blade

	206-1418	1
------------------------------------------------------------------------------------	----------	---

Spare hook blade

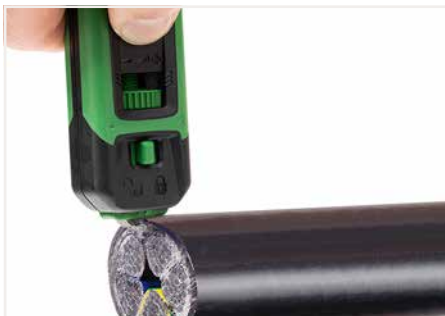
	206-1419	1
-------------------------------------------------------------------------------------	----------	---



The cutting depth of the hook blade can be adjusted with the slider.



The cutting depth of the inner knife can be adjusted with the screw.



Strip large cross sections with the hook blade.



Release the fuse before using the hook blade.

Cable Stripper



In-socket cable stripper; for \varnothing 8 ... 13 mm / 5/16 ... 1/2 inch

Item No.	Pack. Unit
206-1441	1



Universal cable stripper; for \varnothing 8 ... 13 mm / 5/16 ... 1/2 inch

Item No.	Pack. Unit
206-1442	1



Data cable stripper; for \varnothing 4.5 ... 10 mm / 3/16 ... 3/8 inch

Item No.	Pack. Unit
206-1451	1



Product features:

- Extra long design and improved force transmission simplifies stripping in deep device connection sockets
- Special four-blade design for an even more precise round cut
- No cutting depth adjustment required
- TiN-coated blades, TÜV/GS tested
- \varnothing 8 ... 13 mm / 5/16 ... 1/2 inch
- Strips all standard round cables, including NYM 3 x 1.5 mm²/16 AWG ... 5 x 2.5 mm²/14 AWG



Sheath stripping: longitudinal cut

Product features:

- Secure grip achieved with soft padding for non-slip grips
- Technically improved functionality
- New locking mechanism prevents the unwanted opening of the tool
- Absolutely straightforward, quick and easy longitudinal cuts – with innovative internal cable duct
- Redesigned blade layout and intake to stop cable waste from jamming the tool
- Durable and ergonomically designed pocket clip
- \varnothing 8 ... 13 mm / 5/16 ... 1/2 inch



Product features:

- Strip outer insulation and foil sheathing with one tool
- Ideal for stripping PVC-insulated data cables with thin insulation (e.g., Cat. 5, Cat. 6, Cat. 7, twisted pair cable)
- TiN-coated blades
- \varnothing 4.5 ... 10 mm / 3/16 ... 3/8 inch



Stripping a cable sheath.



Built-in handy knife



Stripping a conductor insulation.

Cable Stripper



Never use this tool on or near live electrical circuits!

The stripping pliers for sensor cables have a blade geometry specially designed for sensor cables with a smaller cross section and a working range from Ø 3.2 mm / 0.13 inch (for stranded cables and round cables with Ø 3.2 mm ... 4.4 mm / 0.13 ... 0.17 inch).

The stripping pliers for control cables are designed for stronger cables from Ø 4.4 mm / 0.17 inch (for stranded cables and round cables with Ø 4.4 mm ... 7 mm / 0.17 ... 0.27 inch).

These stripping pliers quickly and safely strip cables for connecting, e.g., sensor/actuator distribution boxes, bus couplers and pluggable connectors.

Suitable for:

- Halogen-free PUR sensor/actuator cables
- Highly flexible TPE-U cables
- Control cables
- PUR cables
- PUR/PVC cables
- PVC cables
- Multi-core cables
- Shielded and unshielded cables

Stripping pliers; for sensor cables; for Ø 3.2 ... 4.4 mm / 0.13 ... 0.17 inch

Item No.	Pack. Unit
206-1481	1

Stripping pliers; for control cables; for Ø 4.4 ... 7 mm / 0.17 ... 0.27 inch

Item No.	Pack. Unit
206-1482	1

Item-Specific Accessories

Replacement blade set; for Ø 3.2 ... 4.4 mm / 0.13 ... 0.17 inch

206-1491	1
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Item-Specific Accessories

Replacement blade set; for Ø 4.4 ... 7 mm / 0.17 ... 0.27 inch

206-1492	1
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Wire Stripper



Wire stripper "Quickstrip Vario"; 0.03 ... 16 mm² / 34 ... 6 AWG; with wire cutter

Item No.	Pack. Unit
206-1125	1

Accessories

Blade set; Standard; 0.03 ... 16 mm² / 34 ... 6 AWG

206-1126 1



Blade set; V-blade; 0.14 ... 4 mm² / 24 ... 12 AWG

206-1127 1



Blade set; Oval blade; 10 ... 16 mm² / 8 ... 6 AWG

206-1128 1



Spare stripping stop

206-1129 1



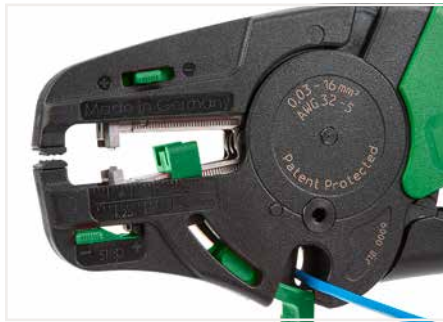
Spare cut protector

206-1131 1



Spare clamping jaws

206-1132 1



Cutting a conductor.



Partially stripping a conductor.

Wire Stripper:

- Automatically adjust to conductor size
- Stripping blades cause no damage to conductor strands
- Gripping pressure of jaws adjusts automatically to conductor insulation diameter
- Clamping jaws and stripping blades automatically open once the stripping process is completed – no splaying of the conductor strands
- Exact strip length may be set by sliding black setting stop
- Stripping blades can be replaced
- Self-sharpening, fully protected cutter (replaceable)
- Entire body made of glass-fiber-reinforced polyamide
- Cutting capacity of the wire cutter of fine-stranded conductors up to 16 mm² (6 AWG)

Crimping Tool



Crimping tool "Variocrimp 4"; for insulated and uninsulated ferrules; Crimping range: 0.25 ... 4 mm² (24 ... 12 AWG)

Item No.	Pack. Unit
206-1204	1

Crimping tool "Variocrimp 16"; for insulated and uninsulated ferrules; Crimping range: 6 mm² (10 AWG), 10 mm² (8 AWG) and 16 mm² (6 AWG)

Item No.	Pack. Unit
206-1216	1

Item-Specific Accessories

Spring clamp; large

	206-1205	1
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Spring clamp; small

	206-1206	1
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Item-Specific Accessories

Spring clamp; small

	206-1206	1
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Application notes:

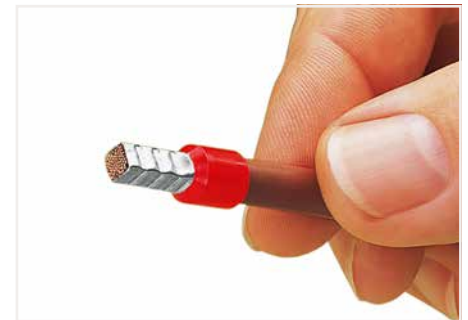
- The built-in crimping pressure control of "Variocrimp 4" automatically adjusts the crimping force to the conductor cross section. Select the wire gauge on "Variocrimp 16" before crimping.
- Only one crimping station is needed to handle the specified conductor range.
- Uniform, compact crimping on all four sides for high conductor retention.
- No need to center the ferrules into the terminal blocks.
- Crimping can be performed from either side (for left- or right-handed users).
- Built-in ratchet mechanism ensures gas-tight crimp connection.
- Crimping tools open automatically after crimping operation is complete.
- Ergonomically designed handles.



Insert the ferruled conductor into the crimping station.



Squeeze handles until ratchet mechanism is released.

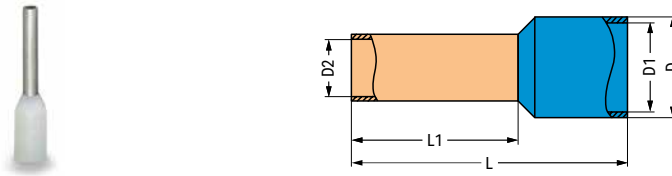


A perfect gas-tight crimp – both electrically and mechanically reliable



Only for "Variocrimp 16":
Adjust conductor cross section with crimping tool in open position.

Insulated ferrule; for Rail-Mount Terminal Block TOPJOB® S



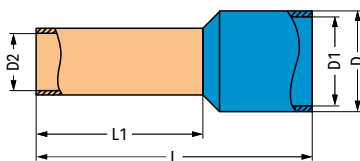
Ferrule; insulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)

Conductor Cross Section	Color	Strip Length	L	L 1	D	D 1	D 2	Item No.	Pack. Unit
0.5 mm ² / 20 AWG	○ white	12 mm / 0.47 inch	16	10	3,1	2,6	1	216-241	1000
0.75 mm ² / 18 AWG	○ gray	12 mm / 0.47 inch	16	10	3,3	2,8	1,2	216-242	1000
0.75 mm ² / 18 AWG	○ gray	14 mm / 0.55 inch	18	12	3,3	2,8	1,2	216-262	1000
1 mm ² / 18 AWG	● red	12 mm / 0.47 inch	16	10	3,5	3	1,4	216-243	1000
1 mm ² / 18 AWG	● red	14 mm / 0.55 inch	18	12	3,5	3	1,4	216-263	1000
1.5 mm ² / 16 AWG	● black	12 mm / 0.47 inch	16	10	4	3,5	1,7	216-244	1000
1.5 mm ² / 16 AWG	● black	14 mm / 0.55 inch	18	12	4	3,5	1,7	216-264	1000
1.5 mm ² / 16 AWG	● black	20 mm / 0.79 inch	24	18	4	3,5	1,7	216-284	500
2.5 mm ² / 14 AWG	● blue	12 mm / 0.47 inch	17	10	4,7	4,2	2,2	216-246	1000
2.5 mm ² / 14 AWG	● blue	14 mm / 0.55 inch	19	12	4,7	4,2	2,2	216-266	1000
2.5 mm ² / 14 AWG	● blue	20 mm / 0.79 inch	25	18	4,7	4,2	2,2	216-286	500
4 mm ² / 12 AWG	○ gray	14 mm / 0.55 inch	20	12	5,4	4,8	2,8	216-267	500
4 mm ² / 12 AWG	○ gray	20 mm / 0.79 inch	26	18	5,4	4,8	2,8	216-287	100
6 mm ² / 10 AWG	● yellow	14 mm / 0.55 inch	20	12	6,9	6,3	3,5	216-208	100
6 mm ² / 10 AWG	● yellow	20 mm / 0.79 inch	26	18	6,9	6,3	3,5	216-288	100
10 mm ² / 8 AWG	● red	20 mm / 0.79 inch	28	18	8,4	7,6	4,5	216-289	100
16 mm ² / 6 AWG	● blue	23 mm / 0.91 inch	28	18	9,6	8,8	5,8	216-210	100

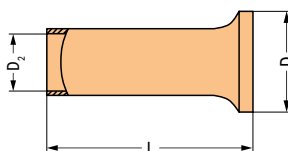


Fine-stranded conductors with ferrules from at least two sizes below the rated cross section up to the rated cross section can also be simply pushed in – without tools.

Insulated and Uninsulated Ferrules; for Chassis-Mount Terminal Strip

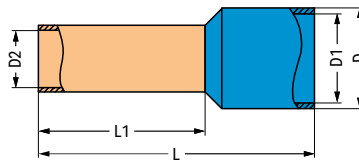


Ferrule; insulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)									
Conductor Cross Section	Color	Strip Length	L	L 1	D	D 1	D 2	Item No.	Pack. Unit
0.5 mm ² / 20 AWG	○ white	12 mm / 0.47 inch	16	10	3,1	2,6	1	216-241	1000
0.75 mm ² / 18 AWG	○ gray	12 mm / 0.47 inch	16	10	3,3	2,8	1,2	216-242	1000
1 mm ² / 18 AWG	● red	12 mm / 0.47 inch	16	10	3,5	3	1,4	216-243	1000
1.5 mm ² / 16 AWG	● black	12 mm / 0.47 inch	16	10	4	3,5	1,7	216-244	1000



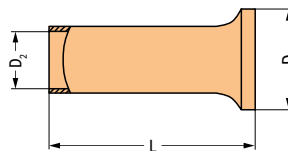
Ferrule; uninsulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)						
Conductor Cross Section	Strip Length	L	D	D 2	Item No.	Pack. Unit
0.5 mm ² / 20 AWG	10 mm / 0.39 inch	10	2,1	1	216-141	5000 (1000)
0.75 mm ² / 18 AWG	10 mm / 0.39 inch	10	2,3	1,2	216-142	5000 (1000)
1 mm ² / 18 AWG	10 mm / 0.39 inch	10	2,5	1,4	216-143	5000 (1000)
1.5 mm ² / 16 AWG	10 mm / 0.39 inch	10	2,8	1,7	216-144	5000 (1000)

Insulated and Uninsulated Ferrules



Ferrule; insulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)

Conductor Cross Section	Color	Strip Length	L	L 1	D	D 1	D 2	Item No.	Pack. Unit
0.25 mm ² / 24 AWG	● yellow	7 mm / 0.28 inch	10	6	2,3	1,8	0,85	216-321	1000
0.25 mm ² / 24 AWG	● yellow	9 mm / 0.35 inch	12	8	2,3	1,8	0,85	216-301	1000
0.34 mm ² / 22 AWG	● green	7 mm / 0.28 inch	10	6	2,5	2	0,85	216-322	1000
0.34 mm ² / 22 AWG	● green	9 mm / 0.35 inch	12	8	2,5	2	0,85	216-302	1000
0.5 mm ² / 20 AWG	○ white	7 mm / 0.28 inch	12	6	3,1	2,6	1	216-221	1000
0.5 mm ² / 20 AWG	○ white	9 mm / 0.35 inch	14	8	3,1	2,6	1	216-201	1000
0.75 mm ² / 18 AWG	○ gray	8 mm / 0.31 inch	12	6	3,3	2,8	1,2	216-222	1000
0.75 mm ² / 18 AWG	○ gray	10 mm / 0.39 inch	14	8	3,3	2,8	1,2	216-202	1000
1 mm ² / 18 AWG	● red	8 mm / 0.31 inch	12	6	3,5	3	1,4	216-223	1000
1 mm ² / 18 AWG	● red	10 mm / 0.39 inch	14	8	3,5	3	1,4	216-203	1000
1.5 mm ² / 16 AWG	● black	8 mm / 0.31 inch	12	6	4	3,5	1,7	216-224	1000
1.5 mm ² / 16 AWG	● black	10 mm / 0.39 inch	14	8	4	3,5	1,7	216-204	1000
2.08 mm ² / 14 AWG	● yellow	10 mm / 0.39 inch	15	8	4,8	4,2	2,05	216-205	1000
2.5 mm ² / 14 AWG	● blue	10 mm / 0.39 inch	15	8	4,7	4,2	2,2	216-206	1000
4 mm ² / 12 AWG	○ gray	12 mm / 0.47 inch	18	10	5,4	4,8	2,8	216-207	500
6 mm ² / 10 AWG	● yellow	14 mm / 0.55 inch	20	12	6,9	6,3	3,5	216-208	100
10 mm ² / 8 AWG	● red	16 mm / 0.63 inch	22	12	8,4	7,6	4,6	216-209	100
16 mm ² / 6 AWG	● blue	23 mm / 0.91 inch	28	18	9,6	8,8	5,8	216-210	100



Ferrule; un-insulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)

Conductor Cross Section	Strip Length	L	D	D 2	Item No.	Pack. Unit
0.25 mm ² / 24 AWG	5 mm / 0.2 inch	5	1,7	0,75	216-151	1000
0.25 mm ² / 24 AWG	7 mm / 0.28 inch	7	1,7	0,75	216-131	1000
0.34 mm ² / 22 AWG	5 mm / 0.2 inch	5	1,8	0,85	216-152	1000
0.34 mm ² / 22 AWG	7 mm / 0.28 inch	7	1,8	0,85	216-132	1000
0.5 mm ² / 20 AWG	6 mm / 0.24 inch	6	2,1	1	216-121	1000
0.5 mm ² / 20 AWG	8 mm / 0.31 inch	8	2,1	1	216-101	1000
0.75 mm ² / 18 AWG	6 mm / 0.24 inch	6	2,3	1,2	216-122	1000
0.75 mm ² / 18 AWG	8 mm / 0.31 inch	8	2,3	1,2	216-102	1000
1 mm ² / 18 AWG	6 mm / 0.24 inch	6	2,5	1,4	216-123	1000
1 mm ² / 18 AWG	8 mm / 0.31 inch	8	2,5	1,4	216-103	1000
1.5 mm ² / 16 AWG	6 mm / 0.24 inch	6	2,8	1,7	216-124	1000
1.5 mm ² / 16 AWG	8 mm / 0.31 inch	8	2,8	1,7	216-104	1000
2.5 mm ² / 14 AWG	10 mm / 0.39 inch	10	3,4	2,2	216-106	1000
4 mm ² / 12 AWG	10 mm / 0.39 inch	10	4	2,8	216-107	1000
6 mm ² / 10 AWG	12 mm / 0.47 inch	12	4,7	3,5	216-108	500
10 mm ² / 8 AWG	12 mm / 0.47 inch	12	5,8	4,5	216-109	500
16 mm ² / 6 AWG	15 mm / 0.59 inch	15	7,5	5,8	216-110	500

Crimping Tool



Crimping tool 25; for insulated and uninsulated ferrules; crimping range: 10 mm² (8 AWG), 16 mm² (6 AWG) and 25 mm² (4 AWG)

Item No.	Pack. Unit
206-1225	1

Crimping tool 50; for insulated and uninsulated ferrules; crimping range: 35 mm² (2 AWG) and 50 mm² (1/0 AWG)

Item No.	Pack. Unit
206-1250	1



Insert the ferruled conductor into the crimping station.



Squeeze handles until ratchet mechanism is released.

Application notes:

- Improved crimping for higher conductor retention
- Crimping can be performed from either side (for left- or right-handed users).
- Built-in ratchet mechanism ensures gas-tight crimp connection.
- Crimping tools open automatically after crimping operation is complete.
- Ergonomically designed handles.

What is a "gas-tight" connection?

In a gas-tight connection, the conductor and the ferrule are compressed, eliminating all spaces. Under normal atmospheric conditions, neither a liquid nor gaseous medium can penetrate the crimped connection.

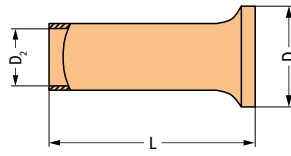
Oxidation between crimped single conductors is prevented, virtually eliminating the possibility of any increase in the crimped connection's resistance. In some exceptional cases, minute, isolated spaces may be present. However, these instances can be considered as closed off due to the twisted conductor.

Inadequate crimping can allow the conductor to be pulled out of the connection. Hollow spaces also remain, permitting oxidation formation and an increase in contact resistance.

Elevated resistance is detrimental for both signal transmission (signal flow is damped) and power transmission, resulting in power loss and contact heating (risk of fire). Crimping tools with built-in ratchets are recommended (e.g., WAGO Crimping Tools). These tools open automatically after the crimping operation is complete. Space-saving crimping from all four sides is ideal for spring clamp termination.

Ferruled conductor cross sections specified for WAGO products are based on this crimping method.

Uninsulated Ferrule



Ferrule; uninsulated; electro-tin-plated; electrolytic copper; gastight crimped; per DIN 46288 (Part 4/09.09)

Conductor Cross Section	Strip Length	L	D	D 2	Item No.	Pack. Unit
25 mm ² / 4 AWG	25 mm / 0.98 inch	25	9,5	7,3	216-413	50
35 mm ² / 2 AWG	25 mm / 0.98 inch	25	11	8,3	216-414	50
35 mm ² / 2 AWG	30 mm / 1.18 inch	30	11	8,3	216-424	50
50 mm ² / 1/0 AWG	30 mm / 1.18 inch	30	13	10,3	216-425	50
50 mm ² / 1/0 AWG	35 mm / 1.38 inch	35	13	10,3	216-435	50

Cable Cutter



Cable cutter; for copper and aluminum cables up to 35 mm² (2 AWG)

Item No.	Pack. Unit
206-118	10 (1)



Cutting a cable.

"Alu-Plus" Contact Paste Terminating Aluminum Conductors



Syringe; contains 20 ml "Alu-Plus" Contact Paste

Item No.	Pack. Unit
249-130	20 (5)



WAGO Lighting Connectors

Push nozzle of the "Alu-Plus" syringe first into the circular entry and then into the square conductor entry hole of the WAGO Lighting Connector.



Press plunger down until the "Alu-Plus" has filled both entry holes.

Note: Not suitable for higher temperature applications!

Terminating Aluminum Conductors

WAGO spring clamp terminal blocks are suitable for solid aluminum conductors ① up to 4 mm²/12 AWG if WAGO "Alu-Plus" Contact Paste is used for termination.

Advantages of the "Alu-Plus" Contact Paste:

- Automatically destroys the oxide film during clamping.
- Prevents fresh oxidation at the clamping point.
- Prevents electrolytic corrosion between aluminum and copper conductors (in the same terminal block).
- Provides long-term protection against corrosion.



WAGO Rail-Mount Terminal Blocks (up to 4 mm²/12 AWG)

For each conductor entry: Insert nozzle of the "Alu-Plus" syringe in every open conductor entry hole (one after the other).



Press plunger down until "Alu-Plus" has filled all conductor entry holes.

Using terminal blocks with CAGE CLAMP® Spring Pressure Connection Technology, aluminum conductors must first be cleaned with a blade and then immediately be inserted into the clamping units filled with "Alu-Plus" Contact Paste.

It is also possible to apply WAGO "Alu-Plus" additionally on the whole surface of the aluminum conductor before termination.

Please note that the nominal currents must be adapted to the reduced conductivity of the aluminum conductors:

$$2.5 \text{ mm}^2 \text{ (14 AWG)} = 16 \text{ A}$$

$$4 \text{ mm}^2 \text{ (12 AWG)} = 22 \text{ A}$$

WAGO "Alu-Plus" in the syringe offers a higher degree of reliability and cleanliness when terminating solid aluminum conductors. Filling is quickly performed on selected WAGO connectors and terminal blocks (see pictures).

① Aluminum conductors per IEC 61545 standard, Class B, "Alloy 1370" with 90 ... 180 N/mm² tensile strength and 1 ... 4% elongation
Standard values: 90 ... 180 MPa tensile strength, 1 ... 4% elongation (per EN 615.4.1)

Test and Measurement Devices

206 Series



Testboy; with integrated flashlight, non-contact voltage tester

	Item No.	Pack. Unit
	206-804	6 (1)



A device that will reliably detect AC voltage in cables, sockets, fuses, switches, outlets and other installations. Testboy can detect the following:

- Live conductors
- Cable breaks
- Blown fuses (in cartridges or holders)
- Defective switches
- Defective lamps in strings of lights

Test and Measurement Devices

206 Series



Profi-LCD+; 2-pole voltage tester with LCD display; removable 4 mm Ø test probes

Item No.	Pack. Unit
206-707	1



Profi-LED+; 2-pole voltage tester with LED display; removable 4 mm Ø test probes

Item No.	Pack. Unit
206-706	1



Spare test probes; 4 mm Ø (2 pieces)

Item No.	Pack. Unit
206-808	1



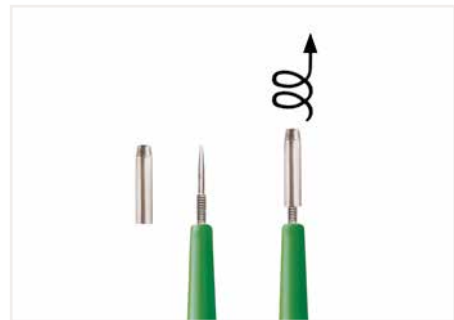
Additional Profi-LCD+ features:

- Automatic measurement range selection
- Single-pole phase testing AC > 100 V
- Two-pole sequence testing (R and L)
- Continuity testing
- RDC/RCD testing (30 mA) via buttons
- One-hand operation for SCHUKO® and CEE sockets
- LED torch lamp function
- Automatic backlight
- Auto power-off function
- CAT IV 1000 V
- TÜV/GS tested and approved
- IEC/EN 61243-3 (DIN VDE 0682-401)



Additional Profi-LED+ features:

- Automatic measurement range selection
- Single-pole phase testing AC > 100 V
- Two-pole sequence testing (R and L)
- Continuity testing
- RDC/RCD testing (30 mA) via buttons
- One-hand operation for SCHUKO® and CEE sockets
- LED torch lamp function
- CAT IV 1000 V
- TÜV/GS tested and approved
- IEC/EN 61243-3 (DIN VDE 0682-401)



Profi-LED+:

- Improved socket contact via 4 mm Ø test probes
- Removable test probes for small test ports (suitable for all WAGO Terminal Blocks)



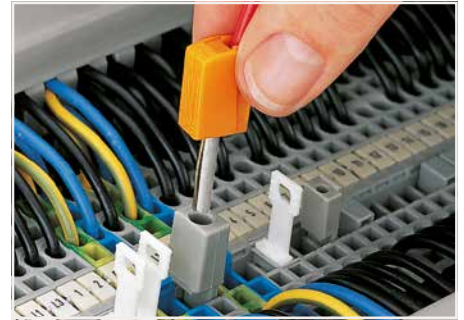
Banana Plug (Only for Safety Extra-Low Voltage) 215 Series

Technical Data

0.08 ... 2.5 mm ²	28 ... 14 AWG
max. 42 V	
Test current: 20 A	
Measuring range category: CAT I	
9 ... 11 mm / 0.35 ... 0.43 inch	



Conductor termination: Press button fully, insert stripped conductor into square entry and release.




Testing via banana plug. Picture shows a test plug adapter (209-170).

Banana plug; for 4 mm socket diameter; color mixed; 10 x orange, white, black, blue, yellow

	Item No.	Pack. Unit
	215-111	50

Banana plug; single

Banana plug; for 4 mm socket diameter

	orange	215-211	50
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Banana plug; for 4 mm socket diameter

	red	215-212	50
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Banana plug; for 4 mm socket diameter

	black	215-311	50
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Banana plug; for 4 mm socket diameter

	green	215-411	50
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Banana plug; for 4 mm socket diameter

	yellow	215-511	50
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Banana plug; for 4 mm socket diameter

	white	215-611	50
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Banana plug; for 4 mm socket diameter

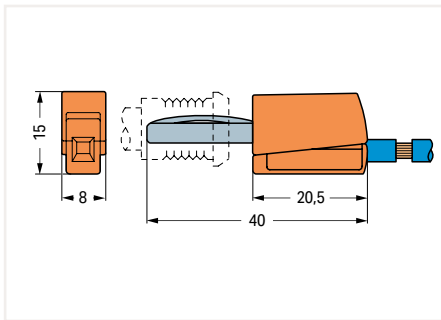
	blue	215-711	50
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Banana plug; for 4 mm socket diameter

	gray	215-811	50
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Banana plug; for 4 mm socket diameter

	green-yellow	215-911	50
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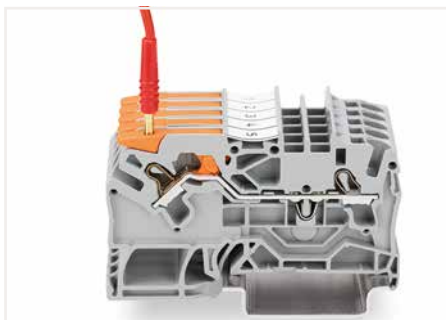
Dimensions in mm

Test Plug 210 Series



Test plug; with 500 mm cable; 2 mm Ø; max. 42 V

Color	Item No.	Pack. Unit
● red	210-136	50 (1)



Testing with a 2 mm Ø test plug (max. 42 V).