



Industrial Switches

Industrial Switches

- Copper cables
- Fiber optic cables
- Ring redundancy

Industrial Switches Contents

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	Managed	No. of Ports	Medium	Item No.	
Industrial Switches		5	100BASE-TX	852-101	402
		8	100BASE-TX	852-102	402
		8/2	100BASE-TX/ 100BASE-FX	852-103	403
		8	1000BASE-T	852-1102	404
		16	1000BASE-T	852-1106	405
Industrial Managed Switches	x	8/2	100BASE-TX/ 100BASE-FX/ 1000BASE-SX/LX	852-303	406
	x	8/4	1000BASE-T/ 1000BASE-SX/LX	852-1305	406
	x	8/4 8 PoE+	1000BASE-T/ 1000BASE-SX/LX	852-1505	407
Industrial Eco Switches		5	100BASE-TX	852-111	408
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Industrial Switches

General Product Information

Always the Right Solution

WAGO's range of switches ensures the scalability of your ETHERNET network infrastructure, while providing outstanding electrical and mechanical characteristics. These robust switches are designed for industrial use and are fully compliant with IEEE 802.3, IEEE 802.3u and IEEE 802.3ab.

Combinable with Fiber Optic Cables

ETHERNET via fiber optic cables offers a multitude of advantages for industrial applications.

High immunity to interference, electrical isolation and long ranges up to 80 km are extremely beneficial characteristics – and these benefits are a perfect fit with IT.

Scaled Offering

Unmanaged and managed switches in various designs are available for high-end applications. Our Eco Switches are ideal for cost-sensitive applications that do not require technical features such as redundancy. They are ideal for small- to medium-sized networks.

Modular and Expandable

Exchangeable SPF modules adapt WAGO's switches to various fiber optic cables (FOC) and the associated required distances and fibers.

There are SFP modules for multimode and single-mode fiber optic cables for ranges up to 80 km. With the exact combination of copper and fiber optic cables, you are prepared for a multitude of requirements.

Web-Based Management

WAGO's fully managed switches have integrated Web-based management. Any Web browser can be used to configure the switch.

Integrated Function Monitoring

For monitoring and error reporting, the managed switch has configurable functions such as e-mail alarm and SNMP traps. In addition, all switches (except for Eco versions) can monitor individual ports or the power supply via potential-free alarm contact. A DIP switch is used to configure this function.

Full Bandwidth on All Ports

The switches' internal bandwidth is designed so that all ports can communicate simultaneously – in full duplex without restrictions.

Security

Managed switches have built-in security features, such as:

- Authentication
- Access control lists
- DHCP snooping
- Port security

Data Transmission

Managed switches provide configuration options for data transfer, such as:

- VLAN
- IGMP snooping
- IP-based VLAN
- MAC-based VLAN

Availability, Redundancy

Select industrial switches have several options to build redundant network structures and guarantee secure communication – even when connections are faulty:

- Rapid Spanning Tree per IEEE 802.1w – compatible with IT standards
- Jet Ring – a simple ring protocol with switching time < 300 ms
- Xpress Ring – fast ring protocol with switching time < 20 ms
- ERPSv2 per ITU-T standard with switching time < 50 ms

In addition to communication link redundancy, a redundant power supply – which can also be monitored using an alarm relay – is integrated into the switches. If the power supply fails, communication is not interrupted.

Different Operating Modes

The unmanaged switches are ideal for direct plug-and-play use. Managed switches are available for applications where IP filtering or further interpretation of telegrams is required for the application.

Configurable Performance

Managed switches offer performance control features, such as:

- Storm control
- Bandwidth control
- Auto-provisioning
- Link aggregation

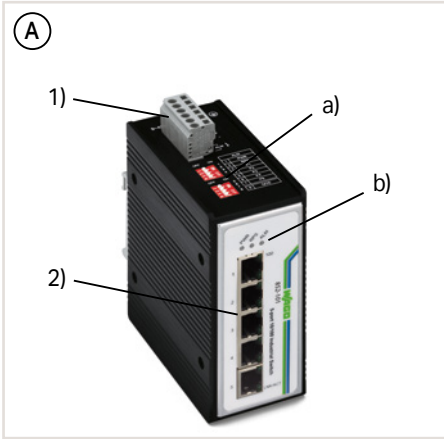
Bit-Based Configuration and Diagnostics

Modbus® can be used to diagnose managed switches. Configuration and diagnostics are also possible with standardized protocols such as SNMP.

Advantages:

- Adaptable to different transmission media
- Automatically adapts to
 - Speed (auto-negotiation)
 - Wiring (auto-crossover, MDI/MDIX)
- Optional redundancy
- Wide supply voltage range

Industrial Switches Interfaces and Types



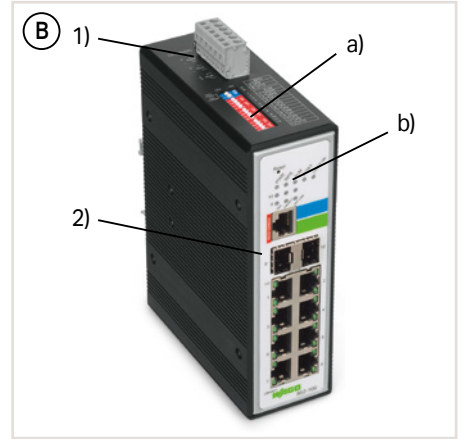
Power supply (1)
Technologically related differences on the connection level (2)

Housing Design (A)

- DIP switch for configuration (a)
- Diagnostic LEDs (b)
- W x H* x D (mm) 50 x 120 x 105

Housing Design (B)

- DIP switch for configuration (a)
- Diagnostic LEDs (b)
- W x H* x D (mm) 50 x 120 x 162

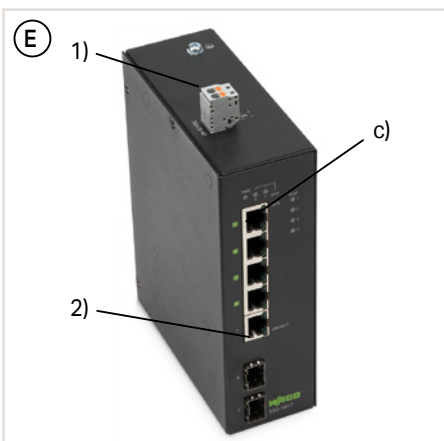
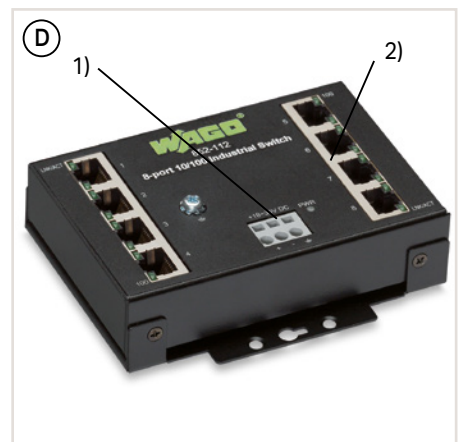


Housing Design Eco (C)

- W x H* x D (mm) 23.4 x 73.8 x 109.2 or 46 x 99.6 x 116
- DIN-35 rail
- wall-mount (852-111, 852-1111)

Housing Design Eco (D)

- W x H* x D (mm) 109.2 x 23.4 x 73.8
- DIN-35 rail or wall-mount



Housing Design PoE+ (E)

- Power over Ethernet (PoE+) Ports (c)
- W x H* x D (mm) 50 x 120 x 160

Housing Design (F)

- SFP module for connecting fiber optic cables
- LC connector
- W x H x D (mm) 13.4 x 13.3 x 56.6

*Height from upper edge of DIN-rail



Variants



Extended Temperature Range

Industrial automation technology is typically operated in temperatures ranging from 0°C to 55°C. However, there are applications that require an extended temperature range. Nearly all switches and SFP modules are available for an extended temperature range of -40°C to +70°C.

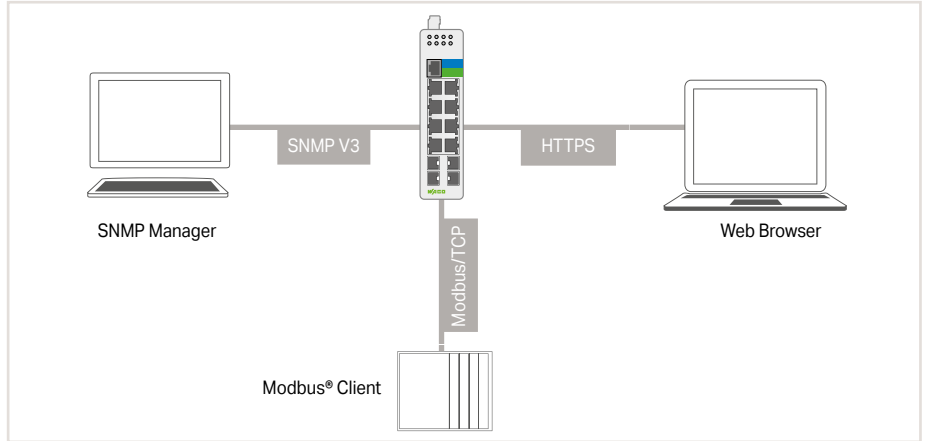
Industrial Switches

Configuration, Diagnostics and Performance

Configuration and Diagnostics

Several options:

- Configuration via Web-based management
- Configuration via command line (SSH, Telnet, RS-232)
- Network management via SNMP v1, v2c, v3
- Support of MIB standards (Management Information Base)
- Diagnostics via Modbus TCP: Comprehensive diagnostic data available for easy diagnostics via Modbus®



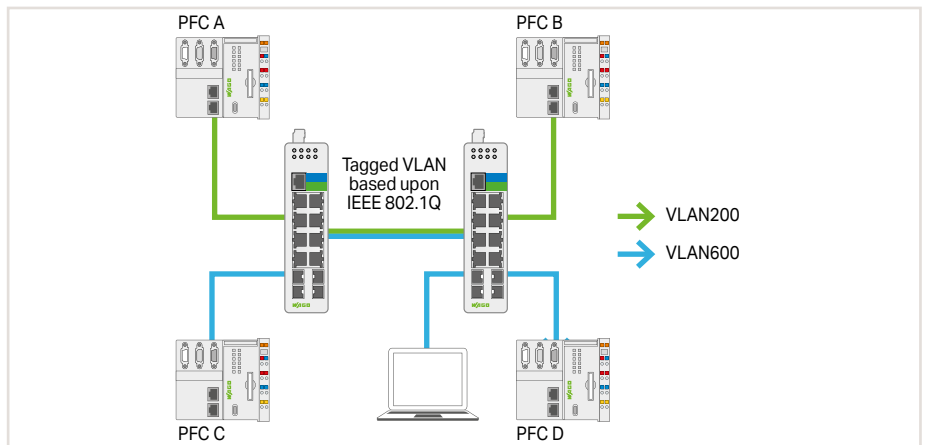
Configuration Interfaces

Logical Network Disconnection

VLAN (e.g., per IEEE 802.1Q)

Segmentation into virtual networks:

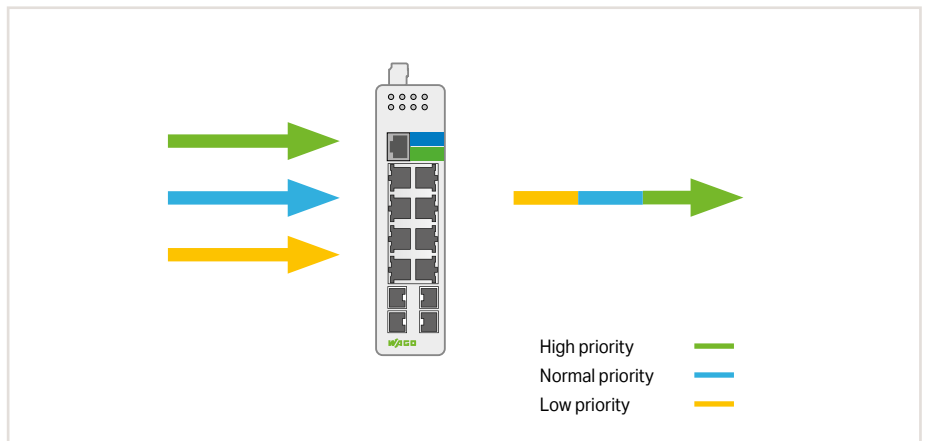
- Broadcast limitation
- Security improvement
- Data flow prioritization
- Subdivision of machines and office networks, for example



Traffic Prioritization and Limitation

- Faster transfer of important data packets through the switch
- Prioritization of data packets per IEEE 802.1Q
- Limitation of the bandwidth or number of packets per unit of time per port
- Increase in data transmission quality

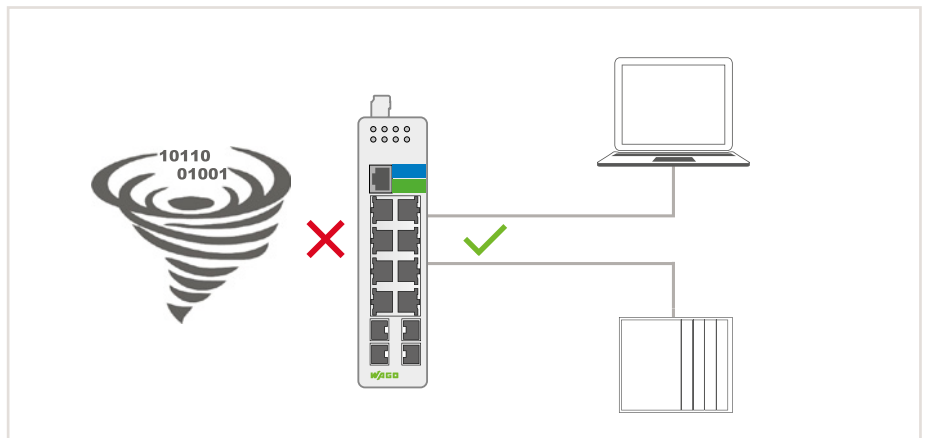
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QoS

Mastering Data Traffic

- Stopping broadcast storms
- Ensuring network availability
- Limiting broadcast and multicast data flows (packets/time)



Storm Control

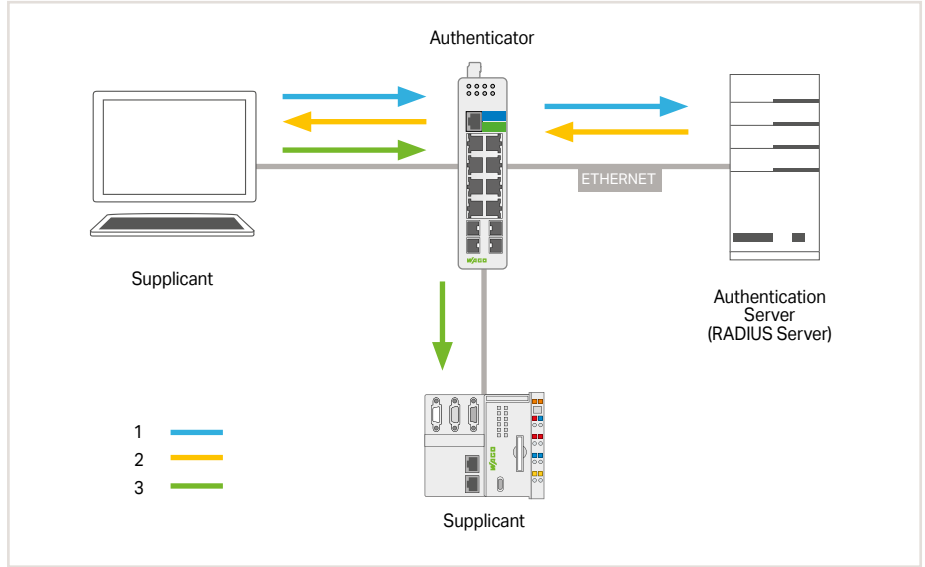
Industrial Switches Security

Authentication IEEE 802.1X

Secure authentication and authorization in ETHERNET networks (locally on the switch or via RADIUS server)

Process:

- Authentication of a subscriber is performed by the authenticator.
- The authenticator checks the authentication information of the subscriber (supplicant) with an authentication server.

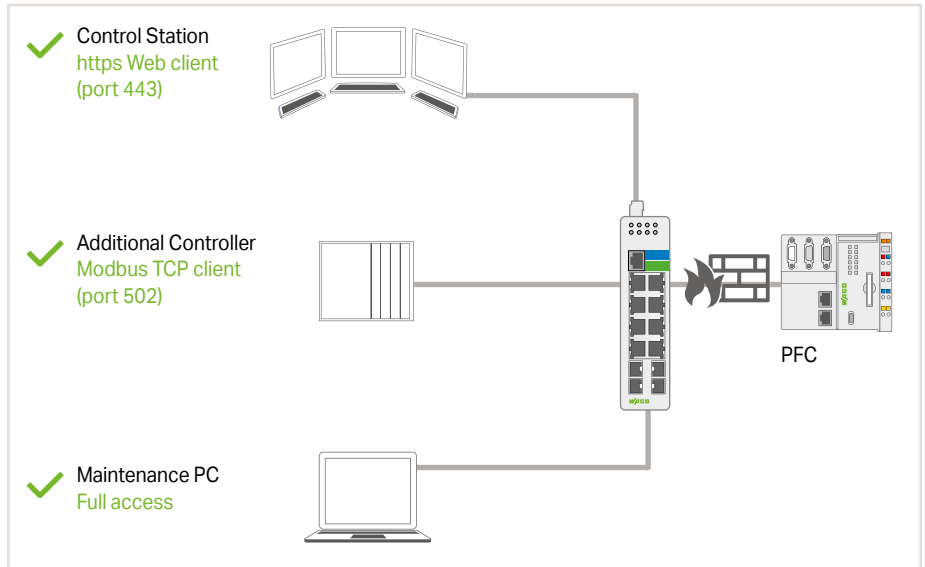


IEEE 802.1X

Firewall – Access Control List

Filtering data packets due to:

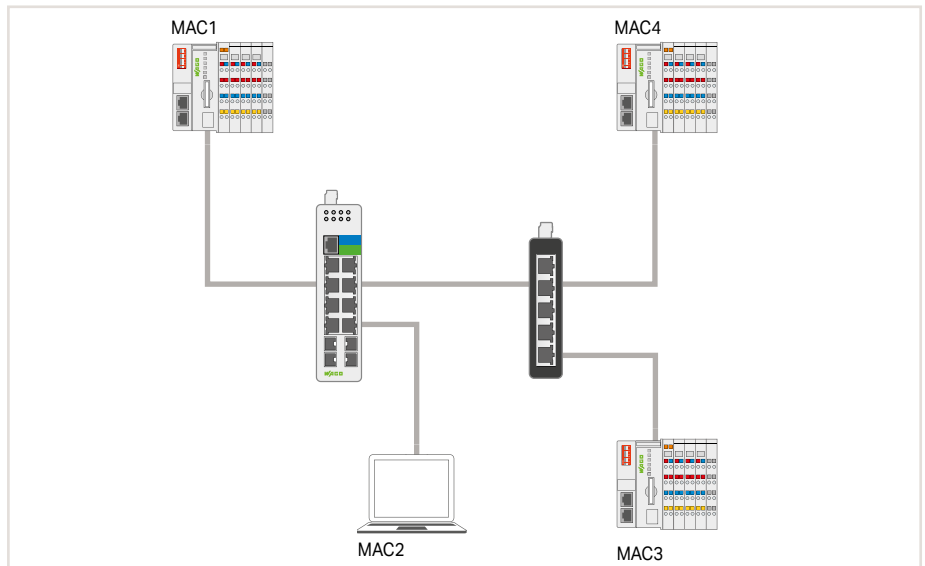
- a source MAC or source IP address
- a destination MAC or destination IP address
- a range of MAC or IP addresses
- UDP/TCP source or destination ports



Firewall

Port Security

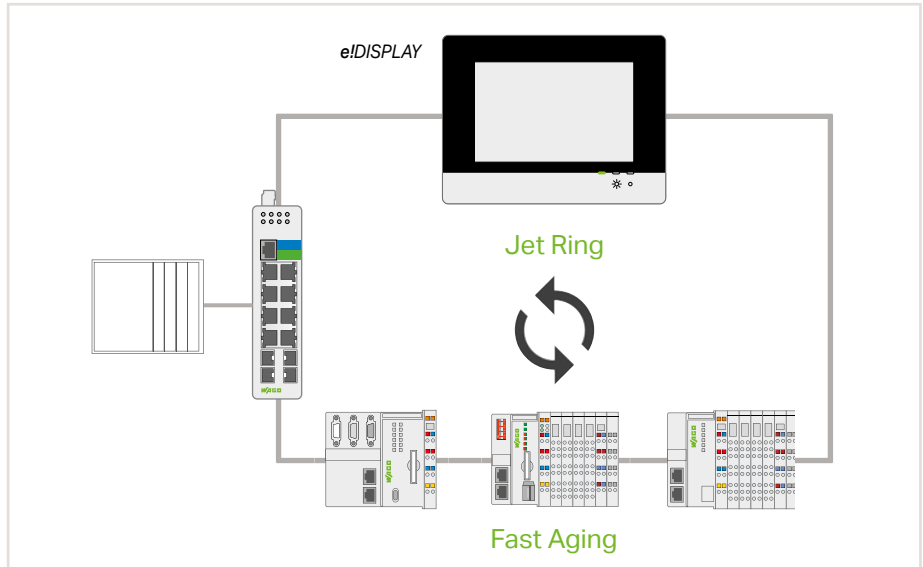
- Dynamically learns MAC addresses per port
- Limitation of MAC addresses per port
- MAC-based white/blacklist per port



Industrial Switches Redundancy

Jet Ring

- Typical switching time < ~ 300 ms (depends on the application)
- Extremely easy configuration
- Up to 20 participants (Fast Aging) in a Jet Ring



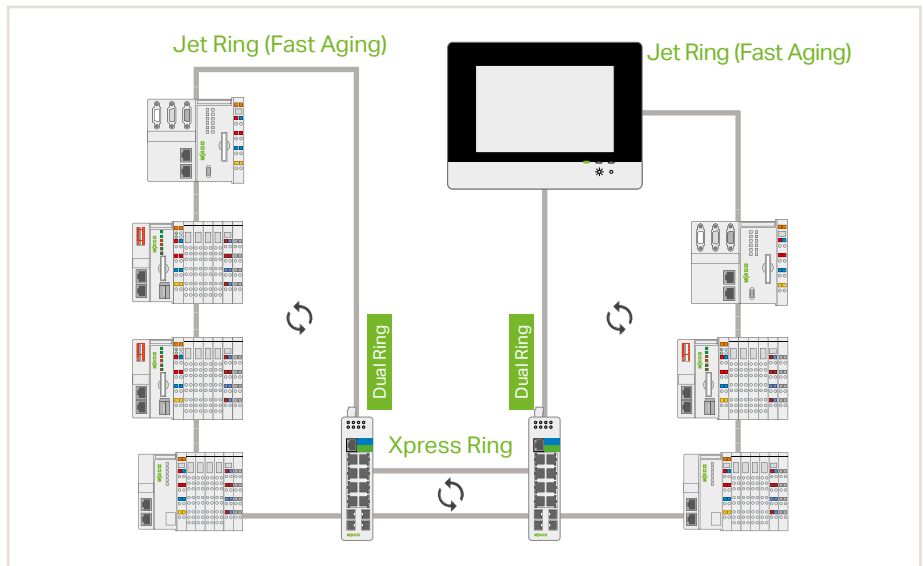
Jet Ring

Xpress Ring

- Switching time < 20 ms
- Easy configuration
- Up to 200 switches in one Xpress Ring
- 2 Xpress Rings per switch

Dual Ring

- Combination of both redundancy types
- 1 Jet Ring and 1 Xpress Ring per switch or 2 Xpress Rings per switch



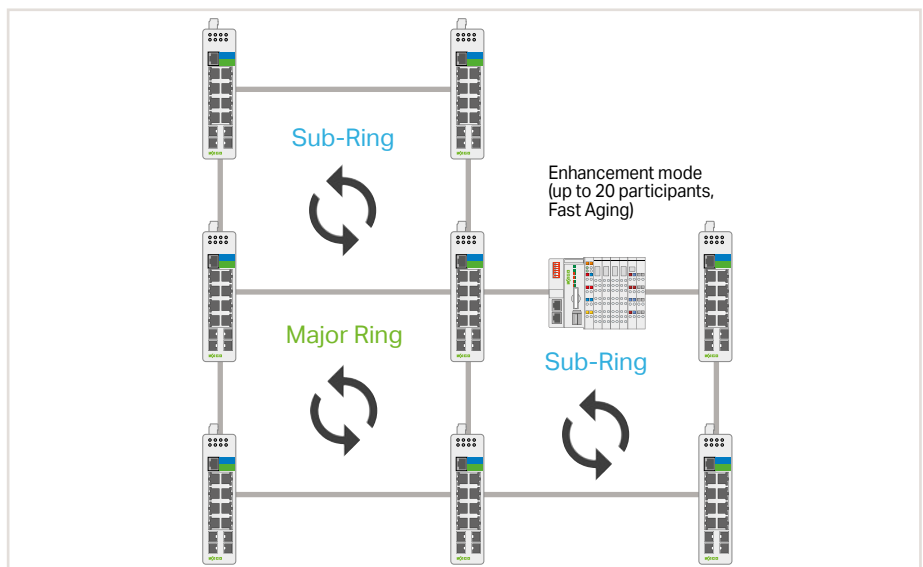
Xpress Ring and Dual Ring

ERPS: ETHERNET Ring Protection Switching

- Standardized and open technology
- Switching time < 50 ms
- Nested topologies with up to six rings per switch
- Realization of a one-fault tolerance (SPOF – Single Point of Failure)

ERPS – Enhancement Mode

- WAGO devices with an integrated switch and Fast Aging configuration
- Typical switching time < ~ 300 ms (depends on the application)



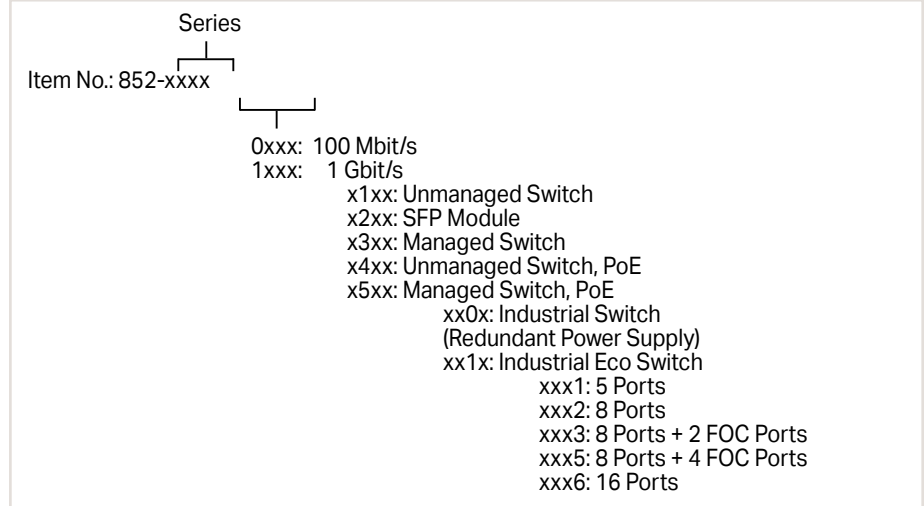
ERPS V2

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Industrial Switches

Item Number Key

Explanation of an item number key's components



Standards and Rated Conditions

General Specifications

Packet throughput per port	10 Mbps port: 14,880 packages per second (pps) 100 Mbps port: 148,800 packages per second (pps) 1000 Mbps port: 1,488,000 packages per second (pps)
Surrounding air temperature (operation)	-40 ... +70 °C
Surrounding air temperature (storage)	-40 ... +80 °C
Relative humidity max.	95 % (non condensing)
Vibration resistance	4g per IEC 60068-2-6
Shock resistance	15g per IEC 60068-2-27
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Protection type	IP30
Mounting type	On DIN-35 rail, Eco version also for wall-mount
Mounting position	Any

Approvals

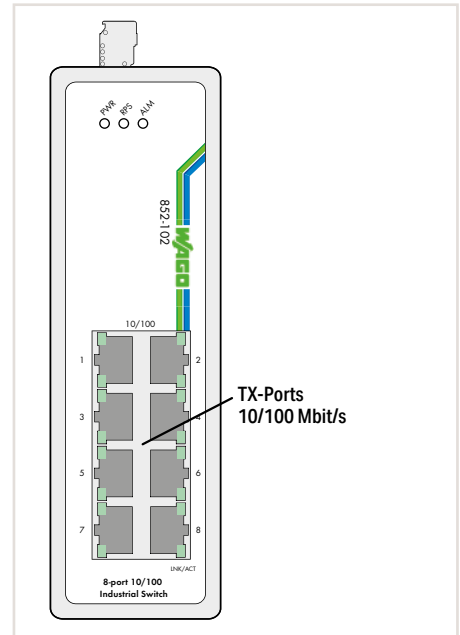
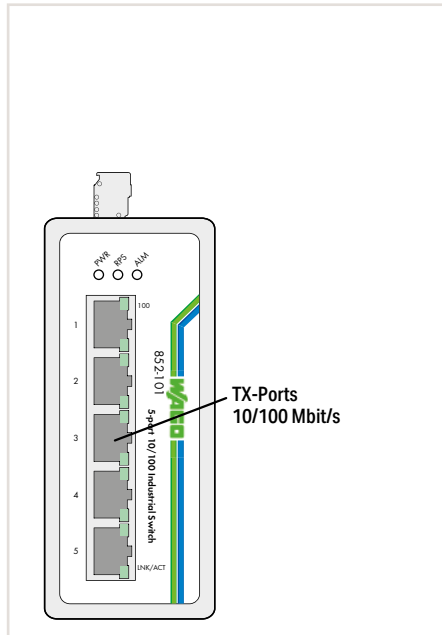
For approvals overview (item comparison), see Section 11 (Technical Section) or visit www.wago.com.



Industrial Switch



Figure: 852-101

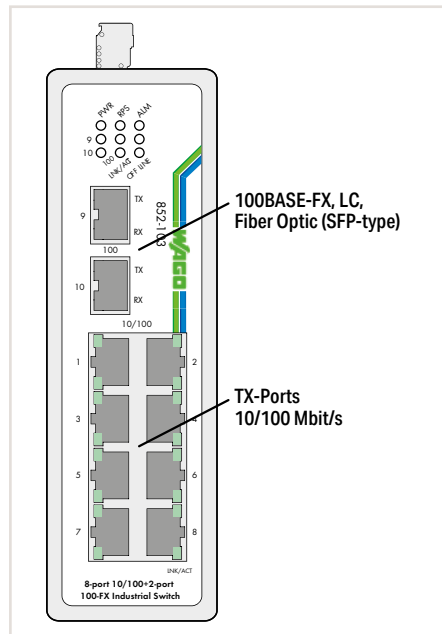


Item Description	Industrial Switch; 5-port 100BASE-TX 852-101	Industrial Switch; 8-port 100BASE-TX 852-102
Item No.	852-101	852-102
Order Text	Industrial Switch; 5Port	Industrial Switch; 8Port
Technical Data		
Switching mode	Store-and-forward, non-blocking	Store-and-forward, non-blocking
Number of copper ports	5 x 100BASE-TX	8 x 100BASE-TX
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control
Redundancy functions	Redundant DC power supply	Redundant DC power supply
Configuration	DIP switch for signal contact	DIP switch for signal contact
Diagnostics	Signal contact	Signal contact
MAC table (large)	2000 addresses	2000 addresses
Jumbo frame size	1536 bytes	1516 bytes
Supply voltage	9 ... 48 VDC	9 ... 48 VDC
Power consumption (max.)	4 W	5.3 W
ESD (contact/air discharge)	8 KV / 15 KV	8 KV / 15 KV
Connection technology (communication)	5 x RJ-45	8 x RJ-45
Surrounding air temperature (operation)	-40 ... +70 °C	-40 ... +70 °C
Dimensions W x H x D	50 x 120 x 105 mm	50 x 120 x 162 mm
Approvals	CE; UL; OrdLoc	CE; UL; OrdLoc
Data sheet and further information, see:	wago.com/852-101	wago.com/852-102

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- „ SFP Modules, see page 412
- „ Passive ETHERNET components, see Section "Accessories and Tools"
- „ Approvals and corresponding ratings, see page 529 or www.wago.com

Industrial Switch



Item Description

Item No.

Order Text

**Industrial Switch; 8-port 100BASE-TX;
2-slot 100BASE-FX**

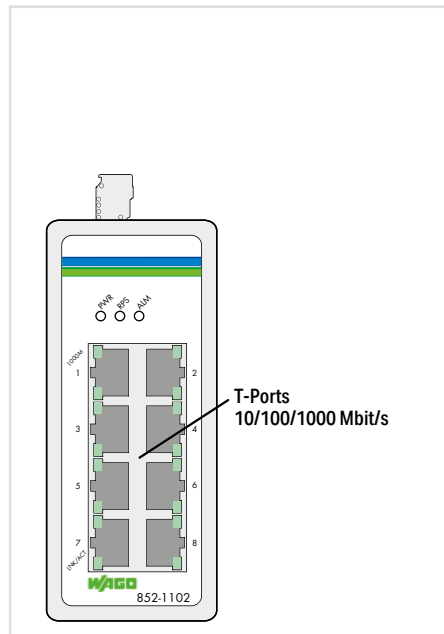
852-103

Industrial Switch; 8Port; 2-Slot 100BASE-FX

Technical Data

Switching mode	Store-and-forward, non-blocking
Number of copper ports	8 x 100BASE-TX
Number of FOC ports	2 x 100BASE-FX
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3x Flow Control
Redundancy functions	Redundant DC power supply
Configuration	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (large)	2000 addresses
Jumbo frame size	1536 bytes
Supply voltage	9 ... 48 VDC
Power consumption (max.)	6.1 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology (communication)	8 x RJ-45; 2 x SFP
Surrounding air temperature (operation)	-40 ... +70 °C
Dimensions W x H x D	50 x 120 x 162 mm
Approvals	CE; RoHS; OrdLoc
Data sheet and further information, see:	wago.com/852-103

Industrial Switch



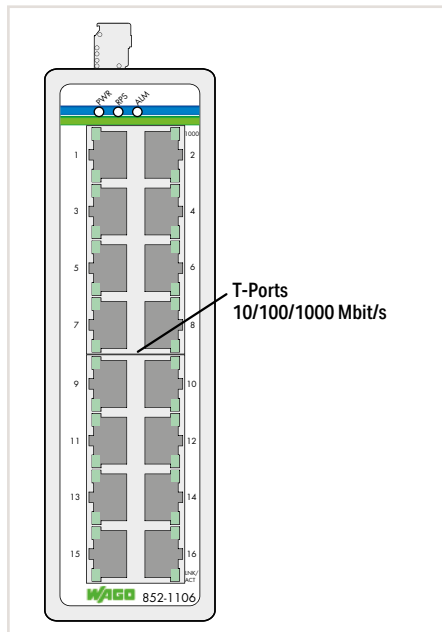
Item Description	Industrial Switch; 8-port 1000BASE-T
Item No.	852-1102
Order Text	Industrial Switch; 8-Port Gb
Technical Data	
Switching mode	Store-and-forward, non-blocking
Number of copper ports	8 x 1000BASE-T
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1p Prioritization
Redundancy functions	Redundant DC power supply
Configuration	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (large)	8000 addresses
Jumbo frame size	9 kB
Supply voltage	9 ... 57 VDC
Power consumption (max.)	6 W
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology (communication)	8 x RJ-45
Surrounding air temperature (operation)	-40 ... +70 °C
Dimensions W x H x D	50 x 120 x 105 mm
Approvals	CE; ®- OrdLoc*
Data sheet and further information, see:	wago.com/852-1102

*pending

„ Passive ETHERNET components,
see Section "Accessories and Tools"

„ Approvals and corresponding ratings,
see page 529 or www.wago.com

Industrial Switch



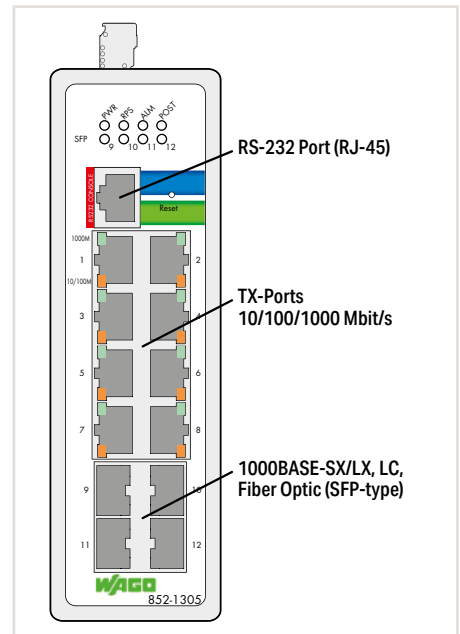
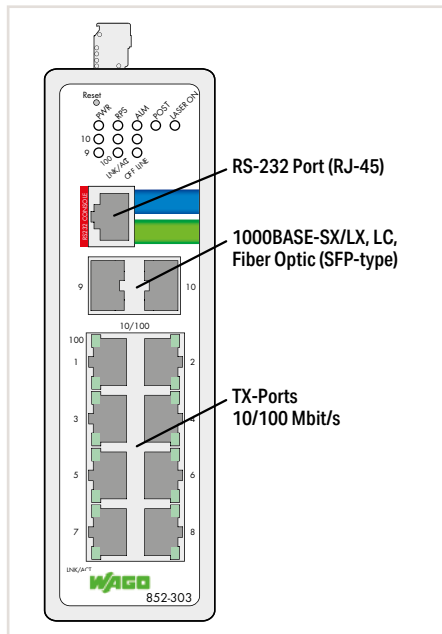
Item Description	Industrial Switch; 16-port 1000BASE-T
Item No.	852-1106
Order Text	Industrial Switch; 16-Port Gb
Technical Data	
Switching mode	Store-and-forward, non-blocking
Number of copper ports	16 x 1000BASE-T
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1p Prioritization
Redundancy functions	Redundant DC power supply
Configuration	DIP switch for signal contact
Diagnostics	Signal contact
MAC table (large)	8000 addresses
Jumbo frame size	10 KB
Supply voltage	12 ... 60 VDC
Power consumption (max.)	12 W
Connection technology (communication)	16 x RJ-45
Surrounding air temperature (operation)	-40 ... +70 °C
Dimensions W x H x D	50 x 120 x 162 mm
Approvals	CE; OrdLoc*
Data sheet and further information, see:	wago.com/852-1106

*pending

Industrial Managed Switch



Figure: 852-303



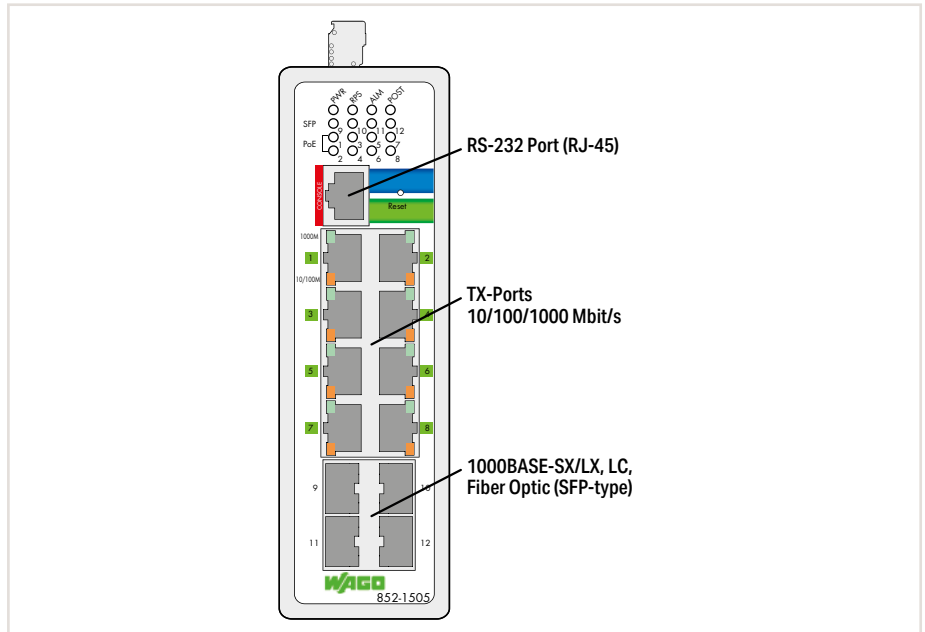
Item Description	Industrial Managed Switch; 8-port 100BASE-TX; 2-slot 1000BASE-SX/LX 852-303	Industrial Managed Switch; 8-port 1000BASE-T; 4-slot 1000BASE-SX/LX 852-1305
Item No.	852-303	852-1305
Order Text	Industrial Managed Switch; 8Port; 2-Slot 1000BASE-SX/LX	Industrial Managed Switch; 8-Port Gb; 4-Slot 1000BASE-SX/LX
Technical Data		
Switching mode	Store-and-forward, non-blocking	Store-and-forward, non-blocking
Number of copper ports	8 x 100BASE-TX	8 x 1000BASE-T
Number of FOC ports	2 x 100BASE-FX / 1000BASE-SX/LX	4 x 1000BASE-SX/LX
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1q VLAN Tagging; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.1p Prioritization; IEEE 802.1x Port Authentication; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1q VLAN Tagging; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.1p Prioritization; IEEE 802.1x Port Authentication; ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy functions	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration	DIP switch for signal contact; Web-Based-Management; Command Line Interface; SNMPv1/v2c/v3	DIP switch for signal contact; Web-Based-Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Modbus TCP; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; Mail alarm; SNMP traps	Signal contact; Modbus TCP; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; Mail alarm; SNMP traps
MAC table (large)	16,000 addresses	16,000 addresses
Jumbo frame size	10 KB	10 KB
Supply voltage	12 ... 60 VDC	12 ... 60 VDC
Power consumption (max.)	12 W	12 W
ESD (contact/air discharge)	8 KV / 15 KV	8 KV / 15 KV
Connection technology (communication)	8 x RJ-45; 2 x SFP; 1 x RJ-45 (RS-232)	8 x RJ-45; 4 x SFP; 1 x RJ-45 (RS-232)
Communication standards	IEEE802.3x (in full duplex mode)	IEEE802.3x (in full duplex mode)
Surrounding air temperature (operation)	-40 ... +70 °C	-40 ... +70 °C
Dimensions W x H x D	50 x 120 x 162 mm	50 x 120 x 162 mm
Approvals	CE; DNV GL; OrdLoc*	CE; DNV GL; DNV; OrdLoc*
Data sheet and further information, see:	wago.com/852-303	wago.com/852-1305

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* SFP Modules, see page 412

Industrial Managed Switch



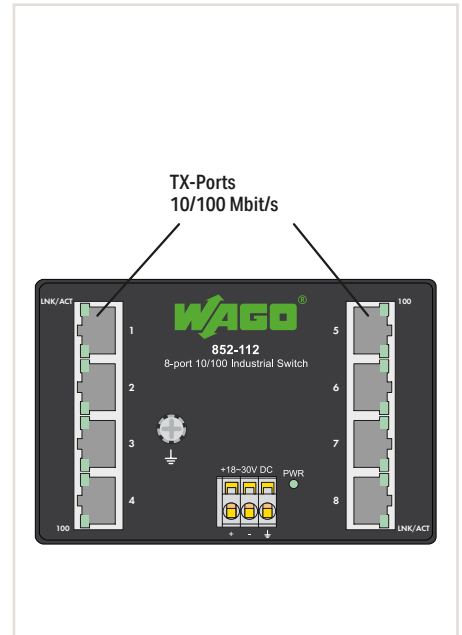
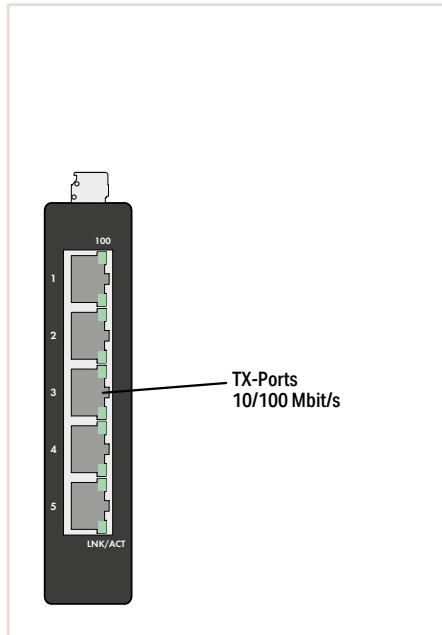
Item Description	Industrial Managed Switch; 8-port 1000BASE-T; 4-slot 1000BASE-SX/LX; Extended temperature; 8 * Power over Ethernet
Item No.	852-1505
Order Text	Industrial Managed Switch; 8-Port Gb; 4-Slot 1000BASE-SX/LX; EXT; 8PoE
Technical Data	
Switching mode	Store-and-forward, non-blocking
Number of copper ports	8 x 1000BASE-T; 8 x PoE+ (Power over Ethernet)
Number of FOC ports	4 x 1000BASE-SX/LX
Communication standards	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3ad Port Trunk with LACP; IEEE 802.3x Flow Control; IEEE 802.1d Spanning Tree Protocol (STP); IEEE 802.1w Rapid Spanning Tree Protocol (RSTP); IEEE 802.1s Multiple Spanning Tree Protocol (MSTP); IEEE 802.1q VLAN Tagging; IEEE 802.1p Prioritization; IEEE 802.1x Port Authentication; IEEE 802.1ab Link Layer Discovery Protocol (LLDP); IEEE 802.3ad Port Trunk with LACP; IEEE 1588v2 Precision Time Protocol (PTP); IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); ITU-T G8032v1/v2 Ethernet Ring Protection Switching (ERPS)
Redundancy functions	Redundant DC power supply; STP; RSTP; MSTP; Jet Ring < 300 ms; Xpress Ring < 20 ms; Dual Homing < 20 ms; Dual Ring; ERPSv2 < 50 ms; LCAP
Configuration	DIP switch for signal contact; Web-Based-Management; Command Line Interface; SNMPv1/v2c/v3
Diagnostics	Signal contact; Modbus TCP; Port status; Port statistics; Port load; Traffic monitor; SFP information; Syslog; Mail alarm; SNMP traps
MAC table (large)	16,000 addresses
Jumbo frame size	10 KB
Supply voltage	48 ... 57 VDC
Power consumption (max.)	18 W; 258 W with 8 PoE+
ESD (contact/air discharge)	8 KV / 15 KV
Connection technology (communication)	8 x RJ-45; 2 x SFP; 1 x RJ-45 (RS-232)
Communication standards	IEEE802.3x (in full duplex mode)
Surrounding air temperature (operation)	-40 ... +70 °C
Dimensions W x H x D	50 x 120 x 162 mm
Approvals	CE; OrdLoc*
Data sheet and further information, see:	wago.com/852-1505

*pending

Industrial Eco Switch



Figure: 852-111



Item Description	Industrial Eco Switch; 5-port 100BASE-TX 852-111	Industrial Eco Switch; 8-port 100BASE-TX 852-112
Item No.	852-111	852-112
Order Text	Industrial Eco Switch; 5Port	Industrial Eco Switch; 8Port
Technical Data		
Switching mode	Store-and-forward, non-blocking	Store-and-forward, non-blocking
Number of copper ports	5 x 100BASE-TX	8 x 100BASE-TX
Supported profiles	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3x Flow Control
MAC table (large)	2000 addresses	2000 addresses
Jumbo frame size	1536 bytes	1536 bytes
Supply voltage	18 ... 30 VDC	18 ... 30 VDC
Power consumption (max.)	3 W	3 W
ESD (contact/air discharge)	4 KV / 8 KV	4 KV / 8 KV
Connection technology (communication)	5 x RJ-45	8 x RJ-45
Surrounding air temperature (operation)	-40 ... +70 °C	-40 ... +70 °C
Dimensions W x H x D	24 x 74 x 110 mm	110 x 24 x 74 mm
Approvals	CE, DNV GL; DNV (only with DNV mounting adapter); OrdLoc	CE, DNV GL; OrdLoc
Data sheet and further information, see:	wago.com/852-111	wago.com/852-112
Accessories	Item No. Page	
DNV mounting adapter	852-9101 413	

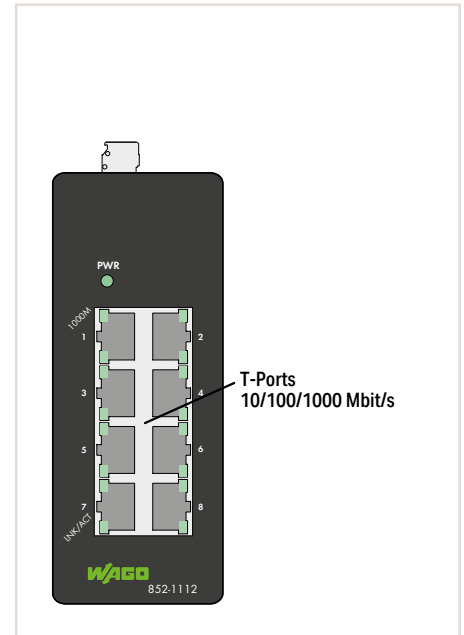
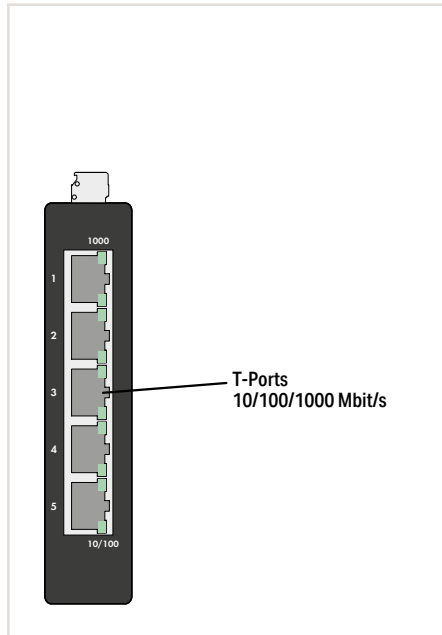
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- „ DNV mounting adapter, see page 413
- „ Passive ETHERNET components, see Section "Accessories and Tools"
- „ Approvals and corresponding ratings, see page 529 or www.wago.com

Industrial Eco Switch



Figure: 852-1112



Item Description	Industrial Eco Switch; 5-port 1000BASE-T 852-1111	Industrial Eco Switch; 8-port 1000BASE-T 852-1112
Item No.	852-1111	852-1112
Order Text	Industrial Eco Switch; 5-Port Gb	Industrial Eco Switch; 8-Port Gb
Technical Data		
Switching mode	Store-and-forward, non-blocking	Store-and-forward, non-blocking
Number of copper ports	5 x 1000BASE-T	8 x 1000BASE-T
Supported profiles	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1p Prioritization	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3az Energy Efficient Ethernet; IEEE 802.1p Prioritization
MAC table (large)	8000 addresses	8000 addresses
Jumbo frame size	9 kB	9 kB
Supply voltage	9 ... 48 VDC	9 ... 57 VDC
Power consumption (max.)	3 W	6 W
ESD (contact/air discharge)	4 KV / 8 KV	8 KV / 15 KV
Connection technology (communication)	5 x RJ-45	8 x RJ-45
Surrounding air temperature (operation)	-40 ... +70 °C	0 ... +60 °C
Dimensions W x H x D	24 x 74 x 110 mm	50 x 100 x 116 mm
Approvals (*pending)	CE; DNV GL; DNV (only with DNV mounting adapter); OrdLoc*	CE; OrdLoc*
Data sheet and further information, see:	wago.com/852-1111	wago.com/852-1112
Accessories	Item No. Page	
DNV mounting adapter	852-9101 413	

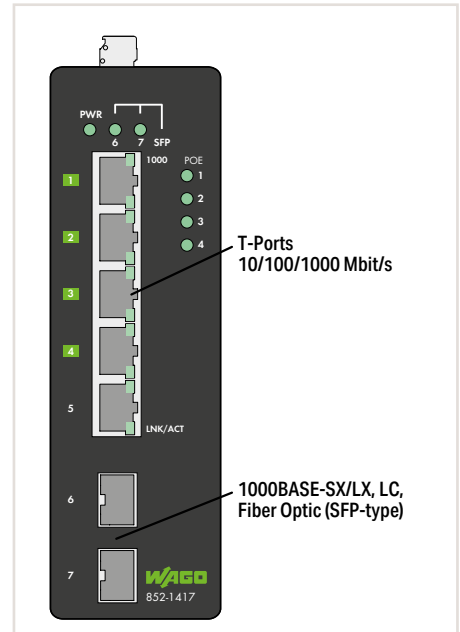
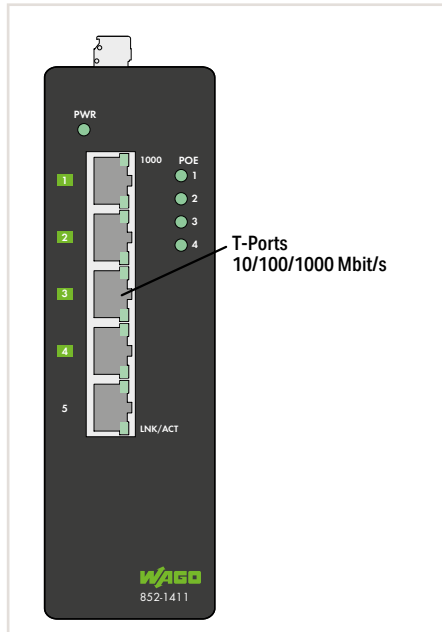
*pending

*pending

Industrial Eco Switch



Figure: 852-1417



Item Description	Industrial Eco Switch; 5-port 1000BASE-T; Extended temperature; 4 * Power over Ethernet	Industrial Eco Switch; 5-port 1000BASE-T; 2-slot 1000BASE-SX/LX; Extended temperature; 4 * Power over Ethernet
Item No.	852-1411	852-1417
Order Text	Industrial Eco Switch; 5Port Gb; EXT; 4PoE	Industrial Eco Switch; 5Port Gb; 2-Slot 1000BASE-SX/LX; EXT; 4PoE

Technical Data		
Number of copper ports	5 x 1000BASE-T; 8 x PoE+ (Power over Ethernet)	5 x 1000BASE-T; 8 x PoE+ (Power over Ethernet)
Number of FOC ports		2 x 1000BASE-SX/LX
Supported profiles	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX; IEEE 802.3ab 1000BASE-T; IEEE 802.3x Flow Control; IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); IEEE 802.1p Prioritization	IEEE 802.3 10BASE-T; IEEE 802.3u 100BASE-TX/FX; IEEE 802.3ab 1000BASE-T; IEEE 802.3z 1000BASE-SX/LX; IEEE 802.3x Flow Control; IEEE 802.3af Power over Ethernet (PoE); IEEE 802.3at High Power over Ethernet (PoE+); IEEE 802.1p Prioritization
Topology	Star	Star
Jumbo frame size	10 KB	10 KB
MAC table (large)	8000 addresses	8000 addresses
Supply voltage	24 ... 57 VDC	24 ... 57 VDC
Power consumption (max.)	13 W; 133 W with 4 PoE	14 W; 134 W with 4 PoE
Connection technology (communication)	5 x RJ-45	5 x RJ-45; 2 x SFP
Surrounding air temperature (operation)	-40 ... +70 °C	-40 ... +70 °C
Dimensions W x H x D	50 x 120 x 160 mm	50 x 120 x 160 mm
Approvals	CE, RoHS, OrdLoc*	CE, RoHS, OrdLoc*
Data sheet and further information, see:	wago.com/852-1411	wago.com/852-1417

*pending

*pending

- „ SFP Modules, see page 412
- „ Passive ETHERNET components, see Section "Accessories and Tools"
- „ Approvals and corresponding ratings, see page 529 or www.wago.com

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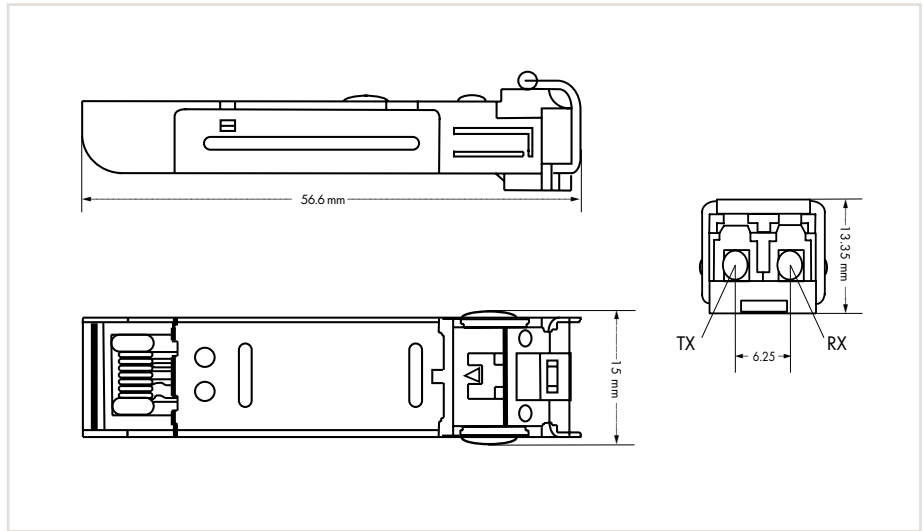
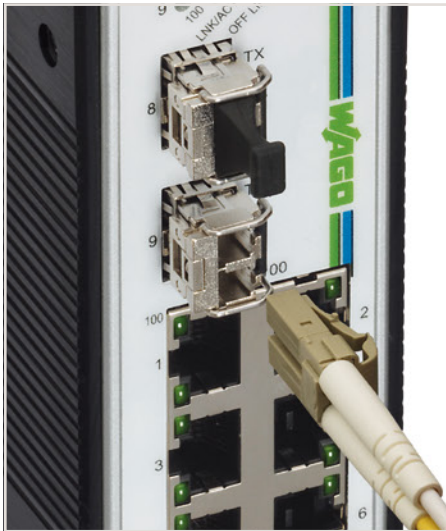
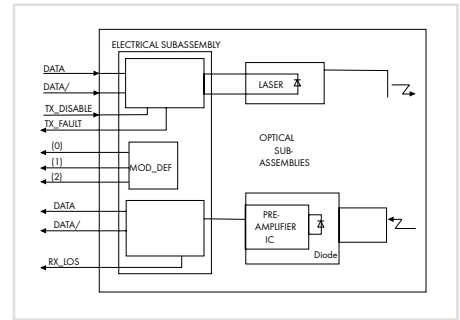
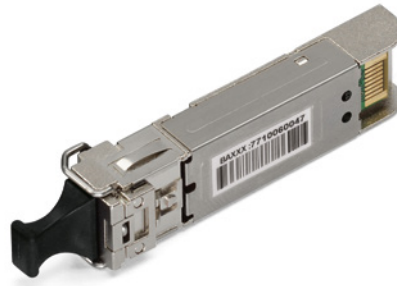
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Industrial Switches – Accessories

SFP Modules

Features:

- Duplex LC optical connector
- Small Form-Factor Pluggable (SFP) industry-standard design
- Compliant with Fast ETHERNET standard and Gigabit ETHERNET standard IEEE802.3z
- Differential LVPECL inputs and outputs
- Supply voltage: 3.3 V
- TTL signal detect indicator
- Hot-pluggable capability



Item Description	SFP Module; 100BASE	SFP Module 1000BASE; Extended temperature; DDM
Version	FX Multi-Mode 1310 nm LC; 2 km	SX Multi-Mode 850 nm LC; 0.55 km
Item No.	852-201/107-002	852-1200
Order Text	SFP Module 2: 1310nm; 100BASE-FX Multi-Mode LC; 2 km	SFP Module 1000BASE; SX Multi-Mode 850 nm LC; 0.55 km; EXT; DDM
Technical Data		
Wavelength	1310 nm	850 nm
Multi-mode fiber	62.5/125 µm; 50/125 µm	62.5/125 µm; 50/125 µm
Lengths (max.)	2 km	300 m; 550 m
Laser type	Laser class 1 per EN 60825-1	Laser class 1 per EN 60825-1
Other		Supports "Digital Diagnostics Monitoring"
Surrounding air temperature (operation)	-40 ... +70 °C	-40 ... +85 °C
Dimensions W x H x D	13.4 x 13.3 x 56.6 mm	13.4 x 13.3 x 56.6 mm
Data sheet and further information, see:	wago.com/852-201/107-002	wago.com/852-1200

Item Description	SFP Module; 100BASE	SFP Module 1000BASE; Extended temperature; DDM	
Version	FX Single-Mode 1310 nm LC; 30 km	LX Single-Mode 1310 nm LC; 10 km	ZX Single-Mode 1550 nm LC; 80 km
Item No.	852-201/107-030	852-1210	852-1280
Order Text	SFP Module 30: 1310nm; 100BASE-FX Single-Mode LC; 30 km	SFP Module 1000BASE; LX Single-Mode 1310 nm LC; 10 km; EXT; DDM	SFP Module 1000BASE; ZX Single-Mode 1550 nm LC; 80 km; EXT; DDM
Technical Data			
Wavelength	1310 nm	1310 nm	1550 nm
Single-mode fiber	9/125 µm	9/125 µm	
Lengths (max.)	30 km	10 km	80 km
Laser type	Laser class 1 per EN 60825-1	Laser class 1 per EN 60825-1	
Other		Supports "Digital Diagnostics Monitoring"	
Surrounding air temperature (operation)	0 °C ... +60 °C	-40 ... +85 °C	
Dimensions W x H x D	13.4 x 13.3 x 56.6 mm	13.4 x 13.3 x 56.6 mm	
Data sheet and further information, see:	wago.com/852-201/107-030	wago.com/852-1210	wago.com/852-1280

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Industrial Switches – Accessories DNV Mounting Adapter with Marine Approval



Item Description	DNV Mounting Adapter; for 852-111/852-1111 Industrial Switches with maritime approval
Item No.	852-9101
Order Text	DNV Mounting Adapter; Switches
Technical Data	
Dimensions W x H x D	20 x 9.6 x 102.2 mm
Weight	32.8 g
Data sheet and further information, see:	wago.com/852-9101