8-port 10/100 Industrial Switch

# **Industrial Switches**

Copper cables Fiber optic cable

LNKACT

- Ring redundancy

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	No. of Ports	Medium	Item No.	
Industrial Switches	5	100Base-TX	852-101	528
	8	100Base-TX	852-102	529
	8/2	100Base-TX/100Base-FX	852-103	530
	7/2	100Base-TX/100Base-FX	852-104	531
Industrial ECO Switches	5	100Base-TX	852-111	532
	8	100Base-TX	852-112	533
	5	1000Base-TX	852-1111	534



## Accessories

SPF modules, RJ-45 interface modules

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#### **Always the Right Solution**

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

# Combinable with Fiber Optic Conductors

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

High immunity to interference, electrical isolation and long ranges up to 30 km are important parameters – and all are compatible with the IT world!

#### 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 ideally suited for small- to medium-sized networks.

#### Modular Expandability

Exchangeable SPF modules can be used to adapt WAGO switches for various fiber optic cables and the necessary distances and fibers. There are SFP modules for multimode and single mode fiber optic cables for ranges up to 30 km. With the optimum combination of copper and fiber optic cables, you are equipped 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 a potential-free alarm contact. A DIP switch is used to configure this function.

#### Availability, Redundancy

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

- "Spanning Tree" acc. to IEEE 802.1D compatible with IT standard
- Jetring a simple ring protocol with a switching time of < 300 ms
- Xpress Ring fast ring protocol switching time < 50 ms</li>

In addition to redundancy of the communication link, a redundant power supply is integrated into the switches that can be monitored using an alarm relay. Thus, if the power supply fails, communication is not interrupted.

#### **Different Operating Modes**

The unmanaged switches are ideally suited 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.

- Adaptable to different transmission media
- Automatic adaptation to
  - Speed (autonegotiation)
  - Wiring (auto-crossover, MDI/MDIX)
- Various switching modes
- Optional redundancy
- Larger supply voltage range

Interfaces and Configurations

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## 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 L (mm) 50 x 120 x 105

# Housing design (B)

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

# Housing design ECO (C)

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

- Housing design ECO (D) W x H\* x L (mm) 109.2 x 23.4 x 73.8 DIN-rail or wall mount

**B** 1) a) b) 2)





#### Housing design (E)

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

\*Height from upper edge of DIN-rail



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Application and Installation Instructions

#### Increasing Availability through Media Redundancy

A primary reason for the success of ETHERNET communication in automation technology is that redundant mechanisms exist and uptime can be increased. This is accomplished by duplicating components and lines so that defects, such as a broken cable, no longer cause communication to fail. However, this requires complex algorithms that detect errors and determine alternative paths without causing loops or rings in the network – and this is performed with the shortest possible downtime. WAGO provides select switches with corresponding features.

#### **Rapid Spanning Tree**

- Is a standardized protocol for determining the shortest path
- Is used in any complex topologies to disable redundant paths
- Determines the best alternative paths during a connection interruption and activates the required paths
- Typically requires one to three seconds to switch

#### Jetring

- Is a simple protocol that can be used exclusively in physical ring topologies
- Requires no configuration
- Automatically assigns a switch as the "master"; disables those network connections that would lead to loop and automatically switches over in case of failure
- Typically requires approx. 300 ms to switch
- Can be operated in "Fast Aging Mode" in connection with specific ETHERNET controllers (e.g., 750-880) for fast switching

#### **Xpress Ring**

- Is only suitable for ring topologies like Jetring
- Requires that all nodes in the ring support the protocol
- Requires an explicit configuration of the connections
- Requires less than 50 ms to switch
- Is suitable as a protocol in redundant coupled ring systems (coupling ring)



Example: Complex topology



#### Example: Simple ring topology



Example: Simple ring topology with 750-881 in "Fast Aging Mode"

Versions

## Extended temperature range



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

# Item Number Keys

Explanations of the components for the item number key

Item No. : 8	beries 52-xxxx
Oxxx:	100 Mbit/s
lxxx:	1 Gbit/s x1xx: Unmanaged switch x2xx: SFP module x3xx: Managed switch x4xx: Unmanaged switch, PoE x5xx: Managed switch, PoE xx0x: Industrial switch (redundant power supply) xx1x: Industrial ECO switch xxx1: 5 ports xxx2: 8 ports xxx3: 8 ports + 2 LWL ports xxx4: 7 ports + 2 LWL ports xxx5: 8 ports + 4 LWL ports

# Standards and Rated Conditions

eneral Specifications	
Operating voltage	9 VDC 48 VDC (ECO version 18 V 30 V)
Operating temperature	0 °C +60 °C
Operating temperature for versions with an extended temperature range	-40 °C +70 °C
Storage temperature	-20 °C +80 °C
Storage temperature for versions with an extended temperature range	-40 °C +85 °C
Relative humidity (without condensation)	95 %
Vibration resistance	4g acc. to IEC 60068-2-6
Shock resistance:	15g acc. to IEC 60068-2-27
EMC immunity to interference	EN 61000-6-2
EMC emission of interference	EN 61000-6-4
Protection type	IP30
Type of mounting	on DIN-rail, ECO version also for wall mounting
Mounting position	any





# 5-Port 100BASE-TX Industrial Switch



The 852-101 Industrial Switch is a 5-port 10/100Base-TX ETHERNET switch. The switch has a rugged housing, a redundant power supply and function monitoring with relay, making it ideal for a wide range of applications.



- Primary Power LED
   Redundant Power LED
   Alarm LED
   TX port 100 Mbps LED
   TX port LNK/ACT LED
   TX ports (5)

- Features:
- Redundant DC power supply
  Wide supply voltage range: 9 V ... 48 V
- DIP switch enables alarm functions

- Full compliance with IEEE802.3, 802.3u stantards
  Non-blocking, store-and-forward switching
  Auto-negotiation on all 10/100Base-TX ports
  Auto-MDI/MDIX (crossover) on all 10/100Base-TX ports

Description	Item No.	Pack. Unit	Technical Data	
5-Port 100BASE-TX Industrial Switch	852-101	1	Ports	5 x 10/100Base-TX (RJ-45)
			Standards	IEEE 802.3u 100Base-TX;
				IEEE 802.3 10Base-T
			Maximum length	10/100Base-TX: 100 m
			Supply voltage	9 V 48 V DC (line length < 3 m)
			Energy consumption max.	3.84 W
			Energy consumption typ. (24 V)	3.36 W
			Operating temperature	0°C +60°C
			Storage temperature	-20 °C +80 °C
			Relative air humidity (no condensation)	95 %
			Dimensions (mm) W x H x L	50 x 120 x 105
				Height from upper-edge of DIN 35 rail
			Weight	639 g
			Vibration resistance	acc. to IEC 60068-2-6
			Shock resistance	acc. to IEC 60068-2-27
			Degree of protection	IP30
			EMC immunity of interference	acc. to EN 61000-6-2
			EMC emission of interference	acc. to EN 61000-6-4
Approvals				
Conformity marking	CE			
Korea Certification	Ğ			
د®∝ UL 508				
			L	

# 8-Port 100BASE-TX Industrial Switch



The 852-102 Industrial Switch is an 8-port 10/100Base-TX ETHERNET switch. The switch has a rugged housing, a redundant power supply and function monitoring with relay, making it ideal for a wide range of applications.

# ont of a 852-102 8-port 10/100 ndustrial Swite

Redundant DC power supply
Large supply voltage range: 9 V ... 48 V

• Full compliance with IEEE802.3, 802.3u stantards

Non-blocking, store-and-forward switching
Auto-negotiation on all 10/100Base-TX ports
Auto-MDI/MDIX (crossover) on all 10/100Base-TX ports

8 x 10/100Base-TX (RJ-45) IEEE 802.3u 100Base-TX; IEEE 802.3 10Base-T

5.28 W

4.56 W

95 %

909 g

IP30

0°C ... +60°C -20 °C ... +80 °C

50 x 120 x 162

acc. to IEC 60068-2-6

acc. to IEC 60068-2-27

acc. to EN 61000-6-2

acc. to EN 61000-6-4

14,880/148,800 packets per second (pps) to 10/100 Mbps ports 10/100Base-TX: 100 m 9 V ... 48 V DC (line length < 3 m)

Height from upper-edge of DIN 35 rail

W/AGO

DIP switch enables alarm functions

Features:

•

Primary Power LED
 Redundant Power LED
 Alarm LED
 TX port 100 Mbps LED
 TX portLNK//ACT LED

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Description	Item No.	Pack. Unit	Technical Data
8-Port 100BASE-TX Industrial Switch	852-102	1	Ports
			Standards
			Throughputs
			Maximum length
			Supply voltage
			Energy consumption max.
			Energy consumption typ. (24 V)
			Operating temperature
			Storage temperature
			Relative air humidity (no condensation
			Dimensions (mm) W x H x L
			Weight
			Vibration resistance
			Shock resistance
			Degree of protection
			EMC immunity of interference
			EMC emission of interference
Approvals			
Conformity marking	CE		
Koreg Certification	16		
(®)∞ UL 508			

# 8-Port 100BASE-TX + 2-Slot 100BASE-FX Industrial Switch



The 852-103 Industrial Switch is an 8-port 10/100Base-TX with dual SFP 100Base-FX port (SFP modules are optional) ETHERNET switch. The switch has a rugged housing, a redundant power supply and function monitoring with relay, making it ideal for a wide range of applications.



- 1
   Primary Power LED

   2
   Redundant Power LED

   3
   Alarm LED

   4
   TX port 100 Mbps LED

   5
   TX port 100 Mbps LED

   6
   107 100 Base-TX ports (8)

   7
   100 Base-TX LC Fiber slots (SFP-type) (2)

   8
   Fiber port Offline LED (2)

   9
   Fiber port LNK/ACT LED [2]

   10
   Fiber port 100 Mbps LED (2)



#### Features:

- ٠
- Redundant DC power supply Large supply voltage range: 9 V ... 48 V •
- DIP switch enables alarm functions
- Full compliance with IEEE802.3, 802.3u stantards

- Non-blocking, store-and-forward switching
  Auto-negotiation on all 10/100Base-TX ports
  Auto-MDI/MDIX (crossover) on all 10/100Base-TX ports

Description	Item No.	Pack. Unit
8/2 Port 100BASE-TX/FX Industrial Switch	n 852-103	1
8/2 Port 100BASE-TX/FX Industrial Switch	nT 852-103/040-000	1
Extended temperature range: -40 °C +70	)°C	
Accessories	Item No.	
SFP Module 2: 1310nm, 100Base-FX	852-201/107-002	
Multi-mode LC, 2 km		
SFP Module 30: 1310nm, 100Base-FX	852-201/107-030	
Single-mode LC, 30 km		
SFP Module 2 T: 1310nm,	852-201/040-002	
100Base-FX, Multi-mode, LC, 2 km,		
(Extended temperature range: -40 °C +70	°C)	
Approvals		
Conformity marking	(€	
Korea Certification	<u>s</u>	
ം⊛ <sub>™</sub> UL 508	to 60 °C (852-103/040-00	0)

Technical Data	
Ports	8 x 10/100Base-TX (RJ-45);
	2 x SFP 100Base-FX Fiber
Standards	IEEE 802.3u 100Base-TX/FX;
	IEEE 802.3 10Base-T
Throughputs	14,880/148,800 packets per second
	(pps) to 10/100 Mbps ports
Wavelength (optical fibers)	depend on SFP module
Maximum length	10/100Base-TX: 100 m;
	Fiber optic: up to 30 km
Supply voltage	9 V 48 V DC (line length < 3 m)
Energy consumption max.	6.08 W
Energy consumption typ. (24 V)	5.76 W
Operating temperature	0°C +60°C (852-103)
	-40 °C +70 °C (852-103/040-000)
Storage temperature	-20 °C +80 °C (852-103)
	-40 °C +85 °C (852-103/040-000)
Relative air humidity (no condensation)	95 %
Dimensions (mm) W x H x L	50 x 120 x 162
	Height from upper-edge of DIN 35 rail
Weight	922 g
Vibration resistance	acc. to IEC 60068-2-6
Shock resistance	acc. to IEC 60068-2-27
Degree of protection	IP30
EMC immunity of interference	acc. to EN 61000-6-2
EMC emission of interference	acc. to EN 61000-6-4

# 7-Port 100BASE-TX + 2-Slot 100BASE-FX Industrial Managed Switch

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The 852-104 Industrial Switch is a 7-port 10/100Base-TX with dual SFP 100Base-FX port (SFP modules are optional) configurable ETHERNET switch. The switch has a rugged housing, a redundant power supply and function monitoring with relay. These functions along with extensive ETHERNET switch options make it ideal for a wide range of applications.

#### Features:

- Web-based/SNMP management
- Redundant DC power supply
  Large supply voltage range: 9 V ... 48 V

Description	Item No.	Pack. Unit
7/2-Port 100BASE-TX/FX Industrial	852-104	1
Managed Switch		
7/2-Port 100BASE-TX/FX Industrial	852-104/040-000	1
Managed Switch T		
Extended temperature range: -40 °C +2	70 °C	
Accessories	Item No.	
SFP Module 2: 1310nm, 100Base-FX	852-201/107-002	
Multi-mode LC, 2 km		
SFP Module 30: 1310nm, 100Base-FX	852-201/107-030	
Single-mode LC, 30 km		
SFP Module 2 T: 1310nm,	852-201/040-002	
100Base-FX, Multi-mode, LC, 2 km,		
(Extended temperature range: -40 °C +7	0 °C)	
Approvals		
Approvals Conformity marking	CE	
Approvals Conformity marking Korea Certification	(	
Approvals Conformity marking Korea Certification ®- UL 508	<b>C€</b> [ੴ to 60 °C (852-104/040-000	))
Approvals Conformity marking Korea Certification ©- UL 508	<b>C€</b> ∭ to 60 °C (852-104/040-000	))
Approvals Conformity marking Korea Certification ·®- UL 508 Technical Data	<b>C€</b> ∭ to 60 °C (852-104/040-000	)]
Approvals Conformity marking Korea Certification ®- UL 508 Technical Data Operating temperature	<b>C€</b> [6] to 60 °C (852-104/040-000 0°C +60°C (852-104)	)}
Approvals Conformity marking Korea Certification •©- UL 508 Technical Data Operating temperature	<b>C€</b> [6] to 60 °C (852-104/040-000 0°C +60°C (852-104) -40 °C +70 °C (852-104)	)) /040-000)
Approvals Conformity marking Korea Certification •©- UL 508 Technical Data Operating temperature Storage temperature	<b>C€</b> [6] to 60 °C (852-104/040-000 0°C +60°C (852-104) -40 °C +70 °C (852-104) -20 °C +80 °C (852-104)	)) /040-000)
Approvals Conformity marking Korea Certification •©- UL 508 Technical Data Operating temperature Storage temperature	<pre>C€     [6]     to 60 °C (852-104/040-000     0°C +60°C (852-104)     -40 °C +70 °C (852-104)     -20 °C +80 °C (852-104)     -40 °C +85 °C (852-104)</pre>	)) /040-000) /040-000)
Approvals Conformity marking Korea Certification •®- UL 508 Technical Data Operating temperature Storage temperature Relative air humidity (no condensation)	C€ ∑ to 60 °C (852-104/040-000 0°C +60°C (852-104) -40 °C +70 °C (852-104) -20 °C +80 °C (852-104) -40 °C +85 °C (852-104) 95 %	)) /040-000) /040-000)
Approvals         Conformity marking         Korea Certification         •®- UL 508         Technical Data         Operating temperature         Storage temperature         Relative air humidity (no condensation)         Dimensions (mm) W x H x L	C€ ∑ to 60 °C (852-104/040-000 0°C +60°C (852-104) -40 °C +70 °C (852-104) -20 °C +80 °C (852-104) -40 °C +85 °C (852-104) -40 °C +85 °C (852-104) 50 × 120 × 162	)) /040-000) /040-000)
Approvals         Conformity marking         Korea Certification         •• UL 508         Technical Data         Operating temperature         Storage temperature         Relative air humidity (no condensation)         Dimensions (mm) W x H x L	<ul> <li>C€</li> <li>C</li> <li></li></ul>	)) '040-000) '040-000) '040-000) N 35 rail



- DIP switch to enable alarm functions
- Full compliance with IEEE802.3, 802.3u, 802.3x,802.1d, 802.1q, 802.1p standards
- Xpress Ring (redundant ring recovery < 50 ms)
- •
- ٠
- Non-blocking, store-and-forward switching Auto-negotiation on all 10/100Base-TX ports Auto-MDI/MDIX (crossover) on all 10/100Base-TX ports
- VLAN (802.1q) VID ٠
- IGMP Snooping for multicast filtering Port configuration, status, statistics
- Port Trunking ٠
- SNMP v1/v2 and RMON

Technical Data	
Ports	7 x 10/100Base-TX (RJ-45);
	2 x SFP 100Base-FX Fiber;
	1 x RS-232 (RJ-45)
Standards	IEEE 802.3u 100Base-TX/FX;
	IEEE 802.3ad Port Trunking;
	IEEE 802.3 10Base-T;
	IEEE 802.1d Spanning Tree Protocol;
	IEEE 802.3x Flow Control;
	IEEE 802.1p Priority Queues;
	IEEE 802.1q VLAN Tagging
MAC table	Up to 2K addresses
VLANs	Port-based and Tag-based (64VIDs)
Throughputs	14,880/148,800 packets per second
	(pps) to 10/100 Mbps ports
Wavelength (optical fibers)	depend on SFP module
Maximum length	10/100Base-TX: 100 m;
	Fiber optic: up to 30 km;
	RS-232: 15 m
Supply voltage	9 V 48 V DC (line length < 3 m)
Energy consumption max.	10.08 W
Energy consumption typ. (24 V)	8.4 W
Vibration resistance	acc. to IEC 60068-2-6
Shock resistance	acc. to IEC 60068-2-27
Degree of protection	IP30
EMC immunity of interference	acc. to EN 61000-6-2
EMC emission of interference	acc. to EN 61000-6-4

# 5-Port 100BASE-TX Industrial Eco Switch



The 852-111 has 5 ports with each port featuring Auto-negotiation and auto MDI/MDI-X detection. Existing 10Mbps networks can now be upgraded effortlessly to higher speed 100Mbps Fast ETHERNET networks. The 852-111 5-port density can be used to create multiple segments to alleviate client congestion and provide dedicated bandwidth to each user node. The 852-111 is a cost-effective solution to keep up with the constant demands for emerging IP-based industry communication needs. The switch can be easily configured and installed and is also ideally suited for small to medium-sized networks.



#### Features:

- 5-port 10/100 Mbps Auto-negotiation ETHERNET ports
- Comprehensive front-panel diagnostic LEDs
- Supports Auto-MDI/MDI-X
- Full/half-duplex transfer modes for each port
- Wire speed reception and transmission
- Store-and-forward switching method
- Integrated address Look-Up Engine, supports 2K absolute MAC addresses

+18~30V DC

- Supports surge protection
- IEEE 802.3x flow control for fullduplex
- Supports DIN 35 rail

Description	Item No.	Pack. Unit
5-Port 100BASE-TX Industrial Eco Switch	852-111	1
Approvals		
Conformity marking C	E	
Korea Certification	ŝ	
Marine applications D	NV pending	
«ಅ» UL 508		

Technical Data	
Ports	5 x 10/100Base-TX (RJ-45)
Standards	IEEE 802.3 10Base-T;
	IEEE 802.3u 100Base-TX/FX;
	IEEE 802.3x Flow Control
Topology	Star
LED	each device:
	1 x Power (PWR), green;
	each port:
	1 x Link/Activity (LNK/ACT), green;
	1 x Speed (100 Mbps), green
Supply voltage	18 V 30 V DC
Energy consumption max.	3 W
Operating temperature	0°C +60°C
Storage temperature	-20 °C +80 °C
Relative air humidity (no condensation)	95 %
Dimensions (mm) W x H x L	23.4 x 73.8 x 109.2
	Height from upper-edge of DIN 35 rail
Fixing	DIN 35 rail
Weight	190 g

# 8-Port 100BASE-TX Industrial Eco Switch





852-112 has 8 ports with each port featuring Auto-negotiation and Auto MDI/MDI-X detection. Existing 10Mbps networks can now be upgraded effortlessly to higher speed 100Mbps Fast ETHERNET networks. The 852-112 8-port density can be used to create multiple segments to alleviate client congestion and provide dedicated bandwidth to each user node. The 852-112 is a cost-effective solution to keep up with the constant demands for emerging IP-based industry communication needs. The switch can be easily configured and installed and is also ideally suited for small to medium-sized networks.

#### Features:

- 8-port 10/100 Mbps Auto-negotiation ETHERNET ports
- Comprehensive front-panel diagnostic LEDs
- Supports Auto-MDI/MDI-X
- Full/half-duplex transfer modes for each port
- Wire speed reception and transmission
- Store-and-forward switching method
- Integrated address Look-Up Engine, supports 2K absolute MAC addresses
- Supports surge protection
  IEEE 802.3x flow control
- IEEE 802.3x flow control for fullduplex
- Supports DIN 35 rail

Description	Item No.	Pack. Unit
8-Port 100BASE-TX Industrial Eco Switch	852-112	1
Approvals		
Conformity marking		
Korea Certification		
°®∞ UL 3U8		

Technical Data	
Ports	8 x 10/100Base-TX (RJ-45)
Standards	IEEE 802.3 10Base-T;
	IEEE 802.3u 100Base-TX/FX;
	IEEE 802.3x Flow Control
Topology	Star
LED	each device:
	1 x Power (PWR), green;
	each port:
	1 x Link/Activity (LNK/ACT), green;
	1 x Speed (100 Mbps), green
Supply voltage	18 V 30 V DC
Energy consumption max.	3 W
Operating temperature	0°C +60°C
Storage temperature	-20 °C +80 °C
Relative air humidity (no condensation)	95 %
Dimensions (mm) W x H x L	109.2 x 23.4 x 73.8
	Height from upper-edge of DIN 35 rail
Fixing	DIN 35 rail
Weight	415 g

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# 5-Port 1000BASE-T Industrial Eco Switch



The 852-1111 is a 5-port 1000Base-T industrial ETHERNET switch supporting Auto-Negotiation and Auto-MDI-/MDI-X detection for each port. The 852-1111 5-port density can be used to create multiple segments to alleviate client congestion and provide dedicated bandwidth to each user node. The 852-1111 is a cost-effective solution to keep up with the constant demands for emerging IP-based industry communication needs. The switch can be easily configured and installed and is also ideally suited for small to medium-sized networks.

#### Features:

- 5-port 10/1000 Mbps Auto-negotiation ETHERNET ports
- Comprehensive front-panel diagnostic LEDs
- Supports Auto-MDI/MDI-X
- Full/half-duplex transfer modes for each port
- Wire speed reception and transmission
- Store-and-forward switching method
- Integrated address Look-Up Engine, supports 2K absolute MAC addresses

- Supports surge protection
- IEEE 802.3x flow control for fullduplex
- Supports DIN 35 rail

Description	Item No.	Pack. Unit
5-Port 1000BASE-T Industrial Eco Switch	852-1111	1
Annuala		
Approvais		
Conformity marking (	:e	
Marine applications [	DNV pending	
«®∞ UL 508 p	bending	

Technical Data	
Ports	5 x 10/100/1000Base-T (RJ-45)
Standards	IEEE 802.3 10Base-T;
	IEEE 802.3u 100Base-TX/FX;
	IEEE 802.3ab 1000Base-T;
	IEEE 802.3x Flow Control
Тороlоду	Star
LED	each device:
	1 x Power (PWR), green;
	each port:
	1 x Link/Activity (LNK/ACT), green;
	1 x Speed (100 Mbps), green
Supply voltage	9 V 48 V DC
Energy consumption max.	3 W
Operating temperature	0°C +60 °C
Storage temperature	-20 °C +80 °C
Relative air humidity (no condensation)	95 %
Dimensions (mm) W x H x L	23.4 x 73.8 x 109.2
	Height from upper-edge of DIN 35 rail
Fixing	DIN 35 rail
Weight	190 g



# SFP Modules 100Base-FX LC



ETHERNET via fiber optic cables offers a multitude of advantages for industrial applications. High immunity to interference, electrical isolation, and long ranges are important parameters here.

Description		Item No.	Pack. Unit
SFP Module 2: 1310nm, 100Base-FX	Connector Duplex LC,	852-201/107-002	1
Multi-mode LC, 2 km	Wavelength 1310 nm,		
	Fiber type Multi-mode 62.5/125 µm, 50/125 µm,		
	Maximum length 2000 m,		
	Operating temperature 0 °C +60 °C,		
	Storage temperature -20 °C +80 °C,		
	Dimensions (mm) W x H x D: 13.4 x 13.3 x 56.6;		
	Laser Class 1 acc. to EN 60825-1		
SFP Module 30: 1310nm, 100Base-FX	Connector Duplex LC,	852-201/107-030	1
Single-mode LC, 30 km	Wavelength 1310 nm,		
	Fiber type Single-mode 9/125 µm,		
	Maximum length 30000 m,		
	Operating temperature 0 °C +60 °C,		
	Storage temperature -20 °C +80 °C,		
	Dimensions (mm) W x H x D: 13.4 x 13.3 x 56.6;		
	Laser Class 1 acc. to EN 60825-1		
SFP Module 2 T: 1310nm,	Connector Duplex LC,	852-201/040-002	1
100Base-FX, Multi-mode, LC, 2 km,	Wavelength 1310 nm,		
(Extended temperature range: -40 °C +70 °C)	Fiber type Multi-mode 62.5/125 µm, 50/125 µm,		
	Maximum length 2000 m,		
	Operating temperature -40 °C +70 °C,		
	Storage temperature -40 °C +80 °C,		
	Dimensions (mm) W x H x D: 13.4 x 13.3 x 56.6;		
	Laser Class 1 acc. to EN 60825-1		

Characteristics:

• Duplex LC optical connector

• Industry standard small form pluggable (SFP) package

• Compliant with Fast ETHERNET standard;

• Differential LVPECL inputs and outputs;

• Single 3.3V power supply;

• TTL signal detect indicator;

• Hot pluggable capability