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Narrow Ethernet switch, eight RJ45 ports with 10/100/1000 Mbps on all ports, automatic data transmission speed detection, autocrossing function, and QoS

### Your advantages

- Auto negotiation and autocrossing detection simplifies installation and setup
- ☑ RJ45 ports support a transmission speed of 10/100/1000 Mbps
- ☑ QoS-prioritized (Quality of Service) messages
- ☑ PROFINET conformance Class A for real-time data exchange
- PROFINET PTCP filter for reliable communication on PROFINET networks
- ☑ Enhanced traffic prioritization for automation protocols
- ☑ Jumbo frame support (frame size up to 9216 bytes/frame)





### **Key Commercial Data**

Packing unit	1 pc
Weight per Piece (excluding packing)	260.000 g
Country of origin	Taiwan

### Technical data

#### Note

Utilization restriction EMC: class A product, se area	ee manufacturer's declaration in the download
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#### **Dimensions**

Width	22.5 mm
Height	140.4 mm
Depth	92 mm
Note on dimensions	147.5 mm with connector

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# Technical data

### Ambient conditions

Degree of protection	IP30
Ambient temperature (operation)	-10 °C 60 °C
Ambient temperature (storage/transport)	-40 °C 85 °C
Permissible humidity (operation)	5 % 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % 95 % (non-condensing)
Air pressure (operation)	79 kPa 108 kPa up to 2000 m above mean sea level (Without derating)
Air pressure (storage/transport)	79 kPa 108 kPa up to 2000 m above mean sea level (Without derating)

### Interfaces

Interface	Ethernet (RJ45)
No. of ports	8 (RJ45 ports)
Note on the connection method	Auto negotiation and autocrossing
Transmission physics	Ethernet in RJ45 twisted pair
Transmission speed	10/100/1000 Mbps
Transmission length	100 m (per segment)
Signal LEDs	Data receive, link status

#### Function

Basic functions	Unmanaged switch / auto negotiation, complies with IEEE 802.3, store and forward switching mode
Additional functions	Autonegotiation
	Jumbo frames (Max. 9,216 bytes)
Status and diagnostic indicators	LEDs: U <sub>s</sub> , link and activity per port

### Network expansion parameters

Cascading depth	Network, linear, and star structure: any
Maximum conductor length (twisted pair)	100 m

# Supply voltage

Supply voltage	24 V
	24 V AC (50/60 Hz)
Residual ripple	3.6 V <sub>PP</sub> (within the permitted voltage range)
Supply voltage range	9 V DC 32 V DC
	18 V AC 30 V AC (50/60 Hz)
Typical current consumption	54 mA
Max. current consumption	452 mA

### General

Mounting type	DIN rail
Type AX	Stand-alone



# Technical data

### General

Net weight	179 g
MTTF	66.1 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)
	786 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	709 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))

### Connection data

Connection method	Push-in spring connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Stripping length	10 mm

# Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Interference emission	EN 61000-6-2 EN 61000-4-8 (electromagnetic fields) Criterion A
Conducted noise emission	EN 61000-6-2 Class A
Immunity to surge	EN 61000-6-2 EN 61000-4-5 (surge) Criterion B
Immunity to burst	EN 61000-6-2 EN 61000-4-4 (EFT burst) Criterion A
Immunity to EF	EN 61000-6-2 EN 61000-4-3 (electromagnetic fields) Criterion A
Immunity to ESD	EN 61000-6-2 EN 61000-4-2 (ESD) Criterion B
Immunity to conducted interference	EN 61000-6-2 EN 61000-4-6 (line noise immunity) Criterion A
Type of test	Free fall in accordance with EN 61131-2
Noise emission	EN 61000-6-4:2007 + A1:2011
Noise immunity	EN 61000-6-2:2005
Vibration (storage/transport)	5g, 150 Hz, in acc. with IEC 60068-2-6
Vibration (operation)	in acc. with IEC 60068-2-6: 5g, 150 Hz
Shock (operation)	30g (EN 60068-2-27)

# Classifications

### eCl@ss

eCl@ss 10.0.1	19170402
eCl@ss 8.0	19170106
eCl@ss 9.0	19170106



# Classifications

**ETIM** 

ETIM 5.0		EC000734		
Approvals				
Approvals				
Approvals				
EAC / IECEE CB Scheme / UL Listed / cUL Listed / IECEE CB Scheme / UL Listed / cUL Listed				
Ex Approvals				
UL Listed / cUL Listed / cULus Listed				
Approval details				
EAC	EAC		RU *- DE.A*08.B.00731	
IECEE CB Scheme	<b>CB</b> scheme	http://www.iecee.org/	DK-91138-UL	
UL Listed	UL LISTED	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140403	
cUL Listed	C UL	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 140403	
IECEE CB Scheme	<b>CB</b> scheme	http://www.iecee.org/	DK-91246-UL	
UL Listed	UL LISTED	http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705	



### Approvals

cUL Listed



http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm

FILE E 238705

### Accessories

#### Accessories

Assembly adapter

Mounting plate - FL DIN-RAIL ADAPTER 22.5 - 1085485



The FL DIN-RAIL ADAPTER 22.5 is designed to allow products 22.5 mm wide to be mounted flush to a standard 35 mm DIN rail, in any orientation.

Mounting plate - FL PANEL ADAPTER 22.5 - 1085488



The FL PANEL ADAPTER 22.5 is designed to allow products 22.5 mm wide to be mounted flush to a panel, in any orientation.

#### Data cable preassembled

Patch cable - NBC-R4AC-R4AC-IE8A/.../... - 1411854



Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/2,0 - 1408360



Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m



### Accessories

Patch cable - NBC-R4AC/10G-R4AC/10G-94F/3,0 - 1408365



Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

#### End block

End clamp - E/NS 35 N - 0800886



End clamp, width: 9.5 mm, color: gray

#### Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263



Patch cable, CAT5, assembled, 0.5 m

Patch cable - FL CAT5 PATCH 1,0 - 2832276



Patch cable, CAT5, assembled, 1 m

Patch cable - FL CAT5 PATCH 2.0 - 2832289



Patch cable, CAT5, assembled, 2 m



#### Accessories

### PCB plug

Printed-circuit board connector - FKCT 2,5/ 3-ST KMGY BD:US,GND - 1087544



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5 mm, connection method: Push-in spring connection, color: light gray, contact surface: Tin

Printed-circuit board connector - FKCT 2,5/ 3-ST KMGY - 1998263



PCB connector, nominal current: 12 A, rated voltage (III/2): 320 V, nominal cross section: 2.5 mm², number of positions: 3, pitch: 5 mm, connection method: Push-in spring connection, color: light gray, contact surface: Tin

### Protective cap

Dust protection - FL RJ45 PROTECT CAP - 2832991



Dust protection caps for RJ45 socket

Surge protection for information technology

Surge protection device - DT-LAN-CAT.6+ - 2881007



Surge protection in accordance with Class  $E_A$  (CAT6<sub>A</sub>), for Gigabit Ethernet (up to 10 Gbps), token ring, FDDI/CDDI, ISDN, and DS1. Suitable for Power over Ethernet (PoE+) "Mode A" and "Mode B". RJ45 attachment plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails.

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