FL SWITCH 1116N - Industrial Ethernet Switch

1085219

https://www.phoenixcontact.com/us/products/1085219

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Narrow Ethernet switch, sixteen 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
- Local diagnostic indicators with LEDs
- 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
- Energy-efficient Ethernet in accord. with IEEE 802.3az
- 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)

Commercial data

Item number	1085219
Packing unit	1 pc
Sales key	DN20
Product key	DNN116
GTIN	4055626833675
Weight per piece (including packing)	541 g
Weight per piece (excluding packing)	455 g
Customs tariff number	85176200
Country of origin	TW

Technical data

Dimensions

Width	40 mm
Height	151 mm
Depth	98 mm

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area

Material specifications

Housing material	Polycarbonate fiber reinforced
	Aluminum / steel sheet DC01

Mounting

Mounting type	DIN rail mounting

Interfaces

Ethernet (RJ45)

Number of interfaces	16
Connection method	RJ45
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100/1000 Mbps
Transmission physics	Ethernet in RJ45 twisted pair
Transmission length	100 m (per segment)
Signal LEDs	Data receive, link status
No. of channels	16 (RJ45 ports)

Product properties

Product type	Switch
Product family	Unmanaged Switch 1000
MTTF	77.4 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)
	833.6 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	616.1 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))

Switch functions

Basic functions	Unmanaged switch
	Autonegotiation
	Store and Forward switching mode

PROFINET conformance class	Conformance-Class A
MAC address table	8k
Status and diagnostic indicators	LEDs: U_S, link and activity per port
Additional functions	100 BASE-TX/100BASE-FX (IEEE 802.3u)
	Jumbo frames (Max. 9,216 bytes)
	Quality of Service (QoS) prioritization (IEEE 802.1p)
	Energy-efficient Ethernet (IEEE 802.3az)
	Gigabit Ethernet 1000BASE-T (IEEE 802.3ab)
	10Base-T (IEEE 802.3)

Security functions

Basic functions	Unmanaged switch
	Autonegotiation
	Store and Forward switching mode

Electrical properties

Maximum power dissipation for nominal condition	8.325 W (at 24 V DC)
Transmission medium	Copper

Supply

Supply voltage (DC)	24 V
Supply voltage range	9 V DC ... 32 V DC
Power supply connection	Via COMBICON, max. conductor cross section 2.5 mm²
Residual ripple	3.6 V_{PP} (within the permitted voltage range)
Max. current consumption	925 mA (at 9 V DC)
Typical current consumption	95 mA (at 24 V DC)

Connection data

Connection technology

Connection name	Power supply
pluggable	yes

Power supply

Connection method	Push-in spring connection
Conductor cross section, rigid	0.2 mm² ... 2.5 mm²
Conductor cross section, flexible	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 12
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 2.5 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² ... 2.5 mm²
Stripping length	10 mm

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP30

Ambient temperature (operation)	-10 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	2000 m (maximum)
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)
Shock (operation)	30g (EN 60068-2-27)
Vibration (operation)	in acc. with IEC 60068-2-6: 5g, 150 Hz
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)

Approvals

Conformity/Approvals

Conformance	CE-compliant
UL, USA / Canada	UL 61010-1, UL 61010-2-201 Class I, Div. 2, Groups A, B, C, D, T4 Class I, Zone 2, Group IIC, T4
FCC	Title 47 Part 15 Subpart B:2018 Class A

EMC data

Conformance with EMC directives	EN 61000-6-2 EN 61000-4-2 (ESD) Criterion B
	EN 61000-6-2 EN 61000-4-3 (electromagnetic fields) Criterion A
	EN 61000-6-2 EN 61000-4-4 (EFT burst) Criterion A
	EN 61000-6-2 EN 61000-4-5 (surge) Criterion B
	EN 61000-6-2 EN 61000-4-6 (line noise immunity) Criterion A
	EN 61000-6-2 EN 61000-4-8 (electromagnetic fields) Criterion A
	EN 61000-6-2 Class A
Noise immunity	EN 61000-6-2:2005
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 61000-6-4:2007 + A1:2011

System properties

Functionality

Basic functions	Unmanaged switch
	Autonegotiation
	Store and Forward switching mode

Signaling

Status display	LEDs: U_S, link and activity per port

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1085219

UL Listed
Approval ID: FILE E 238705

cUL Listed
Approval ID: FILE E 238705

CC-Link IE Field
Approval ID: NRT-IF-00056

CC-Link IE Field
Approval ID: NRT-IT-00065

KC
Approval ID: R-R-PCK-1085219

UAE-RoHS
Approval ID: 23-09-84493

IECEx
Approval ID: IECEx UL 21.0120X

cUL Listed
Approval ID: File E 196811

UL Listed
Approval ID: File E 196811

ATEX
Approval ID: UL 21 ATEX 2638X

cULus Listed

cULus Listed

Classifications

ECLASS

ECLASS-11.0	19170402
ECLASS-12.0	19170402
ECLASS-13.0	19170402

ETIM

ETIM 9.0	EC000734

UNSPSC

UNSPSC 21.0	43222600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	15(a), 7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

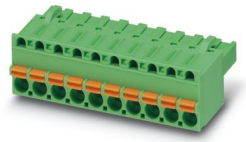
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	ee9801bc-432d-432c-84a5-56d5f4baeff6

Accessories

FKCT 2,5/ 3-ST KMGY BD:US,GND - PCB connector

1087544

https://www.phoenixcontact.com/us/products/1087544



PCB connector, nominal cross section: 2.5 mm^2, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of rows: 1, number of positions: 3, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

FKCT 2,5/ 3-ST KMGY - PCB connector

1998263

https://www.phoenixcontact.com/us/products/1998263



PCB connector, nominal cross section: 2.5 mm^2, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

FL DIN-RAIL ADAPTER 40 - Mounting panel

1085484

https://www.phoenixcontact.com/us/products/1085484



The FL DIN-RAIL ADAPTER 40 is designed to allow products 40 mm wide to be mounted flush to a standard 35 mm DIN rail, in any orientation.

FL PANEL ADAPTER 40 - Mounting panel

1085486

https://www.phoenixcontact.com/us/products/1085486



The FL PANEL ADAPTER 40 is designed to allow products 40 mm wide to be mounted flush to a panel, in any orientation.

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

2881007

https://www.phoenixcontact.com/us/products/2881007



Surge protection in accordance with Class E_A ($CAT6_A$), for Gigabit Ethernet (up to 10 Gbps), token ring, FDDI/CDDI, ISDN, and DS1. Suitable for Power over Ethernet (PoE++ / 4PPoE) “Mode A” and “Mode B”. RJ45 attachment plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails.

FL CAT5 PATCH 0,5 - Patch cable

2832263

https://www.phoenixcontact.com/us/products/2832263



Patch cable, CAT5, assembled, 0.5 m

FL CAT5 PATCH 1,0 - Patch cable

2832276

https://www.phoenixcontact.com/us/products/2832276



Patch cable, CAT5, assembled, 1 m

FL CAT5 PATCH 2,0 - Patch cable

2832289

https://www.phoenixcontact.com/us/products/2832289

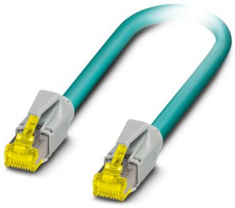


Patch cable, CAT5, assembled, 2 m

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

1411854

https://www.phoenixcontact.com/us/products/1411854

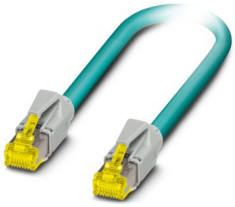


Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, $CAT6_A$, cable outlet: straight, Ethernet

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

1408360

https://www.phoenixcontact.com/us/products/1408360

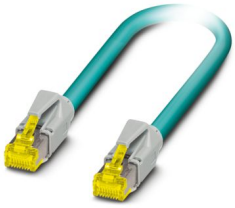


Patch cable, $CAT6_A$, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

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

1408365

https://www.phoenixcontact.com/us/products/1408365

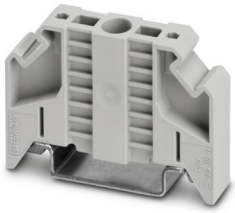


Patch cable, CAT6$_A$, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

E/NS 35 N - End bracket

0800886

https://www.phoenixcontact.com/us/products/0800886



End clamp, width: 9.5 mm, color: gray

FL RJ45 PROTECT CAP - Dust protection

2832991

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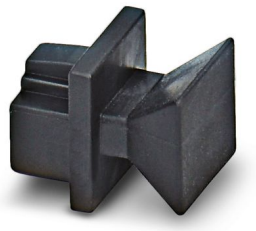

Dust protection caps for RJ45 socket

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