

# FL SWITCH 1116T - Industrial Ethernet Switch



1085115

<https://www.phoenixcontact.com/us/products/1085115>

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Ethernet switch, sixteen RJ45 ports with 10/100/1000 Mbps on all ports, wide temperature range, 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	1085115
Packing unit	1 pc
Sales Key	DN20
Product Key	DNN116
GTIN	4055626834603
Weight per Piece (including packing)	708 g
Weight per Piece (excluding packing)	631 g
Country of origin	TW

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## Technical Data

### Dimensions

Width	65 mm
Height	141 mm
Depth	107 mm

### Material specifications

Housing material	Polycarbonate fiber reinforced
	Aluminum / steel sheet DC01

### Mounting

Mounting type	DIN rail mounting
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### 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	31.4 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)
	449.8 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	300.4 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
MAC address table	8k
Status and diagnostic indicators	LEDs: U <sub>S</sub> , 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)

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	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

Transmission medium	Copper
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### Supply

Supply voltage (DC)	24 V DC
Supply voltage (AC)	24 V AC (50/60 Hz)
Supply voltage range	9 V DC ... 32 V DC 18 V AC ... 30 V AC (50/60 Hz)
Power supply connection	Via COMBICON, max. conductor cross section 2.5 mm <sup>2</sup>
Residual ripple	3.6 V <sub>PP</sub> (within the permitted voltage range)
Max. current consumption	950 mA
Typical current consumption	191 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	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	20 ... 12
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible, with ferrule without plastic sleeve	0.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Stripping length	10 mm

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP30
Ambient temperature (operation)	-40 °C ... 75 °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)

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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

### UL, USA/Canada

Identification	UL 61010-2-201
	UL 61010-1
	Class I, Div. 2 Groups A, B, C, D T4
	Class I, Zone 2, Group IIC T4

### ATEX

Identification	□ II 3G Ex ec IIC T4 Gc
Certificate	UL 22ATEX2910X

### IECEX

Identification	Ex ec IIC T4 Gc
Certificate	IECEX UL 22.0104X

## 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 <sub>S</sub> , link and activity per port
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## Classifications

### ECLASS

ECLASS-11.0	19170402
ECLASS-13.0	19170402

### ETIM

ETIM 8.0	EC000734
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### UNSPSC

UNSPSC 21.0	43222612
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## Environmental Product Compliance

REACH SVHC

Lead 7439-92-1

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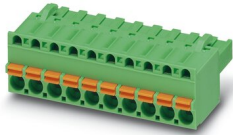
<https://www.phoenixcontact.com/us/products/1085115>

## Accessories

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

1087544

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



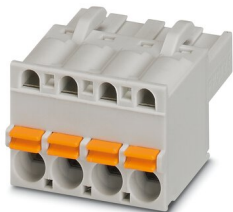
PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Socket, number of rows: 1, number of positions: 3, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, 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

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

1998263

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



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: 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

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

2881007

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



Surge protection in accordance with Class E<sub>A</sub> (CAT6<sub>A</sub>), 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.

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## FL CAT5 PATCH 0,5 - Patch cable

2832263

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



Patch cable, CAT5, assembled, 0.5 m



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## FL CAT5 PATCH 1,0 - Patch cable

2832276

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

Patch cable, CAT5, assembled, 1 m



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## FL CAT5 PATCH 2,0 - Patch cable

2832289

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

Patch cable, CAT5, assembled, 2 m



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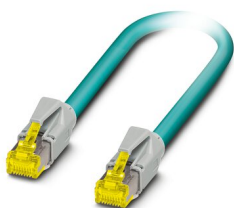
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## NBC-R4AC-R4AC-IE8A/.../... - Patch cable

1411854

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



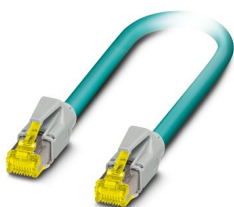
Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight, Ethernet

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

1408360

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

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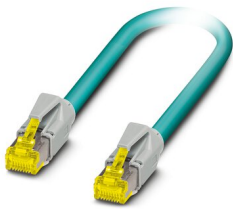
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## NBC-R4AC/10G-R4AC/10G-94F/3,0 - Patch cable

1408365

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



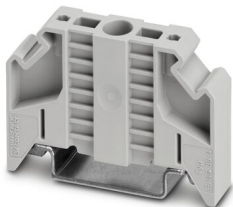
Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

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## E/NS 35 N - End clamp

0800886

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



End clamp, width: 9.5 mm, color: gray

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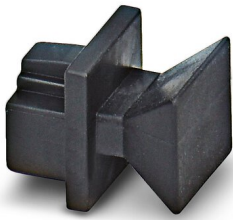
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## FL RJ45 PROTECT CAP - Dust protection

2832991

<https://www.phoenixcontact.com/us/products/2832991>



Dust protection caps for RJ45 socket

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