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Managed Ethernet switch with 16 RJ45 ports at 10/100 Mbps and operating temperature of -40°C ... +75°C

Product description

FL SWITCH 3000 managed industrial Ethernet switches combine extensive network performance and security features with complete IEEE redundancy (STP/RSTP/MST) and 15 ms recovery time extended ring redundancy. Unique web customization provides a simplified user interface for today's applications and scalable functionality for future needs. A comprehensive mix of fiber optic and copper port connections meets a wide range of applications.

Your advantages

- -40 to 75°C and -10 to 60°C ambient temperature versions
- RJ45 ports support a transmission speed of 10/100 Mbps
- Fiber-optic ports support 100 Mbps
- Security options with cable locking
- Extensive web diagnostics with configurable LED and remote alarm contacts
- Secure web-based and SNMP-based management
- Unique cleanup function hides unused configuration pages, reducing complexity, maintenance and startup times
- Auto negotiation and autocrossing detection simplifies installation and setup

Commercial data

Item number	2891059
Packing unit	1 pc
Sales key	DN17
Product key	DNN125
Catalog page	Page 314 (C-6-2019)
GTIN	4046356764278
Weight per piece (including packing)	1,533 g
Weight per piece (excluding packing)	1,133 g
Customs tariff number	85176200
Country of origin	TW

# FL SWITCH 3016T - Industrial Ethernet Switch



2891059

<https://www.phoenixcontact.com/us/products/2891059>

## Technical data

### Dimensions

Width	66 mm
Height	173 mm
Depth	140 mm

### Notes

#### Utilization restriction

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

CCCex note	Use in potentially explosive areas is not permitted in China.
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### Material specifications

Housing material	Aluminum
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### Mounting

Mounting type	DIN rail mounting
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### Interfaces

#### Ethernet (RJ45)

Connection method	RJ45
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100 Mbps
Transmission physics	Ethernet in RJ45 twisted pair
Transmission length	100 m
No. of channels	16 (RJ45 ports)

### Product properties

Product type	Switch
Product family	Managed Switch 3000
Type	Block design
MTTF	47.5 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)

#### Insulation characteristics

Protection class	III (VDE 0106, IEC 60536)
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#### Switch functions

Basic functions	Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts
Signal contact control voltage	24 V DC

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Signal contact control current	100 mA
Redundancy	ERR (Extended ring redundancy)
Status and diagnostic indicators	LEDs: U <sub>S1</sub> , U <sub>S2</sub> (redundant voltage supply), link and activity per port

## Security functions

Basic functions	Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts
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## Electrical properties

Local diagnostics	US1, US2 Supply voltage Green LED
	LNK/ACT Link status/data transmission Green LED
Maximum power dissipation for nominal condition	7.49 W
Test section	Supply voltage/functional ground 500 V 1 min.
Transmission medium	Copper

## Supply

Supply voltage (DC)	24 V DC (redundant)
Supply voltage range	12 V DC ... 48 V DC
Inrush current	4.76 A (5.5 ms)
Residual ripple	3.6 V <sub>PP</sub> (within the permitted voltage range)
Typical current consumption	261 mA (at U <sub>S</sub> = 24 V DC)

## Function

Signal contact control voltage	24 V DC
Signal contact control current	100 mA

## Connection data

### Connection technology

Connection name	Power supply
pluggable	yes

### Power supply

Connection method	Screw connection
Conductor cross section, rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 12
Stripping length	7 mm

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 75 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

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Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)
Air pressure (operation)	57 kPa ... 108 kPa (up to 4850 m above mean sea level)
Air pressure (storage/transport)	57 kPa ... 108 kPa (up to 4850 m above mean sea level)

## Approvals

### Conformity/Approvals

Conformance	CE-compliant
ATEX	II 3 G Ex nA nC IIC T4 Gc
EU-type examination certificate	DEMKO 16 ATEX 1616X
IECEX	Ex nA nC IIC T4 Gc
IECEX certificate	IECEX UL 16.0094X
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D

## EMC data

Conformance with EMC directives	IEC 61000-6-2 IEC 61000-4-2 (ESD) Criterion B
	IEC 61000-4-3 (immunity to radiated interference) Criterion A
	IEC 61000-4-4 (burst) Criterion A
	IEC 61000-4-5 (surge) Criterion B
	IEC 61000-4-6 (immunity to conducted interference) Criterion A
	IEC 61000-4-8 (immunity to magnetic fields) Criterion A
	EN 55022 (emitted interference) Class A
Noise immunity	EN 61000-6-2:2005
Noise emission	EN 61000-6-4

## System properties

### Functionality

Basic functions	Store and forward switch, Extended Ring and IEEE redundancy, Multicast control, IGMP snooping, trunking, Port and Tagging VLANs, Port and IEEE 802.1x security, SNMP V3 and Https security, SNTP, web customization, user accounts
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## Signaling

Status display	LEDs: U <sub>S1</sub> , U <sub>S2</sub> (redundant voltage supply), link and activity per port
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<https://www.phoenixcontact.com/us/products/2891059>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2891059>



**EAC**

Approval ID: RU \*-DE.A\*08.B.00739



**UL Listed**

Approval ID: FILE E 140324



**cUL Listed**

Approval ID: FILE E 140324



**cUL Listed**

Approval ID: FILE E 238705



**UL Listed**

Approval ID: FILE E 238705



**IECEx**

Approval ID: IECEx UL 16.0094X



**cUL Listed**

Approval ID: File E 360692



**UL Listed**

Approval ID: File E 360692



**UL Listed**

Approval ID: FILE E 196811



**cUL Listed**

Approval ID: FILE E 196811



**ATEX**

Approval ID: DEMKO 16 ATEX 1616X

# FL SWITCH 3016T - Industrial Ethernet Switch



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## Classifications

### ECLASS

ECLASS-11.0	19170401
ECLASS-12.0	19170401
ECLASS-13.0	19170401

### ETIM

ETIM 9.0	EC000734
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### UNSPSC

UNSPSC 21.0	43222600
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# FL SWITCH 3016T - Industrial Ethernet Switch



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## Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	15(a), 6(c), 7(a), 7(c)-I
China RoHS	
Environment friendly use period (EFUP)	EFUP-10
	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	6a73eaf7-6ec5-4d8c-ae1a-240529fe62c6

2891059

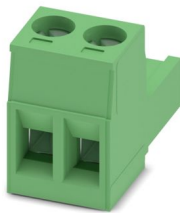
<https://www.phoenixcontact.com/us/products/2891059>

## Accessories

### MSTB 2,5/ 2-ST - PCB connector

1754449

<https://www.phoenixcontact.com/us/products/1754449>



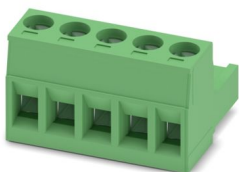
PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 2, number of rows: 1, number of positions: 2, number of connections: 2, product range: MSTB 2,5/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, 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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### MSTB 2,5/ 5-ST - PCB connector

1754504

<https://www.phoenixcontact.com/us/products/1754504>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 5, number of rows: 1, number of positions: 5, number of connections: 5, product range: MSTB 2,5/...-ST, pitch: 5 mm, connection method: Screw connection with tension sleeve, screw head form: L Slotted, 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

# FL SWITCH 3016T - Industrial Ethernet Switch



2891059

<https://www.phoenixcontact.com/us/products/2891059>

## 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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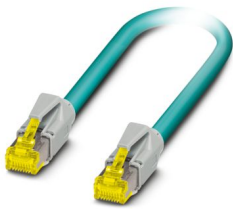
2891059

<https://www.phoenixcontact.com/us/products/2891059>

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

1411854

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



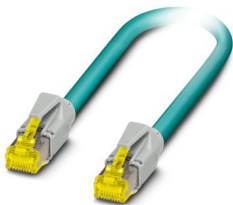
Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight, Ethernet

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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

# FL SWITCH 3016T - Industrial Ethernet Switch



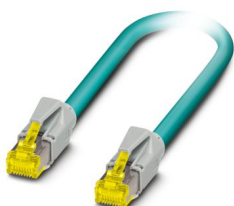
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## NBC-R4AC/10G-R4AC/10G-94F/3,0 - Patch cable

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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## FL DIN RA - DIN rail adapter

2891053

<https://www.phoenixcontact.com/us/products/2891053>



The FL DIN RA is installed in a standard, 19-inch rack (EIA-310-D, IEC 60297-3-100) to allow DIN rail mounted equipment to be rack mounted.

# FL SWITCH 3016T - Industrial Ethernet Switch

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<https://www.phoenixcontact.com/us/products/2891059>

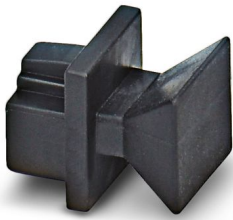


## FL RJ45 PROTECT CAP - Dust protection

2832991

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

Dust protection caps for RJ45 socket



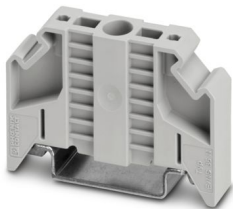
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## E/NS 35 N - End bracket

0800886

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

End clamp, width: 9.5 mm, color: gray



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