Industrial Ethernet Switch - FL SWITCH 3016T

2891059

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

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 securtiy 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
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	C23
Product Key	DNN125
Catalog Page	Page 314 (C-6-2019)
GTIN	4046356764278
Weight per Piece (including packing)	1,246.3 g
Weight per Piece (excluding packing)	1,133 g
Customs tariff number	85176200
Country of origin	TW

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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

Utilization restriction

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

Material specifications

Housing material	Aluminum

Mounting

Mounting type	DIN rail mounting

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

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

Insulation characteristics

Protection class	III (VDE 0106, IEC 60536)

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
Signal contact control current	100 mA

Redundancy	ERR (Extended ring redundancy)
Status and diagnostic indicators	LEDs: U_{S1}, U_{S2} (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

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_{PP} (within the permitted voltage range)
Typical current consumption	261 mA (at U_S = 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

Power supply	
Connection method	Pluggable COMBICON screw connections
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
Stripping length	7 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 75 °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)	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)

Approval data

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 emission	EN 61000-6-4
Noise immunity	EN 61000-6-2:2005

LED signaling

Status display	LEDs: U_{S1}, U_{S2} (redundant voltage supply), link and activity per port

Approvals

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

Classifications

ECLASS

ECLASS-9.0	19170106
ECLASS-10.0.1	19170401
ECLASS-11.0	19170401

ETIM

ETIM 8.0	EC000734

UNSPSC

UNSPSC 21.0	43222600

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1

China RoHS	Environmentally Friendly Use Period = 10;
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

Accessories

PCB connector

PCB connector - MSTB 2,5/ 2-ST - 1754449

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

PCB connector, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, 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

PCB connector

PCB connector - MSTB 2,5/ 5-ST - 1754504

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

PCB connector, nominal cross section: 2.5 mm^2, color: green, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, type of contact: Female connector, 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
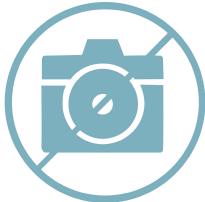
Surge protection device

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

Patch cable

Patch cable - FL CAT5 PATCH 0,5 - 2832263

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

Patch cable, CAT5, assembled, 0.5 m

Patch cable

Patch cable - FL CAT5 PATCH 1,0 - 2832276

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

Patch cable, CAT5, assembled, 1 m

Patch cable

Patch cable - FL CAT5 PATCH 2,0 - 2832289

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

Patch cable, CAT5, assembled, 2 m

Patch cable

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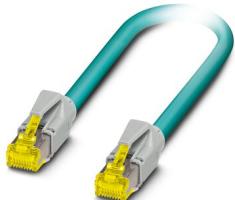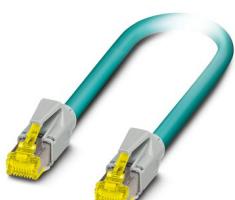
Patch cable

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

Patch cable

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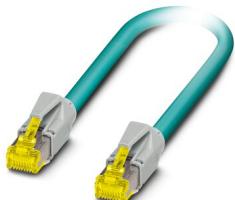
DIN rail adapter

DIN rail adapter - FL DIN RA - 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.

Dust protection

Dust protection - FL RJ45 PROTECT CAP - 2832991

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

Dust protection caps for RJ45 socket
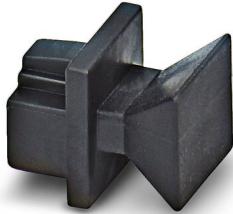
End clamp

End clamp - E/NS 35 N - 0800886

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

End clamp, width: 9.5 mm, color: gray