

Industrial Ethernet Switch - FL SWITCH 1924



2891057

<https://www.phoenixcontact.com/us/products/2891057>

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Ethernet switch, 24 Ethernet ports on the front in RJ45 format, automatic detection of 10, 100 or 1000 Mbps data transmission rate, coupling of network segments with different transmission speeds, auto crossing function, installs in 19-in. (482 mm) rack



Product Description

Ethernet interface

The FL SWITCH 1924 has 24 Ethernet ports in RJ45 format. It is mounted in a 19-in. (482 mm) rack with AC power. The data transmission speed is 10 Mbps, 100 Mbps or 1000 Mbps. The switch also supports jumbo frames.

Each port has an auto crossing function. It is not necessary to make a distinction between 1:1 or crossover Ethernet cables. Mounting brackets and power cords for EEC (CEE 7/4) and North America (NEMA 5-15) are included. User supplies screws for bracket to rack connection.

Switching properties of FL SWITCH 1924

–Store-and-forward:

All data telegrams that are received by the switch have their validity checked. Invalid or faulty data packets (>9216 bytes or CRC errors) and fragments (<64 bytes) are rejected. Valid data telegrams are forwarded by the switch. The switch always forwards the data using the data transmission speed that is used in the destination network segment.

–Multi-address function:

The switch independently learns the addresses for termination devices, which are connected via a port, by evaluating the source addresses in the data telegrams. Only packets with unknown addresses, with a source address of this port or with a multicast/broadcast address in the destination address field are forwarded via the corresponding port. The switch can store up to 8192 MAC addresses in its address table.

–Quality of service (QoS): IEEE 802.1P/Q

The FL SWITCH 1924 switches are capable of reading Ethernet packets that have already been assigned a priority level by a managed switch. In case of heavy traffic, packets with a priority level between 4 and 7 are considered high priority and processed before packets with a priority level between 0 and 3 (2:1 ratio). After prioritization the packets are forwarded without modification.

–Grounding

The metal RJ45 socket housings are connected to earth/ground. For maximum noise immunity, shielded RJ45 connectors and cables should be used.

Your advantages

- Quality of service (QoS) support (2 queues)
- Jumbo frame support (frame size up to 9216 bytes/frame)
- Power supply range of 100 V AC ... 240 V AC at 50/60 Hz
- MAC address table size is 8192 (8k) entries
- Two power cords are included. For North America, a NEMA 5-15 3-pin plug (type A). For EEC, a CEE 7/4 (type F)

Commercial Data

Item number	2891057
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	C23
Product Key	DNN115

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Catalog Page	Page 300 (C-6-2019)
GTIN	4046356763158
Weight per Piece (including packing)	3,589.4 g
Weight per Piece (excluding packing)	2,730 g
Customs tariff number	85176200
Country of origin	TW

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Technical Data

Dimensions

Width	482 mm
Height	44 mm
Depth	210 mm

Notes

Utilization restriction

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

Mounting type	Rack mount, includes brackets
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Interfaces

Ethernet

Connection method	RJ45
Transmission speed	10/100/1000 Mbps
Transmission physics	Twisted pair connection
Transmission length	100 m (per segment)
Signal LEDs	Activity, link status
No. of channels	24 (RJ45 ports)

Product properties

Type	Stand-alone
Product type	Switch
MTTF	30.4 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)

Switch functions

Basic functions	Unmanaged switch / auto negotiation, complies with IEEE 802.3, store and forward switching mode
MAC address table	8192
Status and diagnostic indicators	LEDs: U _S , link and activity per port
Additional functions	Autonegotiation

Security functions

Basic functions	Unmanaged switch / auto negotiation, complies with IEEE 802.3, store and forward switching mode
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Electrical properties

Local diagnostics	US Power present Green LED
Maximum power dissipation for nominal condition	88 W
Transmission medium	Copper

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Supply

Supply voltage	120 V AC
	220 V AC
Supply voltage range	100 V AC ... 240 V AC (50/60 Hz)
Inrush current	23 A (200 µs @ 230 V AC)
Max. current consumption	0.4 A (maximum)
Typical current consumption	312 mA (100 V AC)

Supply: Module electronics

Supply voltage range	100 V AC ... 240 V AC
Current consumption	1 A (maximum)

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	0 °C ... 60 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Air pressure (operation)	86 kPa ... 108 kPa (2000 m above sea level)

EMC data

Conformance with EMC directives	IEC 61000-6-2 EN 61000-4-2 (ESD) Criterion B
	EN 61000-4-3 (radiated noise immunity) Criterion A
	EN 61000-4-4 (EFT burst) Criterion B
	EN 61000-4-5 (surge) Criterion B
	EN 61000-4-6 (line noise immunity) Criterion A
	EN 61000-4-8 (electromagnetic fields) Criterion A
	EN 61000-4-11
Electromagnetic compatibility	EN 61000-6-3
	Conformance with EMC directive 2004/108/EC and for low-voltage directive 2006/95/EC
Noise emission	EN 61000-6-4
Noise immunity	EN 61000-6-2:2005

LED signaling

Status display	LEDs: U _S , link and activity per port
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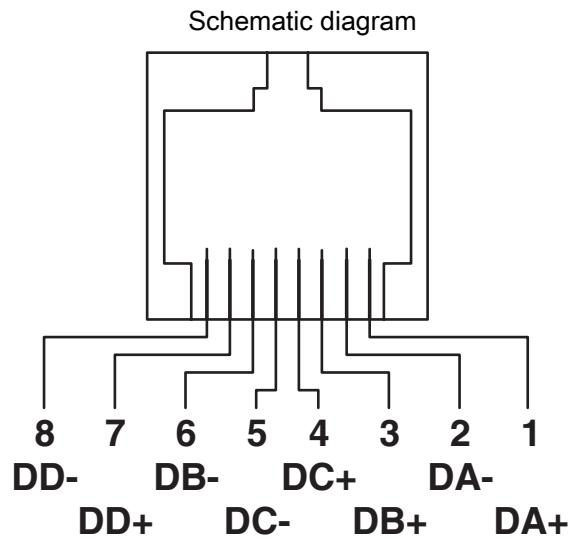
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Drawings



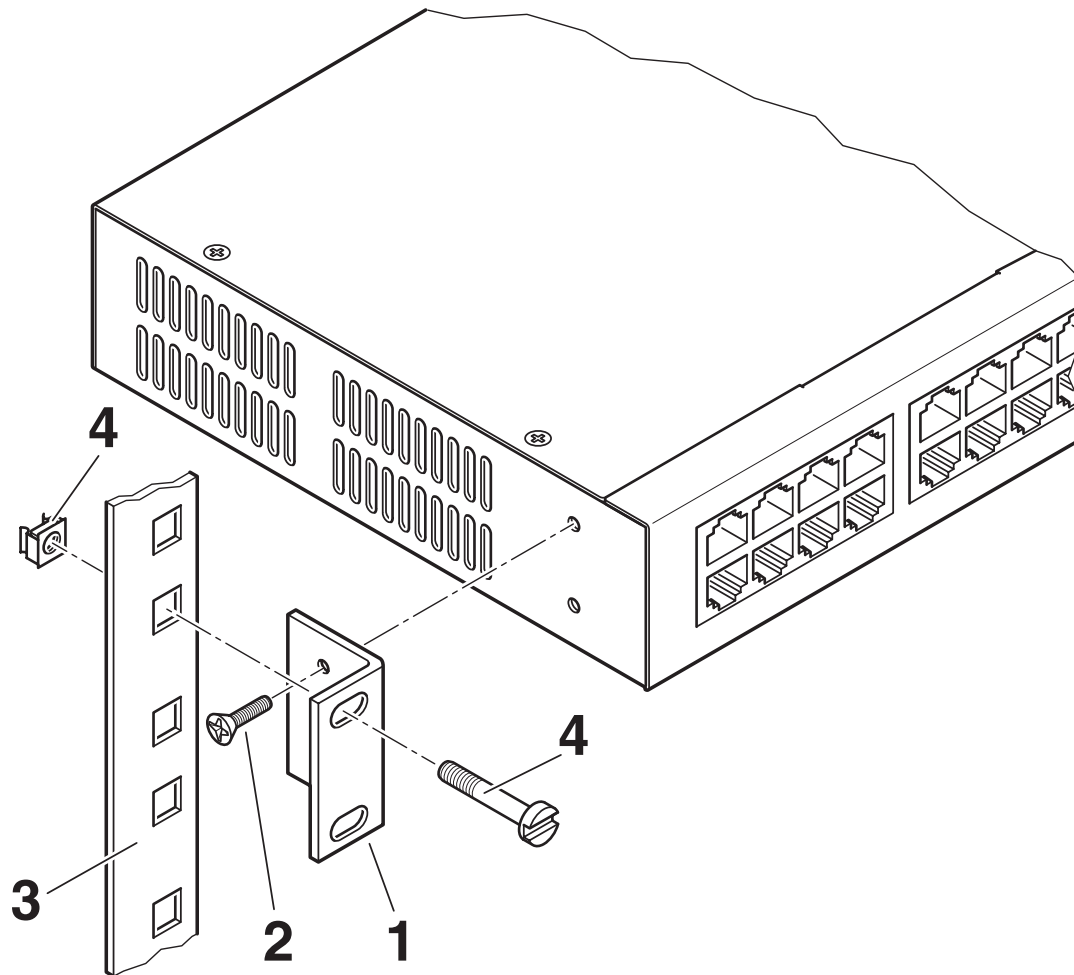
RJ45 pinout for 1000 Mbps

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Application drawing



Attach the brackets to each side of the switch with the included screws (as shown).

Install the switch in the rack using the rack hardware.

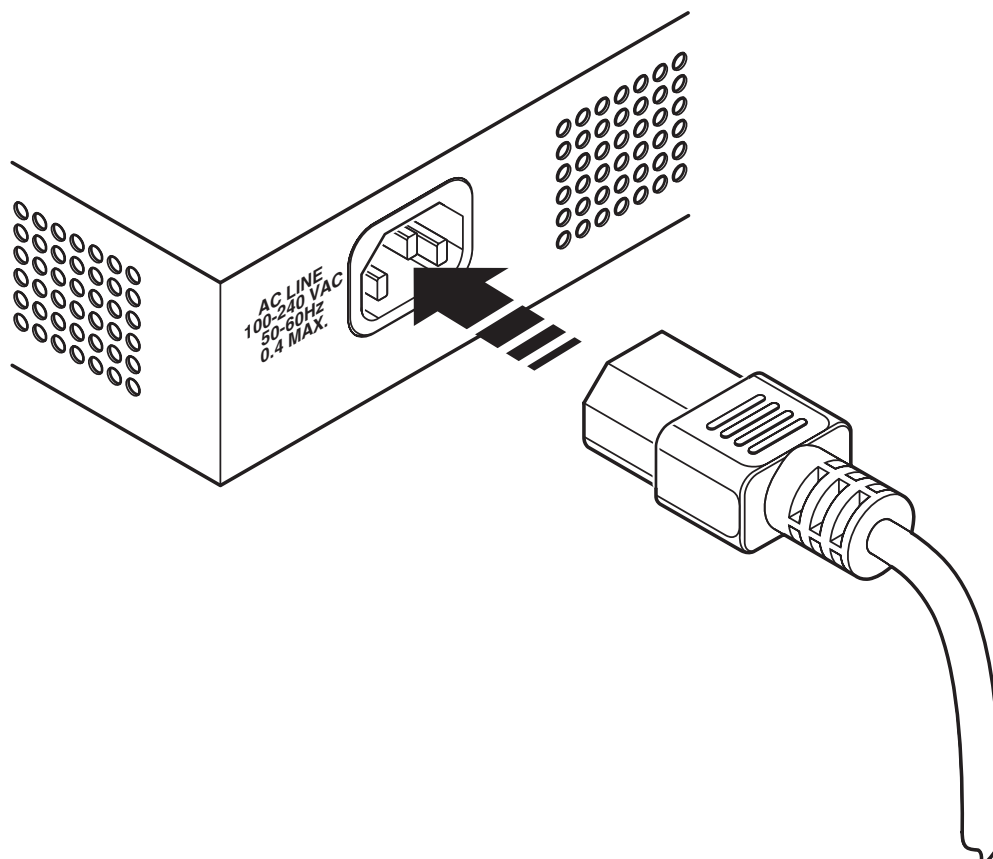
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Schematic diagram



Two power cords are included and provide line, neutral and ground conductors:

For North American markets the power cord uses a NEMA 5-15 plug.

For European markets the power cord uses a CEE 7/4 plug.

Both power cords use a common plug (IEC 60320-1 type C13) for connecting to the FL SWITCH 1924.

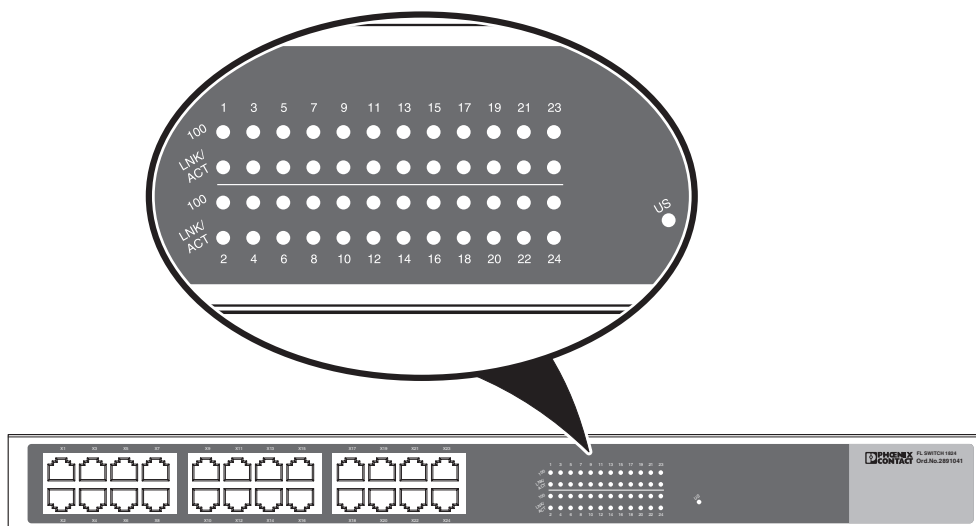
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Schematic diagram



The US LED indicates power is present.

Each port has 2 LEDs:

- When the 100 LED is illuminated, the port is operating at 100 Mbps. When off, it is operating at 10 Mbps.
- The LNK/ACT LED is illuminated when the port is connected and off when not connected. Flashing indicates data transfer (RX or TX).

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Approvals



IECEE CB Scheme

Approval ID: DK-104833-UL



EAC

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



UL Listed

Approval ID: FILE E 140403



cUL Listed

Approval ID: FILE E 140403



KC

Approval ID: MSIP-REI-PCK-2891057

cULus Listed

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Classifications

ECLASS

ECLASS-9.0	19170106
ECLASS-10.0.1	19170402
ECLASS-11.0	19170402

ETIM

ETIM 8.0	EC000734
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UNSPSC

UNSPSC 21.0	43222600
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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"

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Accessories

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

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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

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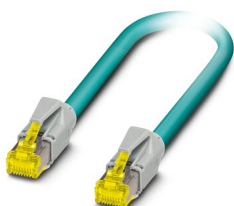
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Patch cable

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

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

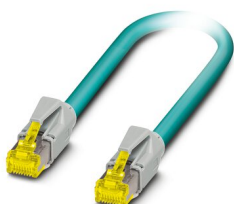


Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6_A, cable outlet: straight, Ethernet

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

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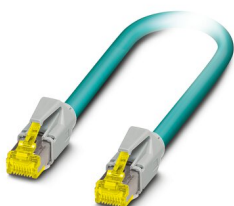
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Patch cable

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

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

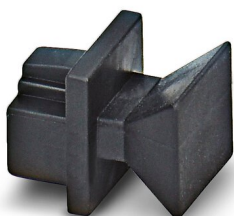


Patch cable, CAT6_A, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

Dust protection

Dust protection - FL RJ45 PROTECT CAP - 2832991

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



Dust protection caps for RJ45 socket

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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com