

FL SWITCH 1824 - Industrial Ethernet Switch



2891041

<https://www.phoenixcontact.com/us/products/2891041>

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Ethernet switch, 24 Ethernet ports on the front in RJ45 format, automatic detection of 10 or 100 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 1824 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 or 100 Mbps. In addition, each port has an auto crossing function at 100 Mbps: It is not necessary to make a distinction between 1:1 or crossover Ethernet cables. Mounting brackets and a German power cord are included. User supplies screws for bracket to rack connection.

Switching properties of FL SWITCH 1824

-Store-and-forward:

All data telegrams that are received by the switch are saved and their validity is checked. Invalid or faulty data packets (>1522 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

In revision version VC03 and higher, FL SWITCH 1824 switches are capable of reading Ethernet packets that have already been assigned a priority level by a managed switch. Four priority queues are supported. The highest priority queue supports packet priorities 6 and 7, the next lowest queue supports priorities 4 and 5, the next lowest queue supports priorities 2 and 3, and the lowest priority queue supports packet priorities 0 and 1. After prioritization, the packets are forwarded without modification.

Commercial data

Item number	2891041
Packing unit	1 pc
Sales key	DN19
Product key	DNN115
Catalog page	Page 300 (C-6-2019)
GTIN	4046356587952
Weight per piece (including packing)	2,966.5 g
Weight per piece (excluding packing)	2,110 g
Customs tariff number	85176200
Country of origin	TW

FL SWITCH 1824 - Industrial Ethernet Switch



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Technical data

Dimensions

Width	440 mm
Height	44 mm
Depth	173 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 Mbps
Transmission physics	Twisted pair connection
Transmission length	100 m (per segment)
Signal LEDs	Data receive, link status
No. of channels	24 (RJ45 ports)

Product properties

Type	Stand-Alone
Product type	Switch
Product family	Unmanaged Switch 1800
MTTF	22.9 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
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
	100 Port is operating at 100 Mbps Green LED
	LNK/ACT Receiving/transmitting messages Green LED

FL SWITCH 1824 - Industrial Ethernet Switch



2891041

<https://www.phoenixcontact.com/us/products/2891041>

Maximum power dissipation for nominal condition	220 W
Transmission medium	Copper

Supply

Supply voltage (AC)	120 V AC
	220 V AC
Supply voltage range	100 V AC ... 240 V AC (50/60 Hz)
Inrush current	29 A (80 µs @ 230 V AC)
Max. current consumption	1 A (maximum)
Typical current consumption	270 mA (100 V AC)

Supply: Module electronics

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

Environmental and real-life conditions

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 (1500 m above sea level)

EMC data

Conformance with EMC directives	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
	EN 61000-6-3
Noise immunity	EN 61000-6-2:2005
Electromagnetic compatibility	Conformance with EMC directive 2004/108/EC and for low-voltage directive 2006/95/EC
Noise emission	EN 61000-6-4

System properties

Functionality

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

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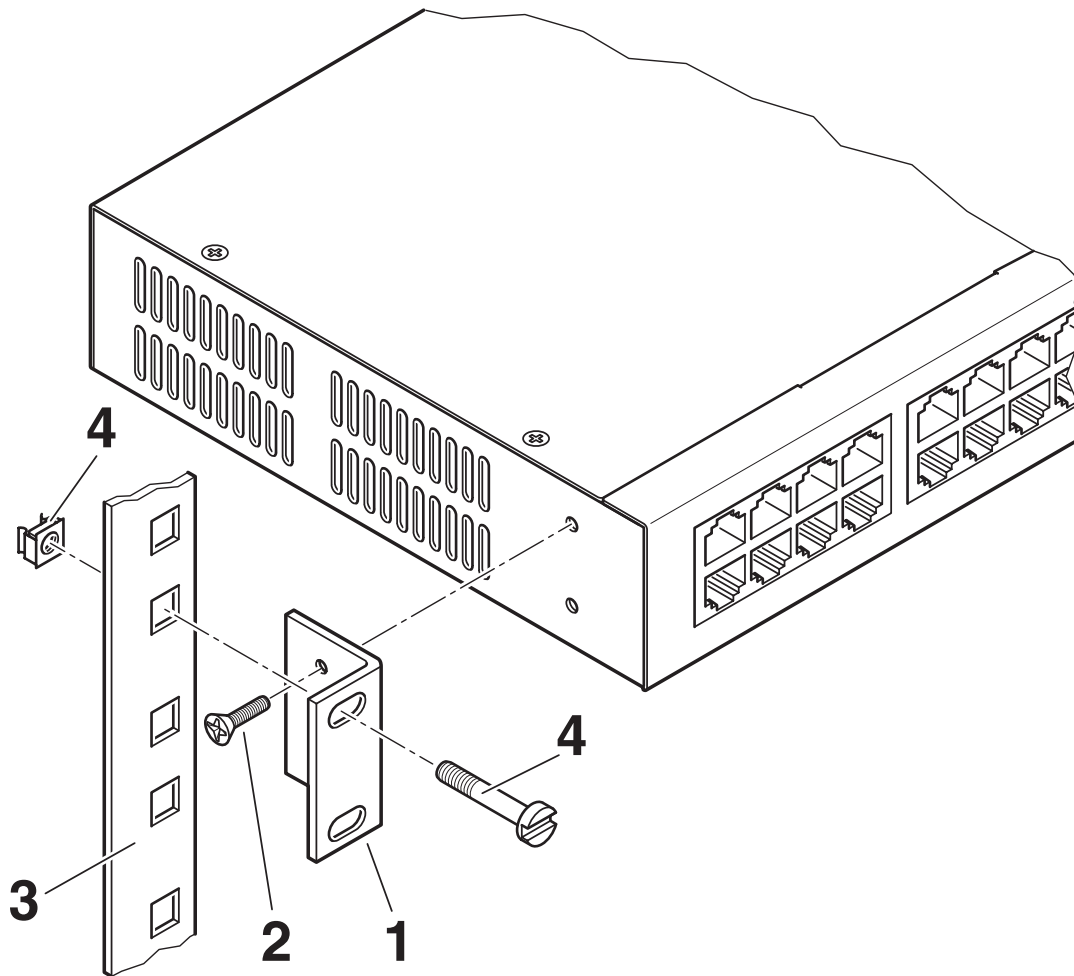
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Drawings

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.

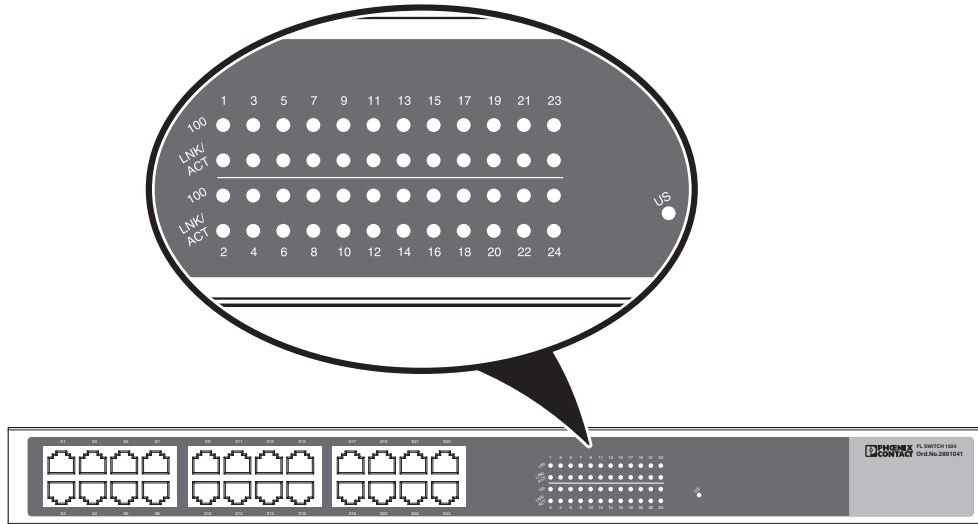
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Schematic diagram



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).

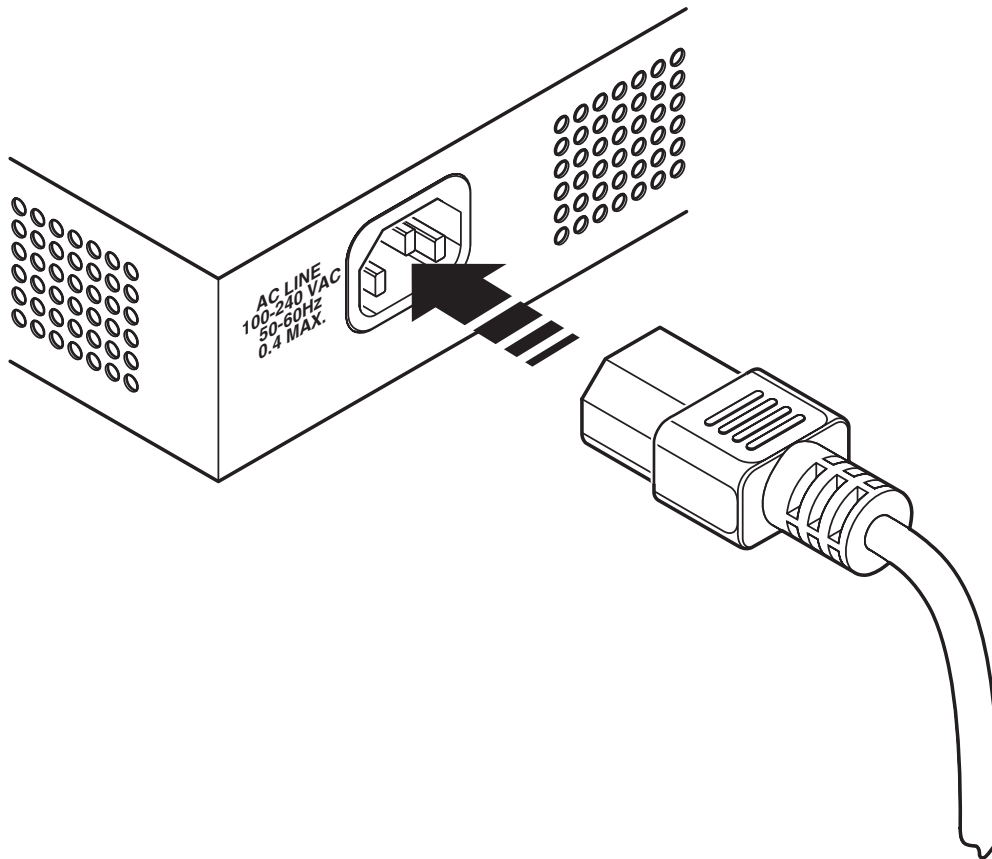
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Schematic diagram



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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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2891041>



IECEE CB Scheme

Approval ID: DK-104831-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: KCC-REI-PCK-FL289104

cULus Listed

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Classifications

ECLASS

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

ETIM

ETIM 9.0	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"

FL SWITCH 1824 - Industrial Ethernet Switch



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Accessories

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

2881007

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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

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FL CAT5 PATCH 1,0 - Patch cable

2832276

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Patch cable, CAT5, assembled, 1 m



FL CAT5 PATCH 2,0 - Patch cable

2832289

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Patch cable, CAT5, assembled, 2 m



FL SWITCH 1824 - Industrial Ethernet Switch



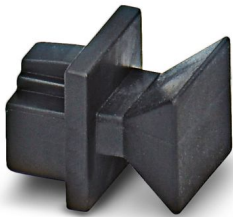
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FL RJ45 PROTECT CAP - Dust protection

2832991

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Dust protection caps for RJ45 socket

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