

# 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
Minimum order quantity	1 pc
Sales key	DN19
Product key	DNN115
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

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## Technical data

### Dimensions

Width	440 mm
Height	44 mm
Depth	173 mm

### Notes

#### Note on application

Note on application	Only for industrial use
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#### Utilization restriction

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

Color (Housing)	black (RAL 9005)
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### Mounting

Mounting type	Rack mounting (with holder)
Holder system	19" rack

### 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

Product type	Switch
Product family	Unmanaged Switch 1800
Type	Stand-alone
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 <sub>S</sub> , link and activity per port
Additional functions	Autonegotiation

#### Security functions

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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
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 $\mu$ s @ 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)

## Connection data

Connection method	RJ45
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## 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

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

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## Noise emission

Standards/regulations

EN 61000-6-4

## System properties

### Functionality

Basic functions

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

## Signaling

Status display

LEDs: U<sub>S</sub>, link and activity per port

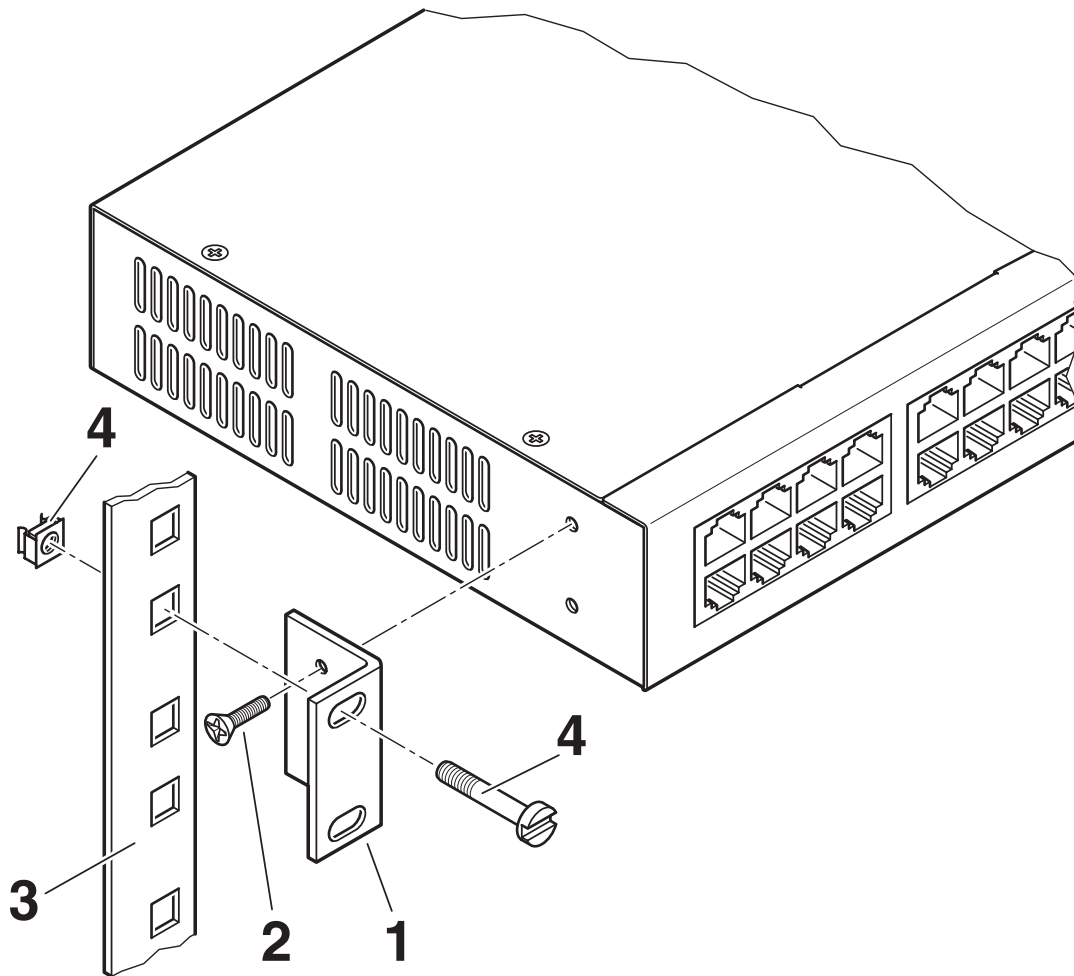
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## Drawings

Application drawing



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

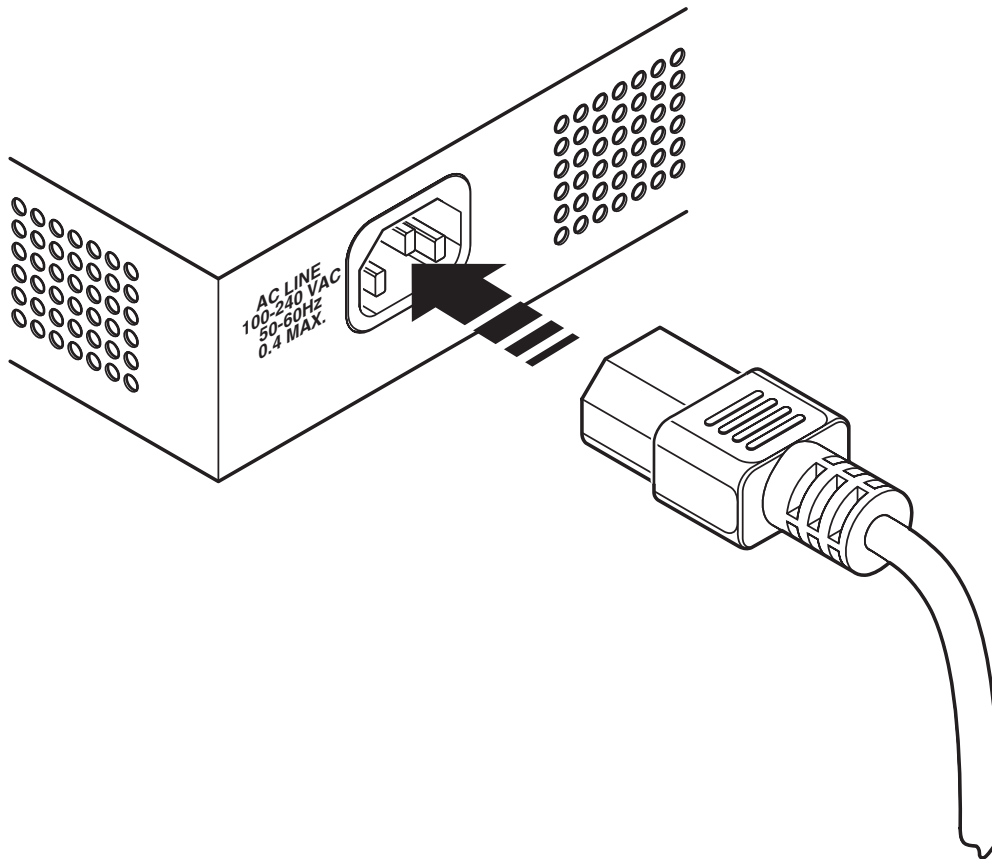
Install the switch in the rack using the rack hardware.

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Schematic diagram



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 1824.

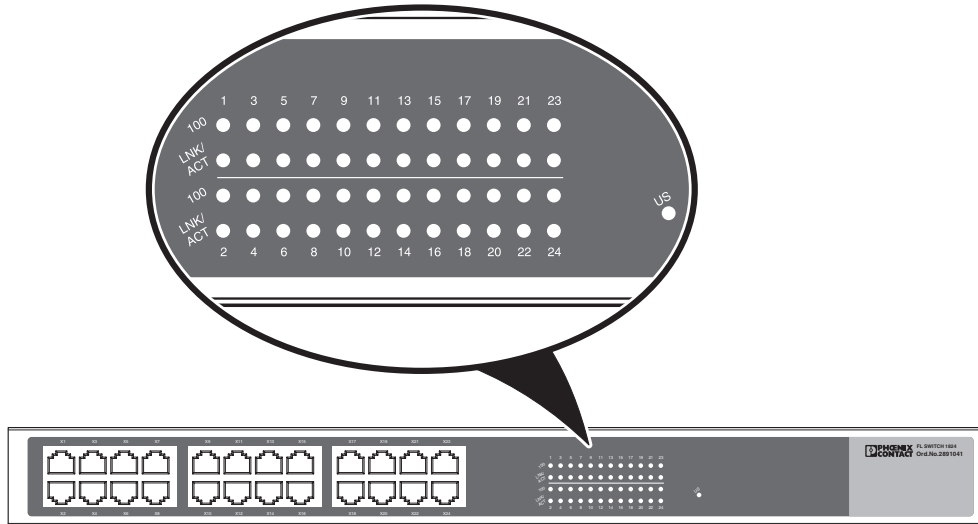
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Schematic diagram



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

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



**cULus Listed**

Approval ID: E140403-A6003-UL



**IECEE CB Scheme**

Approval ID: DK-104831-UL



**KC**

Approval ID: KCC-REI-PCK-FL289104



**cULus Listed**

Approval ID: US-UL-2338994-2

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## Classifications

### ECLASS

ECLASS-13.0	19170402
ECLASS-15.0	19170402

### ETIM

ETIM 10.0	EC000734
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### UNSPSC

UNSPSC 21.0	43222600
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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	5537951a-d187-42ce-b976-f90a72e30696

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