

Unmanaged Industrial Ethernet Switches

Quick Installation Guide

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1. Preparing for installation

Thank you for purchasing DPTEK unmanaged industrial Ethernet switches, please open the box of unmanaged industrial Ethernet switch, your package should include the following items:

- unmanaged industrial Ethernet switch
- 2 Mounting brackets(rack-mountable models)
- Mounting screws (rack-mountable models)

You need to prepare :

- Category 5e or better cable for RJ-45 ports
- Appropriate fiber cables for fiber ports
- Appropriate SFP cable and modules for SFP ports
- Installation tools: No installation tools are provided with the switch. Prepare the following tools yourself
 - Flat-head screwdriver
 - Phillips screwdriver
 - ESD wrist strap
 - Needle-nose pliers
 - Diagonal pliers
 - Cable crimping tool

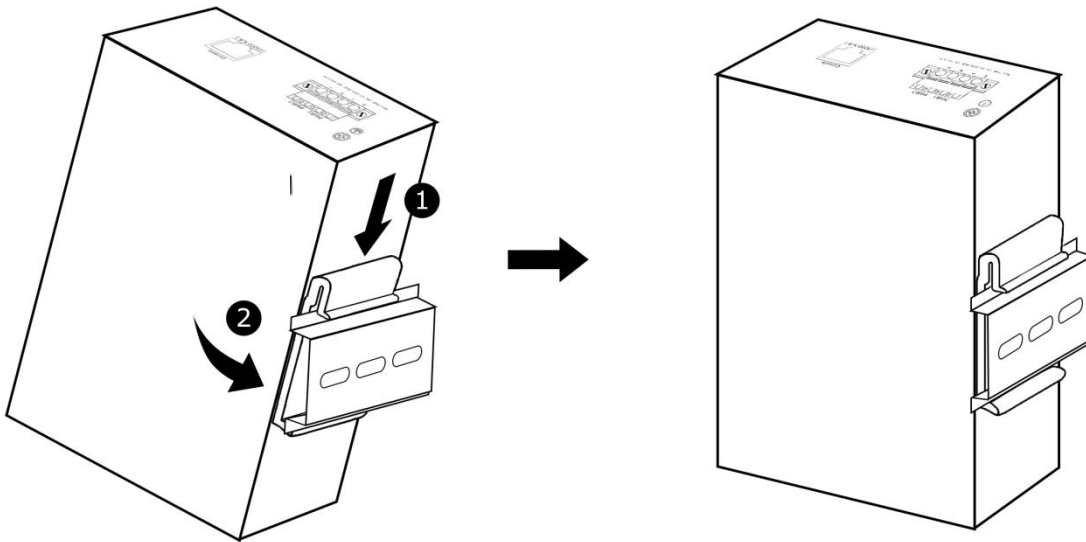
2. Installing the switch

Mounting the switch on a DIN rail or rack/cabinet

2.1. Installing the switch on a DIN rail

- (1) Wear an ESD wrist strap. Make sure the wrist strap makes good skin contact and is reliably grounded.
- (2) As shown in Figure 2-1 position the switch so that the spring of the DIN rail mounting bracket compresses against the upper edge of the DIN rail.
- (3) Rotate the switch down toward the DIN rail until the DIN rail mounting bracket clicks.

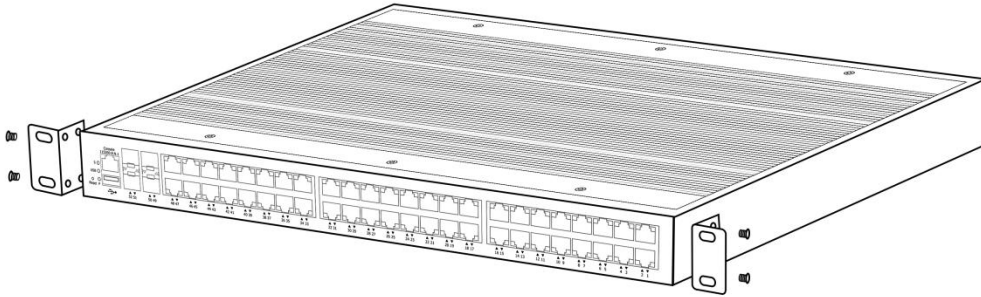
Figure 2-1 Installing the switch on a DIN rail



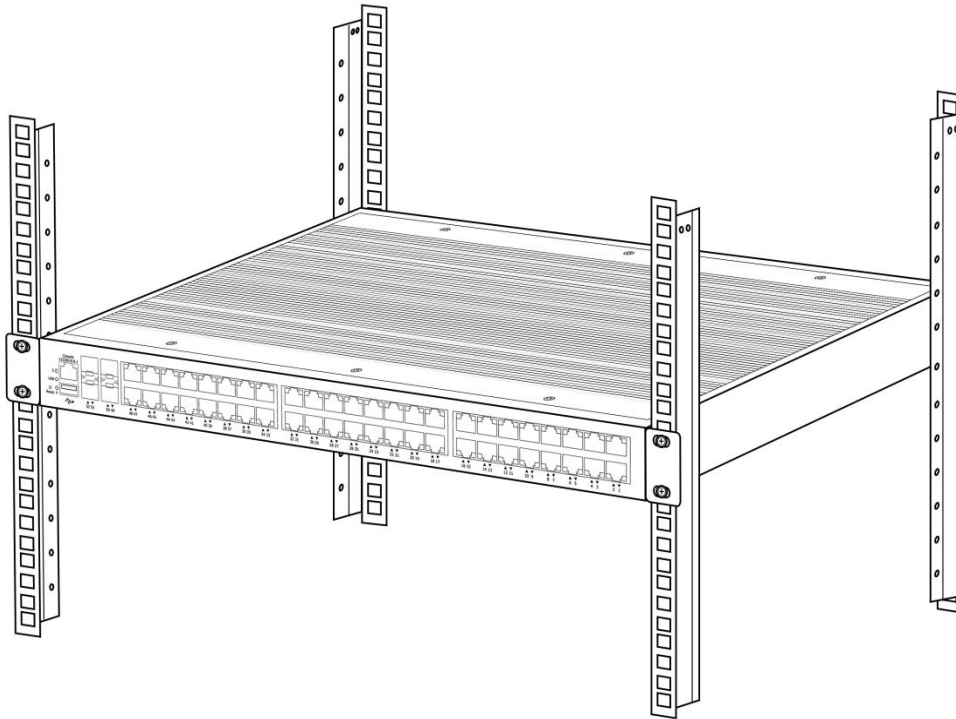
2.2. Installing the switch on the rack/cabinet

Use the enclosed screws and brackets to mount the switch in an open or enclosed 19" rack.

- (1) Please make sure the 19" rack on good grounding.
- (2) Fixing the mounting ears on the both side of the switch.

Figure 2-2 Install the mounting ears

- (3) Place the switch on a bracket of the rack and move the switch along the guide rails of the rack to a proper position.
- (4) Use screws to install the switch on the rack.

Figure 2-3 Install the switch on the rack

2.3. Connecting the grounding cable

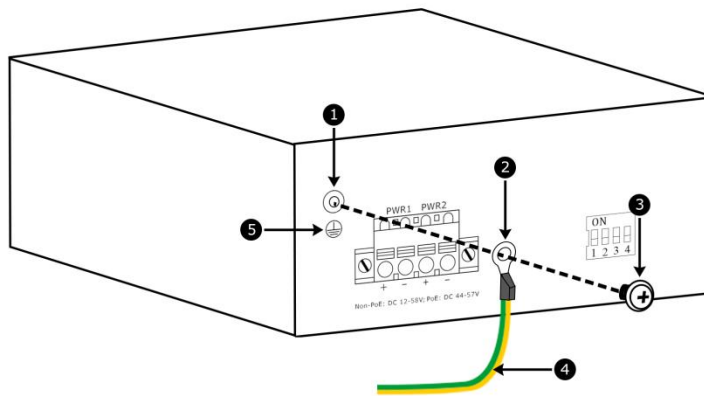
⚠ WARNING!

Correctly connecting the grounding cable for the switch is crucial to lightning protection and EMI protection.

The power input end of the switch has a noise filter, whose central ground is directly connected to the chassis to form the chassis ground. You must securely connect this chassis ground to the earth so the faradism and leakage electricity can be safely released to the earth to minimize EMI susceptibility of the switch. To connect the grounding cable for the switch:

- (1) Remove the grounding screw from the switch.
- (2) Use the grounding screw to attach the ring terminal of the grounding cable to the grounding screw hole. Fasten the screw.
- (3) Connect the other end of the grounding cable to the grounding system.

Figure2-4 Connecting the grounding cable for the switch



- | | |
|--------------------------|--|
| (1) Grounding screw hole | (2) Ring terminal of the grounding cable |
| (2) Grounding screw | (4) Grounding cable |
| (5) Grounding sign | |

2.4. Wiring external alarms (Some models support)

⚠ CAUTION:

- To avoid connection mistakes, identify the positive (+) and negative (-) marks above the (DI) connector.
- Before wiring external alarms, make sure the switch is reliably grounded and is powered off.

The switch comes with an (DI) connector installed on it. The (DI) connector is used for connecting alarm signals to the switch. Before connecting wires to the (DI) connector, remove the (DI) connector. No alarm input and alarm output wires are provided with the switch. Prepare compatible copper wires yourself as required.

Wiring external alarms for the switch which support DO (digital output)

The alarm output connection (DO) outputs alarms by closing or opening the relay contact. It has a current carrying capacity of 1 A/24 VDC and does not support power supply to the connected device.

- (1) Remove the alarm connector.
- (2) Position the alarm connector upside up. Then insert the alarm input and output wires into the alarm connector as shown in Figure 2-5. If you orient the alarm connector upside down, you cannot install it on the switch.
- (3) Use a flat-head screwdriver to fasten the screws at the top of the alarm connector to secure the wires to the connector, as shown in Figure 2-5.
- (4) Attach the alarm connector to the switch, as shown in Figure 2-5.
- (5) Connect the other ends of the input and output wires to an external device.

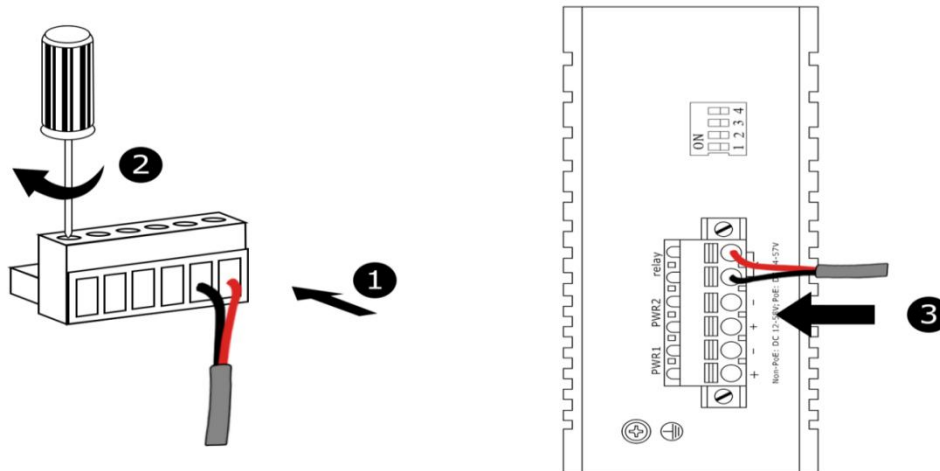


Figure 2-5

2.5. Connecting power cords

⚠ WARNING!

- Make sure each power cord has a separate circuit breaker.
 - Before connecting a power cord, make sure the circuit breaker for the power cord is turned off.
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2.6. Connecting an AC power cord for rack-mountable managed industrial Ethernet switch

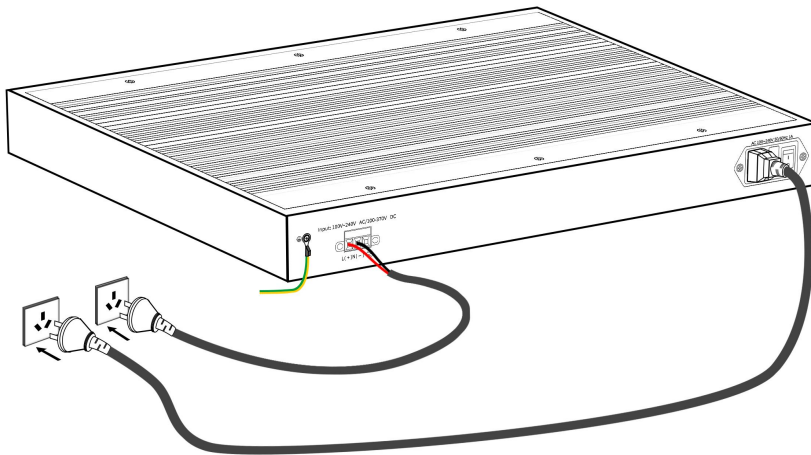
⚠ WARNING!

Before connecting or removing the AC power cord from the AC power receptacle, turn off the circuit breaker for the power cord.

Installation procedure as follows:

- (1) Plug the AC power to the switch AC socket
- (2) Connect the AC power cord to the AC power source

Figure 2-6 Connecting the AC power source



2.7. Connecting a DC power cord

⚠ CAUTION: To avoid connection mistakes, identify the positive (+) and negative (-) marks above the DC power receptacle for the terminal block connection.

Installation procedure as follows:

- (1) Make sure the switch power off.
- (2) Correctly connecting the grounding cable for the switch (please refer to Figure 2-4).
- (3) Connect the DC power to the positive(+) and negative(-) of the terminal block(red cord connect "+", black cord connect "-"), then fasten the screws through the screw-drive. Shown on the Figure 2-6.
- (4) Turn on and check the power indicator on the front panel of the device. If the power indicator is on, the power supply is working normally.

🔧 Remark: Din-rail industrial Ethernet switches support redundant dual DC power supply. You can connect one or two DC power supply according to your requirement.

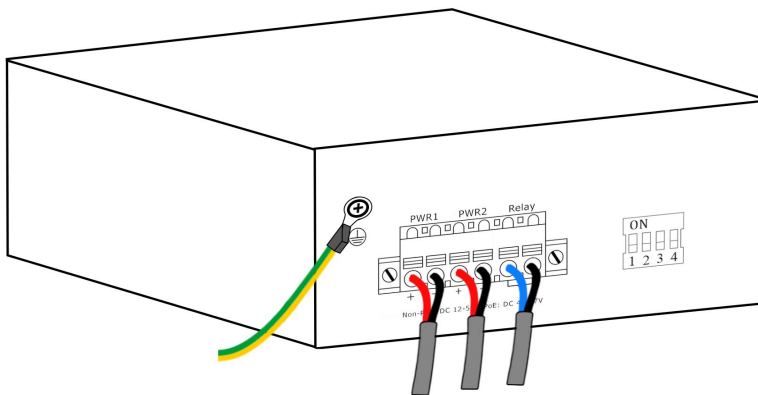


Figure 2-7

2.8. Verifying the installation

After you complete the installation, verify the following information:

- There is enough space around the switch for heat dissipation.
- The DIN rail/mounting ears are securely installed.
- The grounding cable is connected correctly.
- The power source is as required by the switch.
- The power cords are correctly connected.
- If an interface cable for a port is routed outdoors, verify that a network port lightning protector is used for the port.
- If a power line is routed from outdoors, verify that a surge protected power strip is used for the switch.

3. Indicators and silkscreen of unmanaged industrial Ethernet switch

3.1. The LED indicators description of unmanaged industrial Ethernet switch

LED Indicators			
P (Power indicator) Green	Off: the device is power off or failed	On: the device power on is normal	
S (System status indicator) Red	Non-PoE series		PoE series
	Off: the chip is normal		Off: total PoE usage < rated 50%
	On: the chip is unnormal		Blinking: rated 50% < total PoE usage < rated 90%
Copper ports indicators Green	Off: ports link down		
	On: ports link up		
	Blinking: data on TX/RX		
Copper speed/PoE state indicators Yellow	Non-PoE series		PoE series
	1000M models	10/100M models	Off: PoE not working
	Off: ports on 10/100M	Off: ports on 10M	
On: ports on 1000M	On: ports on 100M	On: PoE working	
Fiber ports indicators Green	Off: ports link down		
	On: ports link up		
	Blinking: data on TX/RX		

3.2. The definition of unmanaged industrial Ethernet switch DIP switch

3.2.1 Unmanaged Industrial Ethernet Switch DIP Switch

3.2.1-1 Unmanaged fast industrial Ethernet switch

Models Type	DIP 1	DIP 2	DIP 3	DIP 4
Non-PoE	Port isolation	Flow control	QoS(1-2 ports)	Broadcast storm restrain
PoE	Port isolation	250m long distance mode (10M)	QoS(1-2 ports)	PoE watchdog

3.2.1-2 Unmanaged gigabit industrial Ethernet switch

Models type	Product models	DIP 1	DIP 2	DIP 3	DIP 4
Non-PoE	DK3110I-4T1S DK3110I-4T2S	Port isolation	Flow control	QoS (1-2 port)	Broadcast storm restrain
	DK3110I-5T DK3110I-8T				
	DK3110I-8T1S DK3110I-8T2S				
	DK3110I-8T4S	Link aggregation			
	DK3110I-16T				
	DK3110I-16T2S				
PoE	DK3110I-4TP1S DK3110I-4TP2S	Port isolation	250m long distance (1-2 ports)	QoS (1-2 port)	PoE watchdog
	DK3110I-5TP DK3110I-8TP		250m long distance (1-4 ports)		
	DK3110I-8TP1S DK3110I-8TP2S				
	DK3110I-8TP4S	Link aggregation	250m long distance (1-4ports)		
	DK3110I-16TP				
	DK3110I-16TP2S				

3.2.1-3 Unmanaged Industrial Media Converter

	Dip 1	Dip 2	Dip 3	Dip 4
DK-MC10F-E	LFP	Flow control	Broadcast storm restrain	10Kbytes jumbo frame
DK-MC10F-2F1FS-E	Port isolation	Flow control	Broadcast storm restrain	10Kbytes jumbo frame
DK-MC10F-2F2FS-E	Fiber redundant	Flow control	Broadcast storm restrain	10Kbytes jumbo frame
DK-MC10G-E	LFP	Flow control	Broadcast storm restrain	100/1000M fiber port selection(ON=100M, OFF=1000M)
DK-MC10G-2T1S-E	Port isolation	Flow control	Broadcast storm restrain	100/1000M fiber port selection(ON=100M, OFF=1000M)
DK-MC10G-2T2S-E	Fiber redundant	Flow control	Broadcast storm restrain	100/1000M fiber port selection(ON=100/1000M adaptive, OFF=1000M)

3.2.1-4 Unmanaged Industrial PoE Media Converter

	Dip 1	Dip 2	Dip 3	Dip 4
DK-MC10FP-E	LFP	Flow control	250m long distance	PoE watchdog
DK-MC10F-2FP1FS-E	Port isolation	Flow control	250m long distance	PoE watchdog
DK-MC10F-2FP2FS-E	Fiber redundant	Flow control	250m long distance	PoE watchdog
DK-MC10GP-E	LFP	100/1000M fiber port selection(ON=100M, OFF=1000M)	250m long distance(port 1)	PoE watchdog
DK-MC10G-2TP1S-E	Port isolation	100/1000M fiber port selection(ON=100M, OFF=1000M)	250m long distance(port 1)	PoE watchdog
DK-MC10G-2TP2S-E	Fiber redundant	100/1000M fiber port selection(ON=100/1000M adaptive, OFF=1000M)	250m long distance (port 1)	PoE watchdog