

PT-G7509

Quick Installation Guide

Moxa PowerTrans Switch

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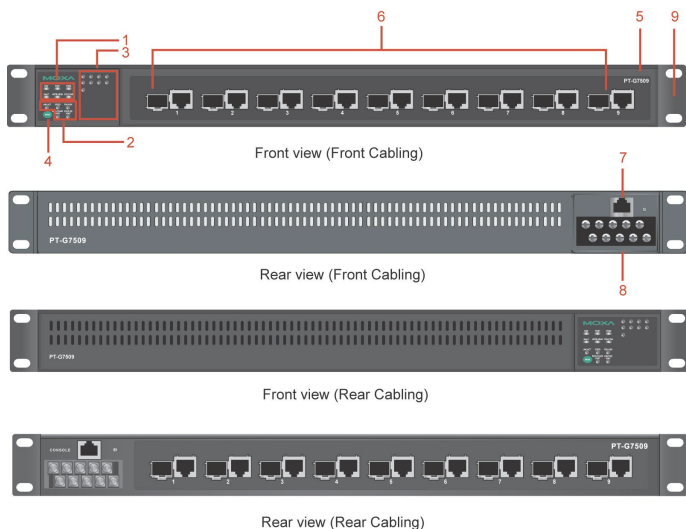


Package Checklist

The Moxa PowerTrans switch is shipped with the following items. If any of these items are missing or damaged, please contact your customer service representative for assistance.

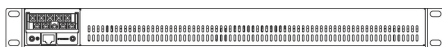
- 1 Moxa PowerTrans Switch
- RJ45 to DB9 console port cable
- Protective caps for unused ports
- 2 rack-mount ears
- CD-ROM with User's Manual and SNMP MIB file
- Quick installation guide
- Warranty card

Panel Layout



1. System status LEDs
2. Interface Module mode LEDs
3. 9 Gigabit Combo port LEDs
4. Push-button switch to select mode for Interface Module
5. Model Name
6. 9 Gigabit Combo ports
7. Serial Console port
8. 10-pin terminal block for power inputs, and relay output
9. Rack Mounting Kit

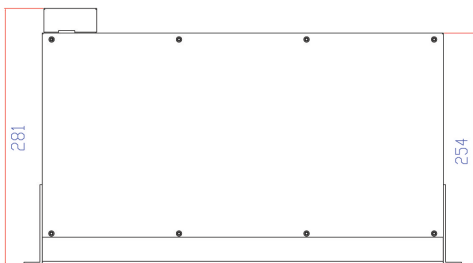
Dimensions (unit = mm)



Rear View



Side View



Top View



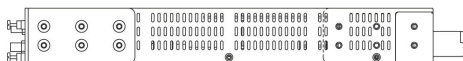
Side View



Front View

Rack Mounting

Use four screws to attach the PT switch to a standard rack.



NOTE Two additional rack-mount ears can be ordered as an option. Use them to secure the rear of the chassis in high-vibration environments.

Wiring Requirements



WARNING

Safety First!

Be sure to disconnect the power cord before installing and/or wiring your Moxa PowerTrans Switch.

Calculate the maximum possible current in each power wire and common wire. Observe all electrical codes dictating the maximum current allowable for each wire size.

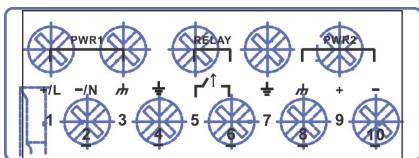
If the current goes above the maximum ratings, the wiring could overheat, causing serious damage to your equipment.

Grounding Moxa PowerTrans Switch

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface prior to connecting devices.

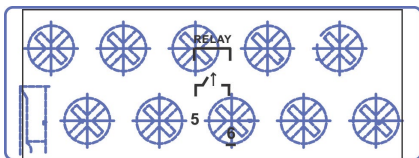
Wiring the Power Inputs

The PT series of switches supports dual redundant power supplies: "Power Supply 1 (PWR1)" and "Power Supply 2 (PWR2)". The connections for PWR1, PWR2 and the RELAY are located on the terminal block. The front view of the terminal block connectors are shown below.



Wiring the Relay Contact

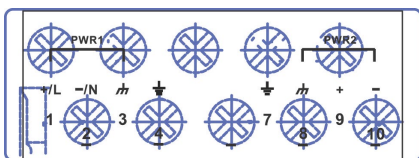
Each PT switch has one relay output. Refer to the next section for detailed instructions on how to connect the wires to the terminal block connector, and how to attach the terminal block connector to the terminal block receptor.



FAULT: The relay contact of the 10-pin terminal block connector are used to detect user-configured events. The two wires attached to the RELAY contacts form an open circuit when a user-configured event is triggered. If a user-configured event does not occur, the RELAY circuit will be closed.

Wiring the Redundant Power Inputs

Each PT switch has two sets of power inputs: power input 1 and power input 2.



STEP 1: Insert the dual set positive/negative DC wires into PWR1 and PWR2 terminals (+ → pins 1, 9; - → pins 2, 10). Or insert the L/N AC wires into PWR1 and PWR2 terminals (L → pin 1, 9; N → pin 2, 10)

STEP 2: To keep the DC or AC wires from pulling loose, use a screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.

- NOTE**
1. The PT switch with dual power supplies uses PWR2 as the first priority power input by default.
 2. For dielectric strength (HIPOT) test, users must remove the metal jumper located on terminals 3, 4, and 7, 8 of the terminal block to avoid damage.

LED Indicators

The front panel of the PT switch contains several LED indicators. The function of each LED is described in the table below.

| System LEDs | | | |
|-------------|-------|----------|---|
| LED | Color | State | Description |
| STAT | GREEN | On | System has passed self-diagnosis test on boot-up and is ready to run. |
| | | Blinking | System is undergoing the self-diagnosis test. |
| | RED | On | System failed self-diagnosis on boot-up. |
| PWR1 | AMBER | On | Power is being supplied to the main module's power input PWR1. |
| | | Off | Power is not being supplied to the main module's power input PWR1. |
| PWR2 | AMBER | On | Power is being supplied to the main module's power input PWR2. |
| | | Off | Power is not being supplied to the main module's power input PWR2. |
| FAULT | RED | On | The corresponding PORT alarm is enabled and a user-configured event has been triggered. |
| | | Off | The corresponding PORT alarm is enabled and a user-configured event has not been triggered, or the corresponding PORT alarm is disabled. |
| MSTR/HEAD | GREEN | On | This PT switch is set as the Master of the Turbo Ring, or as the Head of the Turbo Chain. |
| | | Blinking | This PT switch has become the Ring Master of the Turbo Ring, or the Head of the Turbo Chain, after the Turbo Ring or the Turbo Chain went down. |
| | | Off | This PT switch is not the Master of this Turbo Ring or is set as a Member of the Turbo Chain. |
| CPLR/TAIL | GREEN | On | When this PT switch enables the coupling function to form a back-up path. |
| | | Blinking | Turbo Chain is down. |
| | | Off | When this PT switch disables the coupling function, or is set as a Member of the Turbo Chain. |

| Mode LEDs | | | |
|-----------------|-------|----------|---|
| LED | Color | State | Description |
| LNK/ACT | GREEN | On | The corresponding module port's link is active. |
| | | Blinking | The corresponding module port's data is being transmitted. |
| | | Off | The corresponding module port's link is inactive. |
| SPEED | GREEN | Off | The corresponding module port's data is being transmitted at 10 Mbps. |
| | | On | The corresponding module port's data is being transmitted at 100 Mbps. |
| | | Blinking | The corresponding module port's data is being transmitted at 1000 Mbps. |
| FDX/HDX | GREEN | On | The corresponding module port's data is being transmitted in full duplex mode. |
| | | Off | The corresponding module port's data is being transmitted in half duplex mode. |
| RING/CHAIN PORT | GREEN | On | The corresponding module's port is the ring or chainport of this PT switch. |
| | | Off | The corresponding module's port is not the ring or chainport of this PT switch. |
| COUPLER PORT | GREEN | On | The corresponding module's port is the coupler port of this PT switch. |
| | | Off | The corresponding module's port is not the coupler port of this PT switch. |

Specifications

| Technology | |
|-----------------------|---|
| Standards | IEEE 802.3, 802.3u, 802.3ab, 802.3z, 802.3x, 802.1D, 802.1W, 802.1Q, 802.1p, 802.1X, 802.3ad |
| Flow control | IEEE 802.3x flow control, back pressure flow control |
| Interface | |
| Fiber Ports | 100/1000BaseSFP slot |
| RJ45 Ports | 10/100/1000BaseT(X) auto negotiation speed |
| System LED Indicators | STAT, PWR1, PWR2, FAULT, MSTR/HEAD, CPLR/TAIL |
| Module LED Indicators | LNK/ACT, FDX/HDX, SPEED, RING PORT, COUPLER PORT |
| Alarm Contact | One relay output with current carrying capacity of 3A @ 30 VDC or 3A @ 240 VAC |
| Power | |
| Input Voltage | 24 VDC (18 to 36V) or 48 VDC (36 to 72V) or 110/220 VDC/VAC (88 to 300 VDC and 85 to 264 VAC) |

| | |
|---------------------------------|--|
| Input Current | Max. 1.17 A @ 24 VDC Max. 0.59 A @ 48 VDC Max. 0.27/0.16 A @ 110/220 VDC Max. 0.61/0.35 A @ 110/220 VAC |
| Physical Characteristics | |
| Housing | IP 30 protection, metal case |
| Dimensions (W x H x D) | 440 x 44 x 254 mm (17.32 x 1.73 x 10.00 inch) |
| Weight | 3800 g |
| Installation | 19" rack mounting |
| Regulatory Approvals | |
| Safety | EN60950-1 |
| Power Automaton | IEC61850-3, IEEE 1613 |
| Rail Traffic | EN50121-4, EN50155 |
| EMI | FCC Part 15, CISPR (EN55032) class A |
| Environmental Limits | |
| Operating Temp. | -40 to 85°C (-40 to 185°F) Cold start of min. 100 VAC at -40°C |
| Storage Temp. | -40 to 85°C (-40 to 185°F) |
| Ambient Relative Humidity. | 5 to 95% (non-condensing) |
| WARRANTY | 5 years |