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FCC Warning

These devices have been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These standards are designed to provide reasonable protection against harmful interference when these devices are operated in a commercial environment. These devices generate, use, and can radiate radio frequency energy and may cause harmful interference to radio communications unless installed in accordance with this User's Guide. Operation of these devices in a residential area is likely to cause harmful interference which will make the user responsible for the appropriate remedial action at his / her own expense.

CE Mark Warning

These are Class A products. In a domestic environment these products may cause radio interference in which case the user will need to consider adequate preventative methods.

1. Checklist

The package should contain the following items:

- WPS/MPS-3005 Ethernet Switch
- User's Guide
- Installation Guide

Please notify your sales representative immediately if any item is missing or damaged.

As for power adapters, please refer to Section 7 for more detailed information.

2. Overview

WPS/MPS-3005 Ethernet Switches support IEEE802.3at PoE feature and are specifically designed to supply power to PoE-enabled devices such as WiFi AP or surveillance cameras. They are power supply equipments (PSE) that can transmit data and supply power at the same time to the powered devices (PD). The maximum cable distance that can reach the powered devices from WPS-3005 is up to 80M, allowing your powered devices to be installed in a place where power is not easily accessible.

Besides, WPS/MPS-3005 Series Ethernet Switches aim at industrial applications that demand wide range of operating temperature and require redundant power supplies to create a reliable and stable networking environment in the event of power failure. They can also be mounted on the wall or onto 35mm DIN rail using DIN rail clip on the Switch. The installation and operation procedures are simple and straightforward. Operation status can be locally monitored through a set of diagnostic LED indicators located on the front panel.

Major Features:

- Auto-Negotiation in TP port
- Store and Forward Switching Mechanism
- Auto-detecting full/half duplex mode operation
- MDI/MDIX Auto-Crossover
- Flow Control
- Power and F/O port failure alarm
- 2K MAC address table
- 9K bytes Jumbo Frame
- Wide range of operating temperature (-20°C~60°C)
- DIN Rail and wall mounting installation
- Redundant AC and DC power supply

3. Network Installation

Please follow the steps described below and refer to Figure 1 and 2 to complete the network installation.

- 1 Attach fiber cable from the Switch to the fiber network.
- 2 Attach a UTP cable from the 10/100/1000Base-T network to the RJ-45 port on the Switch.
- 3 Connect the power adapter to the Switch and the Power LED will light up. The Link/ACT/Speed and F/O Link/ACT LEDs will light up as soon as all the cable connections are satisfactory.

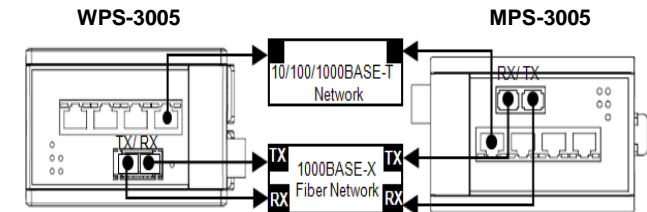


Figure 1. Network Installation for FC Models

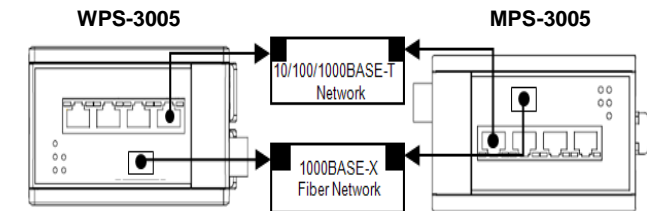


Figure 2. Network Installation for WDM/SFP Models

4. Terminal Block

TB1 and TB2 Power Supply: There are two pairs of contacts on the terminal block connector for power redundancy purpose. You can use both pairs of power supply for redundancy purpose or use either one pair of power supply on the terminal block and AC external power supply to create redundant setup. The redundant power supply will take over seamlessly when one power source is down to protect your device or network from the loss of power. When you use only one power supply (no redundant power is available), the LED Power/Port Status will flash in orange to alert the user.

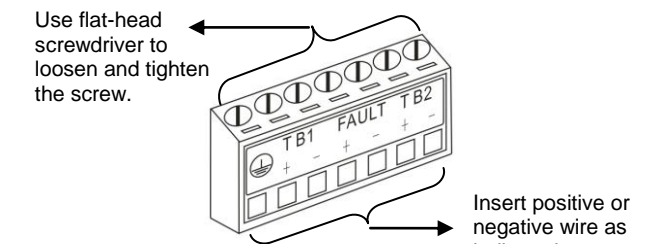


Figure 3. Terminal Block Front and Top View

Port Fault Alarm: One pair of port fault connection on the terminal block is used to connect alarm devices such as speakers or LEDs to alert users when the F/O port link is disconnected.

5. LED Description

LED	Color	Function
PWR	Green	AC or DC power is available.
PW T1	Green	Terminal Block 1 powers up.
PW T2	Green	Terminal Block 2 powers up.
F/O Link/ACT	Green	F/O link is up.
	Blinking Green	F/O is receiving and transmitting data.
PWR/Port Status	Orange	F/O link is down.
	Blinking Orange	Redundancy system is abnormal (only one power source is available).
Link/ACT/Speed	OFF	TP link is down or works at 10M.
	Green	TP link is up and works at 100M
	Orange	TP link is up and works at 1000M
	Blinking	TP is receiving and transmitting data.
PoE	Green	Power feeding is on for 802.3af applications when the LED is steady on.
		Power feeding is on for 802.3at applications when the LED is blinking slowly.
	OFF	No link is detected, and the LED will blink green every 1 to 2 seconds.

6. Technical Specifications

Standards	IEEE 802.3, 802.3u, 802.3x, 802.3z, 802.3ab, 802.3at
Interface	4 X Shielded 10/100/1000Base-T RJ45 1 X 1000Base-X Fiber
LED	PWR, PW T1, PW T2, F/O Link/ACT PWR/Port Status, Link/ACT/Speed, PoE
Power	DC Input Voltage: 48VDC DC Power Jack x 1; DC Terminal Block x 2
Shipping Weight	WPS-3005: 0.4KG ; MPS-3005: 0.6KG
Dimensions	WPS-3005: 105mm(W)X93mm(D)X61mm(H) MPS-3005: 121mm(W)X99mm(D)X61mm(H)
Temperature	Operating: -20°C~60°C; Storage: -20°C~70°C
Humidity	5%~90% RH non-condensing
EMC Safety	FCC Part 15 Class A, CE
Media	TP: EIA/TIA-568 CAT 5e Fiber: 50/125, 62.5/125um multi-mode fiber 9/125, 10/125um single-mode fiber

*Please contact us for further reports and updates.

7. Optional Accessory

Power Adapters:

MODEL	Connector Type	Volt/Watt	PSE Power Feeding Function
WAP-POWER-12J18	DC Jack	12V/18W	X
WAP-POWER-48J90	DC Jack	48V/90W	X
WAP-POWER-48D75	Terminal Block	48V/75W	X
WAP-POWER-48D240	Terminal Block	48V/240W	O

Fiber Transceiver Information

1000M

Multi-Mode

TYPE	BTFC
Connector Type	SC
Wavelength	850nm
Typical Distance	500m
Min/Max TX PWR	-9.5dBm/-4.0dBm
Sensitivity	-18.0dBm
Link Budget	8.5dB

Single-Mode

TYPE	BTFC(SM-10)	BTFC(SM-20)	BTFC(SM-30)
Connector Type	SC	SC	SC
Wavelength	1310nm	1310nm	1310nm
Typical Distance	10Km	20Km	30Km
Min TX PWR	-9.5dBm	-5.0dBm	-5.0dBm
Max TX PWR	-3.0dBm	3.0dBm	3.0dBm
Sensitivity	-20.0dBm	-24.0dBm	-24.0dBm
Link Budget	10.5dB	19.0dB	19.0dB

Wave-Length WDM

TYPE	W2A(SM-10)	W2B(SM-10)	W2A(SM-20)	W2B(SM-20)
Connector Type	SC	SC	SC	SC
TX Wavelength	1310nm	1550nm	1310nm	1550nm
RX Wavelength	1550nm	1310nm	1550nm	1310nm
Typical Distance	10 Km	10 Km	20 Km	20 Km
Min TX PWR	-10.0dBm	-9.0dBm	-7.0dBm	-7.0dBm
Max TX PWR	-3.0dBm	-3.0dBm	0dBm	0dBm
Sensitivity	-22.0dBm	-22.0dBm	-23.0dBm	-23.0dBm
Link Budget	12.0 dB	13.0 dB	16.0 dB	16.0 dB

NOTE: Specifications may change without prior notice.

Contact Information

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WPS-3005/MPS-3005 Series

4 Ports 10/100/1000Base-T and 1 Port 1000Base-X Gigabit Ethernet Switch with Built-in IEEE802.3at PoE/PSE Feature and Extended Operating Temperature

User's Guide

Version 1.1