

Manual

7-Port GbE Industrial Entry Line Switch (MS657204(P)X)

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1. Key Features

- Rugged metal enclosure with IP50 protection
- 7-port Gigabit Ethernet switching fabric (14 Gbps backplane)
- 2x 1000Base-X SFP slots
- 5x 10/100/1000Base-T RJ-45 ports with Auto MDI/MDI-X
- Supports IEEE 802.3af/at PoE+ up to 30W per port, 120W total {MS657204PX only}
- Input voltage 48...56 VDC {MS657204PX} / 12...56 VDC {MS657204X}
- Redundant dual DC power input
- Surge protection on power input
- ESD protection on RJ-45 ports (IEC 61000-4-2, 6KV contact / 8KV air)
- Alarm relay contact output (1A @ 24VDC)
- Reverse polarity protection
- Overload current protection
- Operating temperature -40...+70°C
- DIN Rail or wall mount installation
- CE, FCC, LVD (EN62368-1) certified



Auto-negotiation is supported on RJ-45 ports only. 1000Base-X SFP ports do not support auto-negotiation.

2. Introduction

This rugged Industrial 7-port Gigabit Ethernet Switch is designed for IP surveillance, traffic monitoring, and telco applications. Built to withstand harsh environments, it operates reliably across a wide temperature range of -40°C to +70°C. With its redundant dual DC power input and alarm relay contact, it ensures continuous operation mission-critical deployments. It can be used as a stand-alone device or cascaded with other devices via SFP connection to extend network coverage. DIN Rail or wall mount installation makes it suitable for a broad range of industrial environments.

The MS657204PX variant additionally supports IEEE 802.3af/at PoE+, delivering up to 30W per port and 120W total, making it ideal for powering IP cameras, access points, and other PoE-enabled devices directly over the network cable.



Auto-negotiation is supported on RJ-45 ports only. 1000Base-X SFP ports do not support auto-negotiation.

3. Installation Package

This unit can be DIN Rail or wall mounted. DIN Rail and wall mount brackets are included.



If your application necessitates a change of the mounting method, please ensure that all holes are securely fastened with screws to maintain the enclosure's IP50 rating.

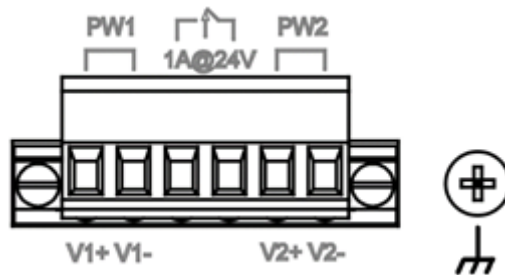
4. Power Connection

This unit provides a 6-pin terminal block. It operates using a 48...56 VDC power source (*MS657204PX*) or 12...56 VDC (*MS657204X*). Always ensure your input voltage is within the supported voltage range.

This unit supports two power inputs. Follow the printed polarity for V1+, V1-, V2+, V2- and ground. Connect the positive wires to V1(2)+, connect the negative wires to V1(2)-, and connect a wire from the unit's chassis ground to earth ground.

RELAY: This unit includes an additional 1A@24V relay circuit. When both power inputs are connected, the relay is in OPEN mode. If only one power source is connected, the relay switches to SHORT mode.

4.1. Power Connection Procedure



1. Pull out the 6-pin terminal block.
2. Connect wires to V1+, V1-, V2+, V2- and ground.
3. Plug the 6-pin terminal block back into place and fasten the screws.



Always shut off the power source before connecting power wires.



Always ground the power source to maintain a clean power input. Low-quality power supplies may introduce excessive noise and cause voltage fluctuations. Grounding the power source prevents this.

5. LED Indicator

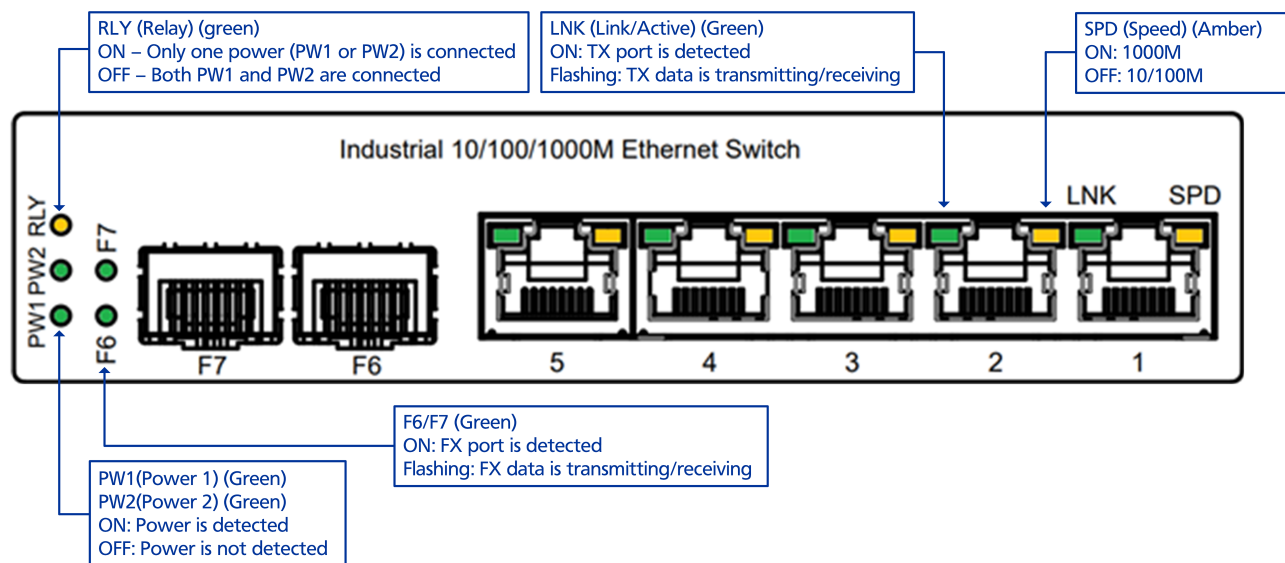


Figure 1. LED Indicator - MS657204X

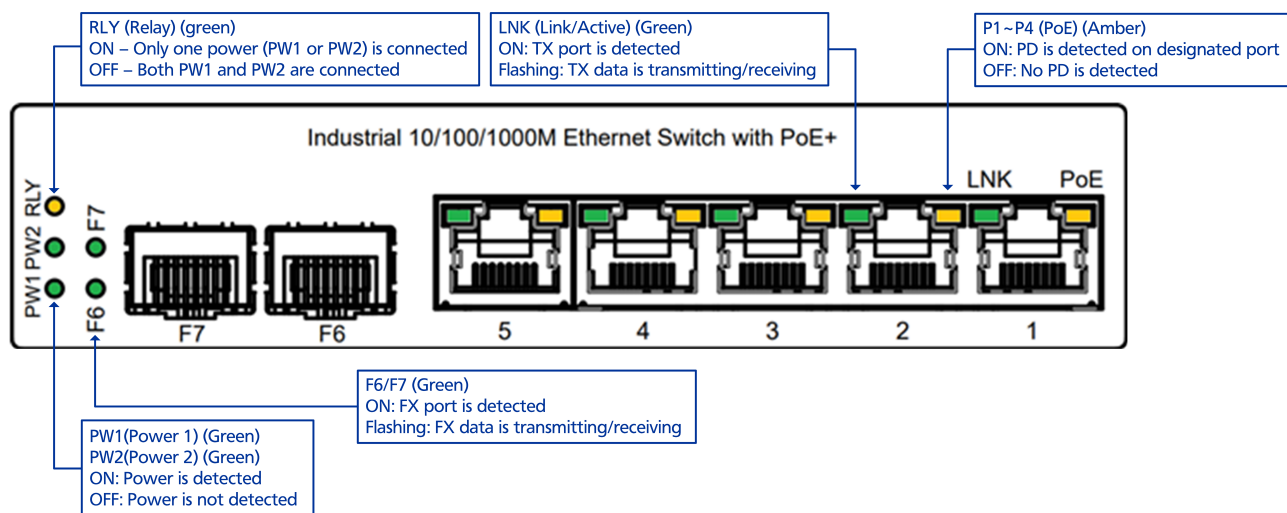
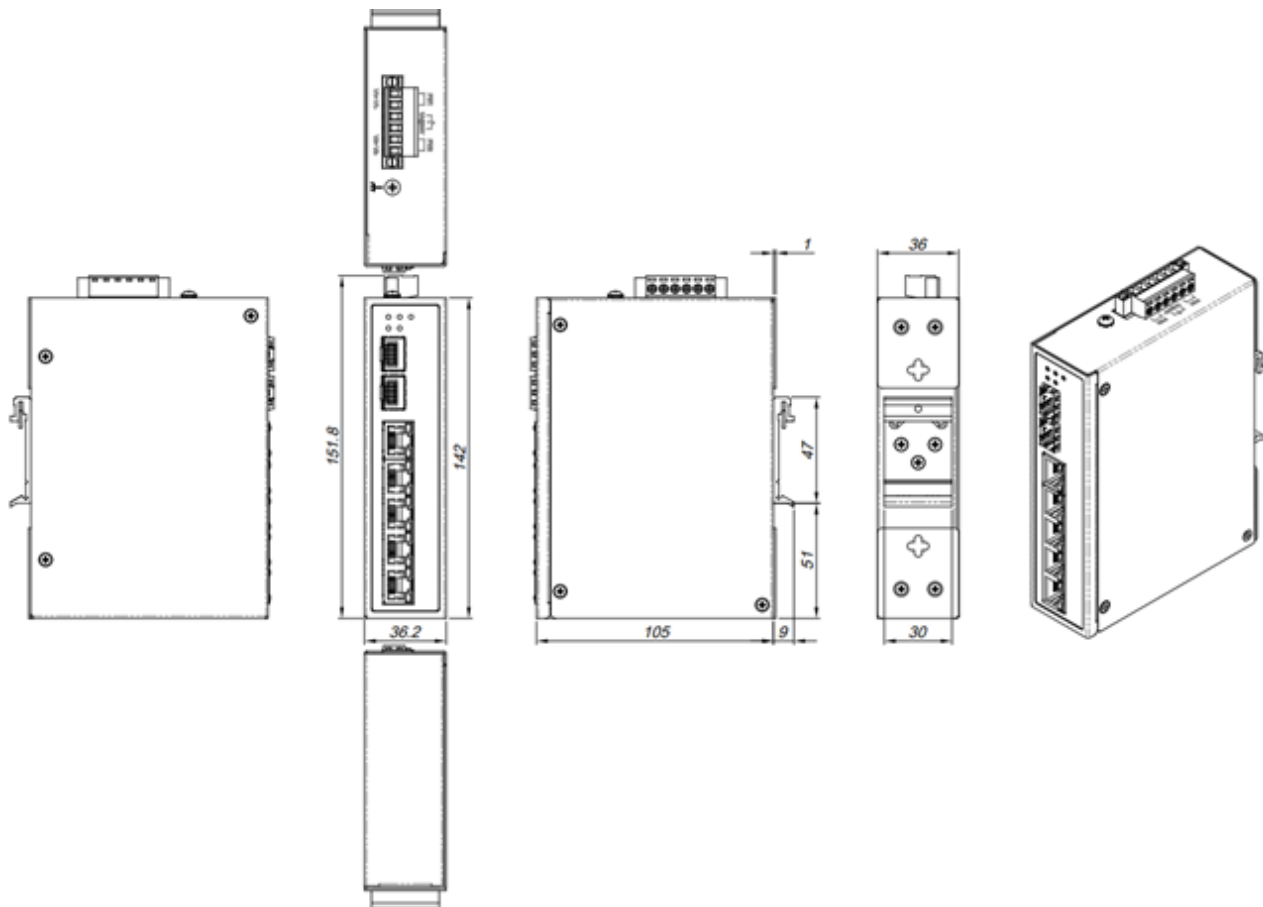


Figure 2. LED Indicator - MS657204PX

6. Dimensions



7. Specifications / Technische Daten

	MS657204X	MS657204PX
IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-X Gigabit Ethernet IEEE 802.3x Flow Control and Back Pressure	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-X Gigabit Ethernet IEEE 802.3x Flow Control and Back Pressure IEEE 802.3af PoE IEEE 802.3at PoE+
Switch Architecture	Backplane (Switching Fabric): 14 Gbps	
Data Processing	Store and Forward	
Flow Control	IEEE 802.3x Flow Control and Back Pressure	
Jumbo Frame	9 KB	
MAC Address Table Size	4 K	
Packet Buffer Size	2 Mbits	
Network Connector	5 x RJ-45 10/100/1000Base-T(X), Auto MDI/MDI-X, Full/Half duplex 2 x SFP 1000Base-X	4 x RJ-45 10/100/1000Base-T(X), Auto MDI/MDI-X, Full/Half duplex, IEEE 802.3af/at PSE 1 x RJ-45 10/100/1000Base-T(X), Auto MDI/MDI-X, Full/Half duplex 2 x SFP 1000Base-X
	 Auto-negotiation is supported on RJ-45 ports only. 1000Base-X SFP ports do not support auto-negotiation.	
Network Cable	UTP/STP Cat.5e or above	
	EIA/TIA-568 (100 m)	
Protocol	CSMA/CD	
LED	PW1 (Power 1) (<i>green</i>) / PW2 (Power 2) (<i>green</i>): <i>ON</i> - Power detected <i>OFF</i> - No power detected RLY (Relay) (<i>amber</i>): <i>ON</i> - Only one power input connected <i>OFF</i> - Both power inputs connected RJ-45: LNK/Act (<i>green</i>): <i>ON</i> - TX port detected <i>Flashing</i> - TX data transmitting/receiving SFP: F6/F7 (<i>green</i>): <i>ON</i> - FX port detected <i>Flashing</i> - FX data transmitting/receiving	
	SPD (Speed) (<i>amber</i>): <i>ON</i> - 1000M <i>OFF</i> - 10/100M	P1~P4 PoE (<i>amber</i>): <i>ON</i> - PD detected on port <i>OFF</i> - No PD detected
Reverse Polarity Protection	Present	

Overload Current Protection	Present	
Power Supply	Redundant dual DC 12...56 VDC power input	Redundant dual DC 48...56 VDC power input
Alarm Relay Contact	Relay output, 1A @ 24VDC Open circuit when both power inputs connected Short circuit when only one power input connected	
Power Consumption	4.5 W @ 56 VDC	4.5 W @ 56 VDC (without PoE)
PoE Power	-	30 W per port, 120 W total @ 56 VDC
Removable Terminal Block	6-pin, redundant dual power + alarm relay contact Wire range: 0.34...2.5 mm ² Solid wire (AWG): 12-24 Stranded wire (AWG): 12-24 Torque: 5 lb-in / 0.5 Nm Wire strip length: 7-8 mm	
Operating Temperature	-40...+70 °C	
Storage Temperature	-40...+85 °C	
Operating Humidity	5% to 95% (non-condensing)	
MTBF	522,018 hrs (Telcordia (Bellcore), GB) at 50 °C	511,546 hrs (Telcordia (Bellcore), GB) at 50 °C
Housing	Rugged metal, IP50 protection	
Case Dimensions (L x W x D)	142 x 36.2 x 105 mm	
Installation	DIN Rail or wall mount	
Certifications		
Safety	LVD (EN 62368-1)	
EMC	CE (EN 55032/EN 55035), FCC	
EMI	CISPR 32, FCC Part 15B Class A	
EMS	IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV	
Further	EN 60068-2-6 (Vibration), EN 60068-2-27 (Shock), EN 60068-2-32 (Free Fall)	

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