

# EB-5ES-PSE Industrial PoE Switch

Sixnet Networking Series



## ▶▶▶ 5 Port Power Over Ethernet Industrial Switch

The EB-5ES-PSE combines the ultra-reliability of a 5 port Sixnet industrial Ethernet switch with four industrial PoE sourcing outputs.

Simply power this switch with 48 VDC to source the PoE lines. The four PoE ports automatically sense and support both PoE and non-PoE (traditional) Ethernet devices. Or power this switch with 10-30 VDC and it functions as a robust 5 port industrial switch that is PoE future-ready.



### APPLICATIONS

- > Video and security
- > Industrial automation and control
- > Process xxxxx and motion control

### PRODUCT HIGHLIGHTS

- > Four fully IEEE-compliant PoE ports
- > Slim packaging fits on your DIN rail
- > Plug and play saves you time and money
- > Truly industrial rated for any application

### FEATURES & BENEFITS

- > IEE 802.3af compliant PoE ports
  - Power Sourcing Equipment (PSE) operation
  - Auto-detection of PD (powered devices)
  - Over-temperature and over-current detection
  - Over and under-voltage detection
- > Real-time network operation
  - Intelligent message routing - No collisions!
  - Supports all standard IEEE 802.3 protocols
- > True plug-and-play simplicity
  - Auto-sensing for speed and duplex
  - Auto-mdi/mdix-crossover and auto-polarity
  - Automatic PoE power management
- > Trouble free operation
  - Truly industrial -40 to 75°C operation
  - Dual power inputs with surge protection
  - DIN rail or direct panel mounting
  - UL / CSA (CUL), CE, hazardous locations and Maritime rated
- > Networking features
  - Store and forward wire speed switching
  - Automatic address learning, aging and migration
  - Full-Duplex operation with flow control
  - Auto crossover (MDI/MDIX) and auto polarity

industrial  
networking



# 5 Port Power Over Ethernet Industrial Switch Specifications

## SWITCH FEATURES

Ethernet switch ports 5 total with 4 PoE (PSE)  
 Unmanaged, store and forward, wire speed  
 Ethernet protocols supported all IEEE 802.3  
 RJ45 ports (shielded) 10/100BaseTX  
 RJ45 speed (10 or 100 Mbps) auto-negotiation  
 RJ45 MDI/MDIX auto-crossover and TD/RD auto-polarity  
 Ethernet isolation 1500 VRMS 1 minute  
 Fiber optic port speed / 100BaseF (100 Mbps) full duplex  
 Fiber optic port wavelength 1300 nm (others available)  
 Fiber multimode (mm) typical 50 or 62.5/125 um (SC or ST)  
 Fiber singlemode (sm) typical 9 or 10/125 um (SC or ST)  
 Fiber max. distance (full duplex) 4 km (mm), 20 (sm)  
 or 40 km (long haul) or more  
 Typical latency for 100 Mbps ports 5 us + frame time;  
 varies on load  
 MAC addresses and bandwidth 1024 and 3.2 Gbps

## POWER INPUT AND POE OUTPUT

Power input with reverse polarity protection; 10-30 VDC  
 with no PoE output; 45-56 VDC for PoE output  
 Switch power consumption (typ.all ports active at 100 Mbps):  
 2.0 W (5-port without fiber) + PoE; 3.0 W  
 (5-port with 1 fiber) + PoE  
 PoE power consumption up to 15.4 W per port  
 RJ45 pin assignments for PoE: TX/V- (3, 6); RX/V+ (1, 2)  
 Power input transient protection 15,000 watts peak  
 Power input spike Protection 5,000 watts (10 times for 10 us)  
 PoE operation - auto power management  
 PoE disconnect mode - DC disconnect  
 PoE auto-detection per IEEE 802.3af  
 PoE protection - over-temperature, over-current,  
 over/under-voltage and transient

## ETHERNET COMPLIANCE

IEEE 802.3af (Power over Ethernet)  
 IEEE 802.3 (10Mbps Ethernet for legacy devices)  
 IEEE 802.3u (100Mbps Ethernet for newer devices)  
 IEEE 802.3x (Full-Duplex with Flow Control)

## ENVIRONMENTAL

Operating temperature range -40 to +75 °C  
 (cold startup @ -40)  
 Storage temperature range -40 to +85 °C  
 Humidity (non-condensing) 5 to 95% RH  
 Vibration, shock and freefall IEC60068-2-6, -27 & -32

## STANDARDS COMPLIANCE

Electrical safety - UL508 / CSA C22.2/14; EN61010-1, CE  
 EMI emissions - FCC part 15, ICES-003; EN61000-6-4, CE  
 EMC immunity - EN61000-6-2, CE  
 Hazardous locations: UL1604/CSA C22.2/213 (Class I, Div. 2);  
 EN60079-15 (Zone 2, Category 3), CE (ATEX)  
 Marine and offshore rated per ABS  
 Eye safety (fiber models) IEC60825-1, Class 1; FDA 21  
 CFR1040.10 and 1040.11

## MECHANICAL

DIN rail or direct panel mounting  
 Lexan case with IP30 protection  
 Dimensions - see mechanical diagram  
 Weight (approximate) 0.17 Kg (6 oz)

All specifications are subject to change. Consult factory for latest info.

## ORDERING GUIDE

PART NUMBER	DESCRIPTION
EB-5ES-PSE-1	5 RJ45 10/100 Ethernet ports including 4 PoE (PSE) ports
EB-5ES-PSE-2SC	4 RJ45 PoE (PSE) ports and 1 multimode
EB-5ES-PSE-2ST (Special Order)	Fiber port with SC or ST style connector for up to 4 km
EB-5ES-PSE-3SC	4 RJ45 PoE (PSE) ports and 1 singlemode
EB-5ES-PSE-3ST (Special Order)	Fiber port with SC or ST style connector for up to 20 km
EB-PD-24V-1	PoE splitter for non PoE devices
EB-PS-AC48-75	AC to 48 VDC, 75W power supply

Contact Red Lion for special or long haul fiber transceivers up to 120 km.

## DIMENSIONS

