

5 PORT INDUSTRIAL PoE SWITCH (ETHERBUS®)

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.

PRODUCT HIGHLIGHTS

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

IEEE 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 & 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 (zone 2) and Maritime rated



NETWORKING FEATURES

- Store and forward wire speed switching – no delays
- Automatic address learning, aging and migration
- Full-Duplex operation with flow control (no collisions!)
- Auto crossover (MDI/MDIX) and auto polarity

Etherbus® Industrial Fieldbus Solutions. Like a true fieldbus, Etherbus® combines all the advantages of Ethernet (speed and openness) with power in the same cable to simplify system wiring, reduce maintenance time and save you money. At the heart of Etherbus are standard Ethernet (802.3) and PoE (802.3af) making it truly open. Etherbus is “Every bus” because it passes any and all Ethernet message packets regardless of origin or protocol. Etherbus works with Modbus/TCP, Profinet, Ethernet/IP, ... (the list is endless). Etherbus works with PoE devices as well as non-PoE devices. It can even deliver standard +24 VDC to your field mounted devices – even non-Ethernet devices.

ETHERNET PERFORMANCE

- 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

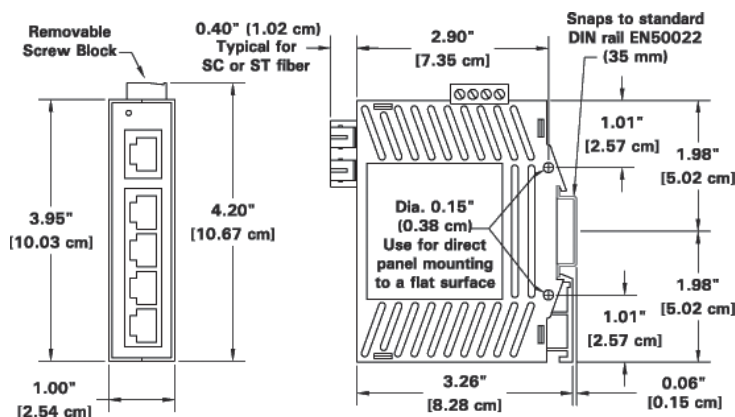
- Electrical safety - UL508 / CSA C22.2/14; EN61010-1, CE
- EMI emissions - FCC part 15, ICES-003; EN61000-6-4, CE
- EMC immunity - EN61000-6-2, CE
- Hazardous locations: UL1604/CSA C22.2/213 (Class I, Div. 2); EN60079-15 (Zone 2, Category 3), CE (ATEX)
- Marine and offshore rated per ABS
- Eye safety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

PHYSICAL

- 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.

MECHANICAL DRAWING



ORDER GUIDE

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 fiber port with SC or ST style connector for up to 4 km
EB-5ES-PSE-2ST	(special order)
EB-5ES-PSE-3SC	4 RJ45 PoE (PSE) ports and 1 singlemode fiber port with SC or ST style connector for up to 20 km
EB-5ES-PSE-3ST	(special order)
EB-PD-24V-1	PoE splitter for non PoE devices
EB-PS-AC48-75	AC to 48 VDC, 75W power supply

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



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Datasheet EB-5ES-PSE
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