

PB00096

GarrettCom Magnum PS14 PoE Power Source Switches

The Magnum PS14 PoE Power Source Convenient Switches combine standard 802.3af Power over Ethernet (PoE) with small heavy-duty four-port Switches.



The Magnum PS14 PoE Power Source Switches are Ideally Suited for VOIP Phone, PoE Powered Digital Clock, Outdoor PoE Video Cameras into A Secure LAN and Much More.

Features

- Four PoE ports in a small heavy-duty Ethernet switch
- The switch and attached PoE devices are powered from an integral -48V DC terminal block
- Two models for two application environments:
 - PS14H Hardened for the Factory Floor
 - PS14P Premium-rated for Outdoors
- RJ45 ports support standard auto-negotiation and auto-cross to enable attaching any 10 Mb or a 100 Mb device, regular or PoE

PoE Power Source

The Magnum PS14 PoE Power Source Convenient Switches combine standard 802.3af Power over Ethernet (PoE) with small heavy-duty four-port Switches. Using an external -48VDC power source, all four of the PS14's Ethernet ports can provide power as well as 10/100 Mb data transmission over the inter-connecting Ethernet cables. Now, data and power for attached devices can be transmitted over a single Ethernet twisted-pair cable.

The PS14 switches are Power Sourcing Equipment (PSE), and are fully compatible with Powered Devices (PD) that comply with the IEEE 802.3af PoE standard. The PS14 Switch ports have an auto-sensing algorithm so that they provide power only to attached 802.3af end devices. If proprietary PoE and non-PoE equipment is attached, it will not be damaged. The PS14 ports discontinue supplying power when the PoE devices are disconnected, and support the PSE standard for over-current protection, under-current detection and fault protection.

**Be certain.
Belden.**

GarrettCom Magnum PS14 - PoE Power Source Switches

Applications

The PS14 is a standards-compliant way to power and connect a few small Ethernet devices at the edge of a network where AC power is either not available or not cost-effective. Increasingly, small powered devices (PD) such as IP phones, video cameras, wireless access points, digital clocks, special purpose radios, IP phones, industrial sensors and laptop computers benefit with increased installation flexibility from the PS14's PoE-PSE capabilities. Traditionally, a mid-span patch panel device could have been connected to a standard Ethernet switch, and insert power onto a PD device – a configuration requiring two devices to achieve PoE. The PS14 integrates both the Ethernet switch and the PoE power functions into one unit, saving costs and space, and increasing reliability for the application.

- Connect a VOIP phone, a PoE powered digital clock, and an IP badge reader in an outdoor guard station into an indoors LAN using standard Ethernet twisted-pair copper cabl
- Connect an IP wireless access point in a warehouse into the factory LAN
- For surveillance, connect a couple of outdoor PoE video cameras into a secure LAN
- Same as previous, but combine with a Magnum CS14P-48VDC for a fiber optic up-link

Hardened for Factory Floor

The orange-label Magnum PS14H Hardened units are for factory floor applications. The PS14H models are built with high-grade components and are constructed using special thermal techniques (patent pending) and a metal case for heavy duty industrial jobs. The ambient temperature rating is for industrial use. No internal air flow is required for cooling, so it resists dust, dirt, moisture, smoke and insects. Mounting options include stand-alone panel-mounting, DIN-Rail, or rack-mount tray.

Premium-rated for Outdoors

The red-label Magnum PS14P Premium-rated units are for temperature uncontrolled applications, typically located outdoors. The PS14P models are built with premium-grade extended temperature components, and use special thermal techniques (patent pending). When used outdoors, the PS14P should be protected from falling rain. Mounting options include stand-alone panel-mounting, DIN-rail, or rack-mount tray.

A 4-port "go anywhere" Magnum PS14 Switch is a versatile and handy PoE solution. The PS14 provides edge access Ethernet ports in a convenient and compact package. For fiber connectivity or additional non-PoE ports, simply add a Magnum CS14 Converter Switch (two RJ45 and one fiber) or an ES42 Edge Switch (6 ports) with all fiber port types available.

The Magnum PS14 family of Power Source Convenient Switches are designed and manufactured in the USA and backed by a three-year warranty.



PS14 terminal block area, shown with panel mount bracket.



PS14 DIN-RAIL-LATCH illustrated here.



Product Information - Magnum PS14

Type	PS14H	PS14P
Product Description	Magnum Hardened PoE Power Source Convenient Switch, four 10/100 RJ45 ports in a compact package, rated for factory floor environments. All four RJ45 Ethernet ports support Power Source PoE per the IEEE 802.3af standard. Includes integral -48V DC terminal block for power input.	Magnum Premium-rated PoE Power Source Convenient Switch, four 10/100 RJ45 ports in a compact package, rated for temperature un-controlled (outdoor) environments. All four RJ45 Ethernet ports support Power Source PoE per the IEEE 802.3af standard. Includes integral -48V DC terminal block for power input.
Port Type and Quantity	4 x 10/100BASE-TX	4 x 10/100BASE-TX
Order Number	PS14H	PS14P
Port Connectors	RJ45 with Auto-Cross 100BASE-TX and 10base-T. Shielded 8-Pin female. Supports shielded (STP) & unshielded (UTP) Cat. 5 and higher. PoE power is delivered to the unused (spare) twisted-pair pins.	
Network Standards		
Ethernet IEEE 802.3af PoE	Yes	
IEEE 802.3	Yes	
IEEE 802.3u	Yes	
IEEE 802.1p	Yes	
100BASE-TX	Yes	
10BASE-T	Yes	
NOTE: Data packets that have the 4-bytes tagged VLAN field (IEEE 802.1q) inserted in them are received and transmitted unchanged by all PS14's.		
Performance		
Date Rate	10/100 Mb, FDX and HDX modes on all 4 ports	
Auto-negotiation and Auto-cross	MDI-MDIX on all 4 RJ45 ports. Occurs at LINK-enabled. No cross-over cable required.	
Non-blocking switching	128KB packet buffer memory	
Address Buffer Storage	2K addresses	
Address Buffer Age-out Time	300 seconds	
Power Input		
Total Power Consumption	66 watts max. (1.4A @48VDC). Terminal block for -48V DC input (range of 46 to 60V DC), built-in for +, -, ground. The 8-15V DC jack is also present, but can only be used to power the PS14 unit when no PoE devices are attached.	
Power Output (PoE available on all four RJ45 ports via Ethernet twisted pair cabling on port pins 4, 5(+), 7, 8(-) Uses spare pairs, not data pairs)		
802.3af Power Consumption	61.6 watts max. (15.4/port)	
PoE Ports Output Voltage	44 to 57 VDC Over-current Protection, per port: resettable fuse	
LED Indicators (dual, front and end, port 4 front only)		
Power	On for 48V power applied to the PS14 unit	
PoE Ports	1,2,3,4: ON when delivering power	
10/100 Per Port	Steady ON for 100 Mb speed, OFF for 10 Mb speed	
LK/ACT Per Port	Steady ON for LINK w/no traffic, blinking for Activity	
F/H Per Port	1,2,3 in end: Steady ON for F/D mode, OFF for H/D mode.	
VLANs Support		
Data packets that have the 4 bytes tagged VLAN field (IEEE 802.1q) inserted in them are received and transmitted unchanged by all CS14 Converter Switches.		
Operating Environment		
Ambient Temp. Range (UL 60950)	-25°C to 60°C (long term per independent agency tests - UL 60950)	-40°C to 75°C (long term per independent agency tests - UL 60950)
Ambient Temp. Range (IEC 60068)	-40°C to 85°C (short per type tests - IEC60068)	-50°C to 100°C (short per type tests - IEC60068)
Cold Start	-20°C	
Storage Temperature	-40° to 185°F (-40° to 85°C)	
Ambient Relative Humidity	5% - 95% (non-condensing)	
Altitude	-200 to 95,000 ft.	
Conformal Coating	Optional	

Product Information - Magnum PS14 (continued)

Packaging	
Enclosure	Robust sheet metal (steel) IEC 529 rated IP40
Dimensions	3.5 in H x 3.0 in W x 1.0 in D (8.9 cm x 7.6 cm x 2.5 cm)
Weight	9.6 oz (272g)
Colling Method	Case used as a heat sink
Mounting	
Metal Panel Mounting Clips	Included
DIN-Rail Mounting Option	Model # DIN-RAIL-LATCH
Rack-mount Option	Model MC14-TRAY, Depth: 6.0", Width 17", Height 2.25"(15 cm D x 43cm W x 5.7cm H)
Agency Approval and Standards Compliance	
UL Listing	UL 60950, cUL, CE, Emissions meet FCC Part 15, Class A (see footnote).
Class 1 Div 2	Yes - Environmental Standard for Electric Power Substations)
EN 300 386	Yes - EMC and Operating Conditions Class C for Power Substations
Footnote: These products are tested and approved under IEC61850 for use in Class C sheltered locations where neither temperature nor humidity are controlled. The equipment needs to be protected against solar radiation, rainfall, other precipitations, and wind. UL has not approved these products for Annex-T outdoor use.	
Warranty	
Warranty	Three Years



Belden Competence Center

As the complexity of communication and connectivity solutions has increased, so have the requirements for design, implementation and maintenance of these solutions. For users, acquiring and verifying the latest expert knowledge plays a decisive role in this. As a reliable partner for end-to-end solutions, Belden offers expert consulting, design, technical support, as well as technology and product training courses, from a single source: Belden Competence Center. In addition, we offer you the right qualification for every area of expertise through the world's first certification program for industrial networks. Up-to-date manufacturer's expertise, an international service network and access to external specialists guarantee you the best possible support for products. Irrespective of the technology you use, you can rely on our full support – from implementation to optimization of every aspect of daily operations.

About Belden

Belden Inc., a global leader in high quality, end-to-end signal transmission solutions, delivers a comprehensive product portfolio designed to meet the mission-critical network infrastructure needs of industrial, enterprise and broadcast markets. With innovative solutions targeted at reliable and secure transmission of rapidly growing amounts of data, audio and video needed for today's applications, Belden is at the center of the global transformation to a connected world. Founded in 1902, the company is headquartered in St. Louis, USA, and has manufacturing capabilities in North and South America, Europe and Asia.

For more information, visit us at www.belden.com and follow us on Twitter [@BeldenIND](https://twitter.com/BeldenIND).

Got questions? Need to talk to an expert? Send us an email:

EMEA: garrettcomsalesinfo@belden.com US: ICS.Security@belden.com