

PB00102

Magnum CS14 Converter Switch with 100 Mb Fiber

Flexible, edge-of-network Ethernet product with multi-mode and single-mode fiber connectors plus AC or DC power inputs



This switch family covers the full range of application environments, with Regular (office), Hardened (factory floor) and Premium-rated (outdoor) versions. Offers the best price-to-value for each user and installation.

Features:

- Provides one 100 Mb fiber port and two (2) 10/100 copper switch ports
- Two RJ45 ports support IEEE 802.3u to enable attaching any 10 Mb or 100 Mb device
- AC power for all models, Factory Floor and Outdoor models also have integral DC terminal blocks
- Same packaging and mounting options as the popular Magnum 14-Series Media Converters

Combine a 100 Mb Fiber Media Converter and a two-port 10/100 copper Switch, and you have the Converter Switch, a new flexible edge-of-the-network Ethernet product. Add in fiber port choices for all multi-mode and single-mode fiber connector types plus AC or DC input power selection and multiple application environments, and you have the Magnum CS14 Converter Switch. Where a Media Converter might traditionally have been used, a Converter Switch now offers a better value. The compact package is ideal for network edge installations, and is able to be conveniently mounted to suit any application.

All CS14 Converter Switch models come with two (2) sets of LED indicators. One set is on the front for viewing convenience when the unit is wall-mounted, and one LED set is mounted in the end adjacent to the ports for easy viewing when units are in a rackmount tray. The Magnum CS14 family of Converter Switches and other Magnum products are designed and manufactured in the USA and backed by a three-year warranty.

Applications



Office and Wiring Closet

The Magnum CS14 regular units are for office and indoor wiring closet environments. These are the economical base units in the CS14 Switch family. An external AC power supply for either North America (-d, 115vac 60Hz) or international (-i, 230vac, 50Hz) is included. The ambient temperature rating is 0° to 40°C, office grade.



Hardened for Factory Floor

The Magnum CS14H Hardened units are for factory floor applications. The CS14H models are built with high-grade components and are constructed using special thermal techniques and a metal case for heavy duty industrial jobs. In addition to a Hardened AC power option and jack, terminals for internal DC power choices at 8 to 15V, 24V or -48V DC are included. 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.



Premium-rated for Outdoors

The Magnum CS14P Premium-rated units are for temperature uncontrolled sheltered applications, typically located outdoors. The CS14P models are built with premium-grade extended temperature components, and use similar thermal techniques as the S14H Hardened units. In addition to a Premium-rated AC power option and jack, terminals for internal DC power choices at 8 to 15V, 24V or -48V DC are included. When used outdoors, the S14P should be sheltered from elements.

Technical Information

| | CS14 | CS14H | CS14P |
|------------------------------------|---|---|---|
| Performance | | | |
| Fiber Port | 100 Mb HDX / FDX, all types of connectors for multi-mode or single-mode | | |
| RJ45 Ports Data Rate | 10 / 100 Mbps, FDX and HDX modes Auto-negotiation and auto-cross MDI-MDIX on all RJ45 ports occurs at LINK-enable No cross-over cables required | | |
| Non-blocking Switching | 128KB packet buffer memory | | |
| Address Buffer Storage | 2K addresses | | |
| Address Buffer Age-out Time | 300 seconds | | |
| Network Standards | | | |
| Compliance With | Ethernet IEEE 802.3, IEEE 802.3u, 802.1p; 100BASE-TX, 10BASE-T, 100BASE-FX | | |
| VLANs Support | | | |
| Description | 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 Temperature Ratings | 0°C to 40°C | -25°C to 60°C long term per independent agency tests (UL), or -40°C to 85°C short term per IEC Type Tests | -40°C to 75°C long term per independent agency tests (UL), or -50°C to 100°C short term per IEC Type Tests. |
| Storage Temperature | -40°F to 185°F (-40°C to 85°C) | | |
| Cold Start | | -20°C | -40°C |
| Ambient Relative Humidity | 5% - 95% (non-condensing) Conformal coating (humidity protection) optional, request quote | | |
| Altitude | -200 to 50,000 ft. (-60 to 15,000m) | | |
| NEBS Compliance | Yes—including vibration, shock, altitude | | |



Technical Information (continued)

| | CS14 | CS14H | CS14P |
|---|---|--|---|
| Switches | | | |
| Fiber Port | Manual selection of HDX or FDX (default is FDX) | | |
| Packaging | | | |
| Enclosure | Robust sheet metal (steel) | | |
| Unit 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 | CS14 Switch Units: 4.6 oz (130g) | | |
| Power Supply | d, i: 5.8 oz (165g) | Hd, Hi: 5.8 oz (165g) | Pd, Pi: 7.9 oz (225g) |
| Cooling Method | Convection | | |
| Rated For | IEC 529 IP40 | | IEC 529 IP40 |
| Connectors | | | |
| Fiber Ports "ff" selections of the "fiber flavor" | "SC"= 100BASE-FX-SC: fiber optic multi-mode with SC type, 2 km "ST"= 100BASE-FX-ST: fiber optic multi-mode with ST type, 2 km "MTRJ"= 100BASE-FX-MTRJ: fiber optic multi-mode w/ MTRJ, 2 km "MLC"= 100BASE-FX-MLC: FO multi-mode with LC, 2Km "SSC"= 100BASE-FX-SSC: fiber optic single-mode with SC, 20 km "SSCL"= 100BASE-FX-SSCL: fib. op. sgl-m SC, "Long Reach" 40 km "SST"= 100BASE-FX-SST: fiber optic single-mode with ST type , 20 km "SLC"- 100BASE-FX-SLC: fiber optic sgl-m with LC-type , 15 km For other fiber connectors, request quote | | |
| RJ45 Ports | RJ45 with auto-cross, 100BASE-TX and 10BASE-T: shielded 8-Pin female. Supports shielded (STP) and unshielded (UTP) Cat. 3, 4, 5. For PoE Pass-through option on H and P models, request quote | | |
| LED Indicators (dual, top front, in end) | | | |
| Power | ON for power applied | | |
| 10/100 per RJ45 Port | Steady ON for 100 Mb, OFF for 10 Mb speed | | |
| LK/ACT per Port | Steady ON for LINK with no traffic, blinking for Activity | | |
| F/H per Port In End | Steady ON for F/D mode, OFF for H/D mode | | |
| Power | | | |
| Power Supplies for AC (External) | 95-125V AC at 60 Hz for "-d" models, 215-240vac at 50 Hz for "-i" models that have IEC power connector in the ext power unit | 100-240V AC at 47-63 Hz for "-Hd", "Hi" models, see footnote 1 | 95-260V AC at 47-63 Hz for "-Pd", "Pi" models, see footnote 2 |
| Power Input Options for DC | Power input DC jack (8 to 15V) is 2.5mm, center +ve, with 6ft. DC cord 12V DC, internal (range of 8.0 to 15V DC), built-in screw terminal block for +, -, ground. The 12V DC jack is also present. 24V DC internal (range of 10 to 36V DC) built-in screw terminal for +, -, ground. The DC jack is also present. -48V DC internal (range of 30 to 60V DC), built-in screw terminal block for +, -, ground. The 12V DC jack is also present. Note1: the 12V DC jack can be used for dual source DC power input Note2: internal DC power floats, user may ground + or - if desired. For PoE: Total power input required = 66 watts max or 1.4a @48VDC | | |
| Power Consumption | 4.8 Watts typical. 6 Watts max | | |
| Approvals/Standards Compliance | | | |
| All Models | UL listed (UL60950), cUL, CE, Emissions meet FCC Part 15, Class A NEBS L3 and ETSI compliant, including vibration, shock, and altitude Compliant with EN50155 Railway Applications Standard IEC61850 EMC and Operating Conditions Class C for Power Substations | | |
| H and P Models | IEEE 1613 Env. Std for Electric Power Substations | | |
| P Model | NEMA TS-2 and TEES for traffic control equipment Designed for UL 2043 above-the-ceiling installation | | |
| Warranty | | | |
| Made in USA | Three [3] years | | |
| Mounting | | | |
| Metal Panel Mounting | Clips included | | |
| DIN-Rail Mounting | Model # DIN-RAIL MC2 | | |
| Rack-Mount | Model MC14-TRAY. Dept h: 6.0", Width 17", Height 2.25"(15 cm D x 43cm W x 5.7cm H) | | |



1: External 12V1A power supply, wall plug or power cord for North America AC receptacles. Temperature rating same as S14H, see above. (North America: for spare, order Model PSH-12V1A-Hd. Intl: order Model PSH-12V1A-Hi with IEC plug).

2: External 12V1A power supply, rated for outdoor temperatures same as S14P, see above. Universal AC input with recessed IEC plug. (North America: for spare, order Model PSP-12V1A-Pd, Intl: order Model PSP-12V1A-Pi with IEC plug).

Technical Information (continued)

| Model # | Power Input | | | | | Mounting |
|-----------------|-------------------------------------|-------------------------------------|--------------------|--------------------|---------------------|-------------|
| | Hd, Hi AC external +12V Term Blk | Pd, Pi AC external +12V Term Blk | 12V DC Term. Block | 24V DC Term. Block | -48V DC Term. Block | |
| CS14H-ff-Hd, Hi | X | | X | | | Panel incl. |
| CS14H-ff-12VDC | | | X | | | Panel incl. |
| CS14H-ff-24VDC | | | | X | | Panel incl. |
| CS14HR-ff-24VDC | | | | X | | DIN-Rail |
| CS14H-ff-48VDC | | | | | X | Panel incl. |
| CS14P-ff-Pd, Pi | | X | X | | | Panel incl. |
| CS14P-ff-12VDC | | | X | | | Panel incl. |
| CS14P-ff-24VDC | | | | X | | Panel incl. |
| CS14PR-ff-24VDC | | | | X | | DIN-Rail |
| CS14P-ff-48VDC | | | | | X | Panel incl. |



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