

### Features

- Provides one 100 Mb fiber port and two (2) 10/100 copper switch ports
- Two RJ-45 ports support IEEE 802.3u to enable attaching any 10 Mb or 100 Mb device
- Three models for three application environments:
  - Office, wiring closet
  - Factory floor
  - Outdoors
- 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



Office and Wiring Closet

Hardened for Factory Floor

Premium-rated for Outdoors

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™*.

The Magnum CS14 family of Converter Switches with a 100 Mb Fiber port built in covers the full range of application environments, with regular (office), Hardened (factory floor), and Premium-rated (outdoor) versions. Extra features for heavy-duty and extended temperature operation ranges are included selectively in the Hardened factory-floor and Premium-rated outdoor models. This selection of models and fiber port types offers the best price-to-value ratio for each user and installation. Where a Media Converter might have been used, a Converter Switch offers a better value. The compact package is ideal for network edge installations, and is able to be conveniently mounted to suit any application.

The Magnum CS14 regular-package 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°C to 40°C, office grade. A robust metal case with convection cooling is featured. Metal mounting clips are included, and rack-mount tray options are available.

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 (patent pending) 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. Mounting options include stand-alone panel-mounting, DIN-Rail, or rack-mount tray.

The Magnum CS14P Premium-rated units are for temperature un-controlled applications, typically located outdoors. The CS14P models are built with premium-grade extended temperature components, and use similar thermal techniques (patent pending) as the CS14H 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 CS14P should be protected from falling rain. Mounting options include stand-alone panel-mounting, DIN-rail, or rack-mount tray.

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 rack-mount 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.



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Industrial Networking at Its Best™

# Specifications

## Magnum CS14 Converter Switch with 100 Mb fiber

### PERFORMANCE:

Fiber port: 100 Mb HDX / FDX, all types of connectors for multi-mode or single-mode  
 RJ-45 Ports Data Rate: 10 / 100Mbps, FDX and HDX modes.  
 Auto-negotiation and auto-cross MDI-MDIX on both RJ-45 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:

Ethernet IEEE 802.3, IEEE 802.3u; IEEE 802.1p, 100BASE-TX, 10BASE-T, 100BASE-FX

### 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 Temperature ratings:

- CS14: the ambient temperature rating is 0°C to 40°C.
  - CS14H: the ambient temperature rating is -25°C to 60°C long term per independent agency tests (UL), or -40°C to 85°C short term per IEC Type Tests
  - CS14P: the ambient temperature ratings of -40°C to 75°C long term per indep. agency tests (UL), or -50°C to 100°C short term per IEC Type Tests.
- Storage temperature, all models: -40° to 185°F (-40°C to 85°C)  
 Cold start: CS14H model to -20°C, CS14P model to -40°C  
 Ambient Relative Humidity, all models: 5% - 95% (non-condensing)  
 Altitude, all models: -200 to 50,000 ft. (-60 to 15,000m)  
 Conformal coating (humidity protection) option, request quote.  
 H and P models are designed for NEBS compliance, including vibration, shock, and altitude.

### PACKAGING:

Enclosure: Robust sheet metal (steel)  
 Dimensions of units: 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)  
 Power Supply - Hd, Hi: 5.8 oz (165g)  
 Power Supply - Pd, Pi: 7.9 oz (225g)  
 Cooling Method: Convection on regular model, case used as a heat sink on H and P models.

### MOUNTING FOR CS14 FAMILY OF SWITCH UNITS:

Metal panel mounting clips: included  
 DIN-Rail mounting option:  
 Model # DIN-RAIL MC2, illustrated here;  
 Rack-mount option: Model MC14-TRAY.  
 Depth: 6.0", Width 17",  
 Height 2.25"(15 cm D x 43cm W x 5.7cm H)



### SWITCHES:

Fiber port has manual selection of HDX or FDX, default is FDX

### FIBER PORT CONNECTORS:

"ff" selections of the "fiber flavor" (see table below):

- "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.

### RJ-45 PORT CONNECTORS:

RJ-45 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 and in end:

POWER: ON for power applied  
 10/100 per RJ-45 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: ON for power applied

10/100 per RJ-45 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 SUPPLIES for AC (EXTERNAL):

Power input DC jack (8 to 15V) is 2.5mm, center +ve, with 6ft. DC cord  
■ Input: 95-125vac at 60 Hz for "-d" models, 215-240vac at 50 Hz for "-i" models that have IEC power connector in the ext power unit.  
■ Input: 100-240vac at 47-63 Hz for "-Hd", "Hi" models, see footnote 1  
■ Input: 95-260vac at 47-63 Hz for "-Pd", "Pi" models, see footnote 2

### POWER INPUT OPTIONS for DC:

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 18 to 36V DC) built-in screw terminal block for +, -, ground. The 12V 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.  
 Power Consumption, all models: 4.8 Watts typical. 6 Watts max.

### AGENCY APPROVALS AND STANDARDS COMPLIANCE:

UL listed (UL60950), cUL, CE, Emissions meet FCC Part 15, Class A.  
 NEBS L3 and ETSI compliant  
 H and P models: IEEE P1613 Env. Std for Electric Power Substations IEC61850 EMC and Operating Conditions Class C for Power Substations  
 P model: NEMA TS-2 and TEES for traffic control equipment  
 P model: designed for UL 2043 above-the-ceiling installation  
 The "-CL" models are UL/CSA and IEC 60079-15 Class 1, Division 2, Groups A,B,C and D (Master Contract #232420) and ATEX Class 1, Zone 2, per EU Directive 94/9/EC.

WARRANTY: Three years

Made in USA

- 1: External 12V1A power supply, wall plug or power cord for North America AC receptacles. Temperature rating same as CS14, see above. (North America: for spare, order Model PSH-12V1A-Hd. International: order Model PSH-12V1A-Hi with IEC plug).
- 2: External 12V1A power supply, rated for outdoor temperatures same as CS14, see above. Universal AC input with recessed IEC plug. (North America: for spare, order Model PSP-12V1A-Pd, International: order Model PSP-12V1A-Pi with IEC plug).

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Model No.	AMBIENT TEMPERATURE			POWER INPUT					MOUNTING	
	0° to 40°C	-25° to +60°C	-40° to +75°C	d,i AC external	Hd, Hi AC external +12V T.B.	Pd, Pi AC external +12V T.B.	12V DC Term. Block	24V DC Term. Block		-48V DC Term. Block
CS14-ff-d, i	X			X						X
CS14H-ff-Hd, Hi		X			X		X			X
CS14H-ff-12VDC		X					X			X
CS14H-ff-24VDC		X						X		X
CS14HR-ff-24VDC		X						X		DIN-Rail
CS14H-ff-48VDC		X							X	X
CS14P-ff-Pd,Pi			X			X	X			X
CS14P-ff-12VDC			X				X			X
CS14P-ff-24VDC			X					X		X
CS14PR-ff-24VDC			X					X		DIN-Rail
CS14P-ff-48VDC			X						X	X

■ Office & wiring closet ■ Factory Floor ■ Outdoors



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