

Magnum S14

4-port 10/100 Mb Convenient Switch

Features

- Three models for three application environments:
 - Office, wiring closet
 - Factory floor
 - Outdoors
- Adds a convenient network connections anywhere
- Supports IEEE 802.3u auto-negotiation and MDI / MDIX auto-cross to enable attaching a 10 Mb or a 100 Mb device on any port
- AC power for all models, Factory-floor and Outdoor models also have integral DC power terminal blocks
- Same mounting options and packaging as the Magnum 14-series Media Converters



(front view)

(rear view)

Office and Wiring Closet

Hardened for Factory Floor

Premium-rated for Outdoors

The 4-port Magnum™ S14 Convenient Switch™ family 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 three-level selection of models offers the best price-to-value for each user and installation.

For any user who needs a small chunk of Ethernet connectivity, a 4-port “go anywhere” Magnum S14 Switch is a versatile and handy solution. It provides edge access Ethernet ports in a convenient and compact package.

■ The yellow-label Magnum S14 regular units are for office and indoor wiring closet environments. These are the economical base units in the S14 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. A robust metal case with convection cooling is featured. Metal mounting clips are included, and rack-mount tray options are available.

■ The orange-label Magnum S14H Hardened units are for factory floor applications. The S14H 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 red-label Magnum S14P Premium-rated units are for temperature uncontrolled sheltered applications, typically located outdoors. The S14P models are built with premium-grade extended temperature components, and use similar thermal techniques (patent pending) 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. Mounting options include stand-alone panel-mounting, DIN-rail, or rack-mount tray.

All S14 Convenient 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 three of the RJ-45 ports for easy viewing when units are in a rack-mount tray. The Magnum S14 family of Convenient Switches and other Magnum products are designed and manufactured in the USA and backed by a three-year warranty.

Specifications

10/100 Mb Convenient Switch Models S14, S14H, S14P

PERFORMANCE:

Data Rate: 10 / 100 Mb, FDX and HDX modes on all 4 ports.
 Auto-negotiation and auto-cross MDI-MDIX on all four 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
 Data packets that have the 4 bytes tagged VLAN field (IEEE 802.1q) inserted in them are received and transmitted unchanged by all S14's.

OPERATING ENVIRONMENT:

Ambient Temperature ratings

- S14: the ambient temperature rating is 0° to 40°C.
- S14H: 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
- S14P: the ambient temperature ratings of -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, all models: -40° to 185°F (-40° to 85°C)
 Cold start: S14H model to -20°C, S14P 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: S14 Switch Units: 8.6 oz (243g)
 Power Supply - d, i: 5.9 oz (170g)
 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 S14 FAMILY OF SWITCHES:

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)



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, front and end, port #4 front only):

POWER: ON for power applied
 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.

POWER SUPPLIES FOR AC (EXTERNAL):

Power input DC jack (8-15V) is 2.5mm, center +ve, with 6ft. DC cord
■ Input: 115vac at 60 Hz for "-d" models, 230vac at 50 Hz for "-i" models that have IEC power connector in the PS unit
■ Input: 100-240vac at 47-63 Hz for "-Hd" and "Hi" models, see footnote 1
■ Input: 100-240vac at 47-63 Hz for "-Pd" and "Pi" models, see footnote 2

POWER INPUT OPTIONS FOR DC:

12 DC, internal (range of 8.0 to 15V DC), built-in screw terminal block for +, -, ground. The 8-15V DC jack is also present.
 24V DC internal (range of 18 to 36V DC) built-in screw terminal for +, -, ground. The 8-15V DC jack is also present.
 -48V DC internal (range of 30 to 60V DC), built-in screw terminal block for +, -, ground. The 8-15V DC jack is also present.
 Note1: the 8-15V DC jack can be used for dual source DC input
 Note 2: internal DC power floats, user may ground + or - if desired.
 Power Consumption, all models: 3 Watts typical. 4 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 1613 Env. Std for Electric Power Substations
 P model: NEMA TS-2 and TEES for traffic control equipment
 P model: designed for above-the-ceiling (plenum) installation
 IEC61850 EMC and Operating Conditions Class C for Power Substations
 All Models: compliant with EN50155 Railway Applications Standard

WARRANTY:

Three years

Made in USA

Footnotes:

- 1: External 12V1A power supply, wall plug or power cord for North America receptacles AC input. Temperature rating same as S14H, 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 S14P, 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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Ordering Information

- **Magnum S14-d,i:** Magnum Convenient Switch, four 10/100 RJ-45 ports in a compact package, temperature rated for office and wiring closet environments. External AC PS.
- **Magnum S14H-Hd,Hi:** Magnum Hardened Convenient Switch, four 10/100 RJ-45 ports in a compact package, rated for factory floor environments. Internal 8 to 15VDC terminal block. External AC Hardened power supply included.
- **Magnum S14H-12VDC:** Same as S14H-Hd,Hi except external AC Hardened power supply not included
- **Magnum S14H-24VDC:** Same as S14H-12VDC except for 24VDC power input.
- **Magnum S14HR-24VDC:** Same as S14H-24VDC but includes DIN-Rail option, Model DIN-RAIL MC2.
- **Magnum S14H-48VDC:** Same as S14H-12VDC except for -48VDC power input.
- **Magnum S14P-Pd,Pi :** Magnum Premium-rated Convenient Switch, four 10/100 RJ-45 ports in a compact package, rated for temperature un-controlled (outdoor) environments. Internal 8 to 15V terminal block. External AC Premium power supply included.
- **Magnum S14P-12VDC:** Same as S14P-Pd,Pi except external AC Premium power supply not included.
- **Magnum S14P-24VDC:** Same as S14P-12VDC except for 24VDC power input.
- **Magnum S14PR-24VDC:** Same as S14P-24VDC but includes DIN-Rail option, Model DIN-RAIL MC2.
- **Magnum S14P-48VDC:** Same as S14P-12VDC except for -48VDC power input.