

STRIDE™ INDUSTRIAL UNMANAGED ETHERNET MEDIA CONVERTERS – DATA SHEET



SE-MC2U-ST



SE-MC2U-SC

Description:

STRIDE SlimLine Industrial Unmanaged Ethernet copper to Fiber Converter with one 10/100BaseT auto-detecting, auto-crossover and auto-polarity RJ45 Ethernet Port and one 100BaseFX Fiber Optic Port (multimode fiber connector for links up to 4km, ST or SC type connector depending on model). Redundant power inputs with surge and spike protection. DIN rail mounting. Supports store & forward wire speed switching and full-duplex with flow control. UL, CSA (CUL), & CE



NOTE: FOR ADDITIONAL PRODUCT DETAILS, A USER MANUAL, SE-USER-M, IS AVAILABLE AS A DOWNLOADABLE PDF FILE FROM THE ONLINE DOCUMENTATION AREA OF THE AUTOMATIONDIRECT WEBSITE.

General Specifications	
Ethernet switch type	2 ports
Operating mode	Store and forward wire speed switching, non-blocking
Devices supported	All IEEE 802.3 compliant devices are supported
Standards	IEEE 802.3, 802.3u, 802.3x
MAC addresses	1024 addresses
Memory bandwidth	3.2 Gbps
Latency for 10 Mbps ports	16 us + frame time (typical)
Latency for 100 Mbps ports	5 us + frame time (typical)
Power input	Redundant Input Terminals
Input power (typical with all ports active at 100 Mbps)	2.0 W
Input voltage	10-30 VDC (continuous) - Class 2 Power Supply
Reverse power protection	Yes
Transient protection	15,000 watts peak
Spike protection	5,000 watts (10x for 10 us)
Ethernet isolation	1500 VRMS 1 minute
Operating temperature range	-10 to +60 °C (+14 to +140 °F), cold startup at -10 °C (+14 °F)
Storage temperature range	-40 to +85 °C (-40 to +185 °F)
Humidity (non-condensing)	5 to 95% RH
Environmental Air	No corrosive gasses permitted
Vibration, shock & freefall	IEC68-2-6, -27, -32
Agency Approvals	UL/cUL 508, CSA C22 per EN61010-1, UL/cUL 1604 (Class 1, Div. 2, Groups A, B, C, D), CSA C 22.2/213.9 per EN50021/EN60079-15 (Zone 2, Category 3), CE (ATEX)
EMI emissions	FCC part 15, ICES-003, EN55022
EMC immunity	IEC61326-1
Hazardous locations	UL1604, CSA C22.2/213 (Class 1, Div.2) (file #E200031); EN50021/EN60079-15 (Zone2)
RoHS and WEEE	RoHS (Pb free) and WEEE compliant
Packaging and protection	UL94V0 Lexan, IP30
Dimensions (L x W x H)	See mechanical diagrams for details
Weight	4 oz (0.11 kg)

NOTE: DIMENSIONS, INSTALLATION AND WIRING INFORMATION IS SHOWN ON THE BACK OF THIS DATA SHEET.

Copper RJ45 Port: (10/100BaseT)	
10/100BaseT ports	Shielded RJ45
Protocols supported	All standard IEEE 802.3
Ethernet compliancy	IEEE 802.3, 802.3u, 802.3x
Auto-crossover	Yes, allows you to use straight-through or crossover wired cables
Auto-sensing operation	Yes, Full and half duplex
Auto-negotiating	Yes, 10BaseT and 100BaseT
Auto-polarity	Yes, on the TD and RD pair
Flow control	Automatic
Ethernet isolation	1500 VRMS 1 minute
Plug and play	Yes
Cable requirements	Twisted pair (Cat. 5 or better) (shielded recommended)
Max. cable distance	100 meters

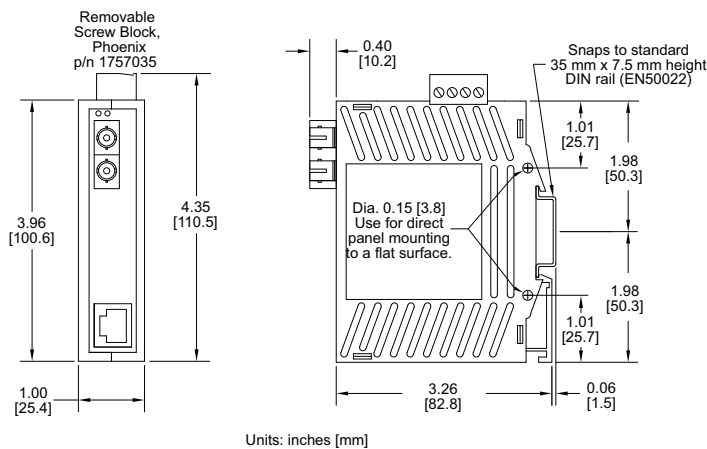
Fiber Port: (100BaseFX multimode)	
100BaseFX ports	1
Fiber port mode	Multimode (mm)
Fiber port connector	ST - model SE-MC2U-ST SC - model SE-MC2U-SC
Optimal fiber cable	50/125 or 62.5/125 μm
Center wavelength	1300 nm
Multimode	Links up to 4 km typ.; 1300 nm; use with 50 or 62.5/125 um fiber > Transmitter power (dB): -21 min., -17 typ., -14 max > Receiver sensitivity (dB): -34 typ., -31 max
Nominal max. distance (full duplex)	4 km
Half and full duplex	Full duplex
Ethernet compliance	100BaseFX
Eye safety (laser)	IEC 60825-1, Class 1; FDA 21 CFR 1040.10 and 1040.11

Safety Standards:



Dimensions:

Media Converters – SE-MC2U-ST and SE-MC2U-SC



Units: inches [mm]

Installation – DIN Rail Mounting:

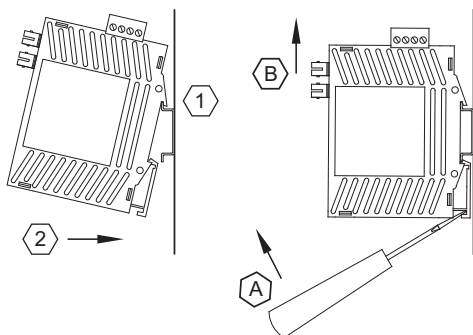
The converter can be snapped onto a standard 35 mm x 7.5 mm height DIN rail (Standard: CENELEC EN50022) and can be mounted either vertically or horizontally.

DIN rail mounting steps:

1. Hook top back of unit over the DIN rail.
2. Push bottom back onto the DIN rail until it snaps into place.

DIN rail removal steps:

- A. Insert screwdriver into DIN clip and pry until it releases from the DIN rail.
- B. Unhook top of unit from DIN rail.



WARNING

To minimize the risk of potential safety problems, you should follow all applicable local and national codes that regulate the installation and operation of your equipment. These codes vary from area to area and it is your responsibility to determine which codes should be followed, and to verify that the equipment, installation, and operation are in compliance with the latest revision of these codes.

Equipment damage or serious injury to personnel can result from the failure to follow all applicable codes and standards. We do not guarantee the products described in this publication are suitable for your particular application, nor do we assume any responsibility for your product design, installation, or operation.

If you have any questions concerning the installation or operation of this equipment, or if you need additional information, please call Technical Support at 770-844-4200.

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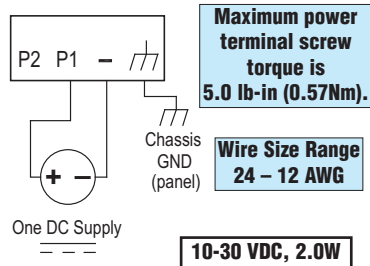
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Power Wiring:

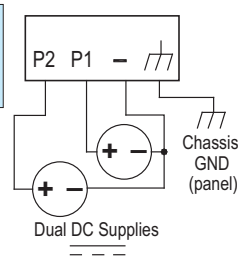
The converter can be powered from the same DC source that is used to power your other devices. To maintain the UL508 listing, this must be a Class 2 power supply. A DC voltage in the range of 10 to 30 VDC needs to be applied between the P1 (plus) terminal and the Minus terminal as shown below. The chassis screw terminal should be tied to panel or chassis ground. To reduce down time resulting from power loss, the converter can be powered redundantly with a second power supply as shown below.

A recommended DC power supply is AutomationDirect.com Part number PSC-24-015.

Single DC Power



Redundant DC Power



Communications Ports Wiring:

The converter provides connections to standard Ethernet devices such as PLCs, Ethernet I/O, industrial computers and much more. Use data-quality (not voice-quality) twisted pair cable rated category 5 (or better) with standard RJ45 connectors. Straight-through or crossover RJ45 cable can be used for all devices the converter is connected to as all the ports are capable of auto-mdi/mdix-crossover detection.



NOTE: THE FOLLOWING **AUTOMATIONDIRECT** PLC ETHERNET MODULES ARE NOT COMPATIBLE WITH THE **STRIDE** ETHERNET SWITCHES AND MEDIA CONVERTER WITH FIBER OPTIC CONNECTIONS BECAUSE THE MODULES HAVE A SPEED OF 10BASEF (FIBER OPTIC) ONLY: ETHERNET COMMUNICATIONS MODULE, P/N H2-ECOM-F & H4-ECOM-F; ETHERNET BASE CONTROLLER MODULE, P/N H2-EBC-F & H4-EBC-F; ETHERNET REMOTE MASTER MODULE, P/N H2-ERM-F & H4-ERM-F.

The RJ45 Ethernet port connector bodies on the converter are metallic and connected to the Chassis GND terminal. Therefore, shielded cables may be used to provide further protection. To prevent ground loops, the cable shield should be tied to the metal connector body at one end of the cable only. Electrical isolation is also provided on the Ethernet ports for increased reliability.

Additional Help and Support

- For additional product support, specifications, and installation, a User Manual, SE-USER-M, is available as a downloadable PDF file from the Online Documentation area of the **AutomationDirect** Web site.
- For additional technical support and questions, call our Technical Support team @ 770-844-4200.

