AUTOMATIONDIRECT.com
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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: 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

NOTE: FOR ADDITONAL PRODUCT DETAILS, A USER MANUAL, SE-USER-M, IS AVAILABLE AS A DOWNLAODABLE 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 and shock	IEC68-2-6, -27
Agency Approvals	UL/cUL 508, CSA C22 per EN61010-1, UL/cUL Haz Loc (Class 1, Div. 2, Groups A, B, C, D), CSA C 22.2/213 EN60079-15 (Zone 2, Category 3), CE (ATEX)
EMI emissions	FCC part 15, ICES-003, EN61000-6-4
EMC immunity	EN61000-6-2
Hazardous locations	UL HazLoc, CSA C22.2/213 (Class I, Div.2) (file #E200031); EN50021/EN60079-15 (Zone2)
RoHS and WEEE	RoHS (Pb free) and WEEE compliant
Packaging and protection	UL94VO Lexan, IP30
Dimensions (L x W x H)	See mechanical diagrams for details
Weight	4 oz (0.11 kg)

Safety Standards:

c UL us — **Electrical Safety**

CE — **European Directives**

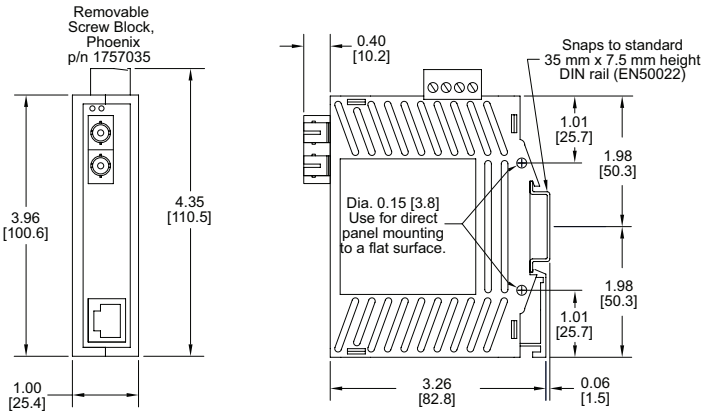
FC — **US Emissions**

WEEE Compliant

RoHS — **RoHS Compliant**

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.

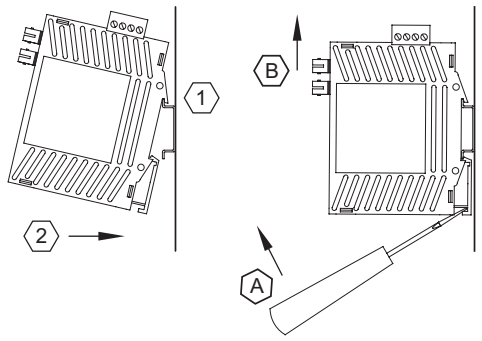
DIN rail mounting steps:

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

All power, input and output (I/O) wiring must be in accordance with Class I, Division 2 wiring methods and in accordance with the authority having jurisdiction.
"This Equipment is Suitable for Use in Class I, Division 2, Groups A, B, C, D or Non-Hazardous Locations Only".

WARNING – EXPLOSION HAZARD – SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.

WARNING – EXPLOSION HAZARD – WHEN IN HAZARDOUS LOCATIONS, DISCONNECT POWER BEFORE REPLACING OR WIRING UNITS.

WARNING – EXPLOSION HAZARD – DO NOT DISCONNECT EQUIPMENT UNLESS POWER HAS BEEN SWITCHED OFF OR THE AREA IS KNOWN TO BE NONHAZARDOUS.

WARNING – EXPLOSION HAZARD – IN HAZARDOUS OR POTENTIALLY HAZARDOUS LOCATIONS, DO NOT SEPARATE ANY PART OF THE UNIT WHEN ENERGIZED. USE THE UNIT FOR INTERNAL CONNECTIONS ONLY.

Tout pouvoir, le câblage d'entrée et de sortie (I/O) doivent être conformes aux méthodes de câblage de Classe I, Division 2 et conformément à l'autorité compétente.
"Cet équipement est adapté pour une utilisation en Classe1, Division 2, Groupes A, B, C et D ou endroits non-dangereux seulement ".

AVERTISSEMENT – RISQUE D'EXPLOSION – LA SUBSTITUTION DE TOUT COMPOSANT PEUT NUIRE À LA CONFORMITÉ DE CLASSE I, DIVISION 2.

AVERTISSEMENT – RISQUE D'EXPLOSION – LORSQUE DANS DES ENDROITS DANGEREUX, DÉBRANCHEZ LE CORDON D'ALIMENTATION AVANT DE REMPLACER OU DE BRANCHER LES MODULES.

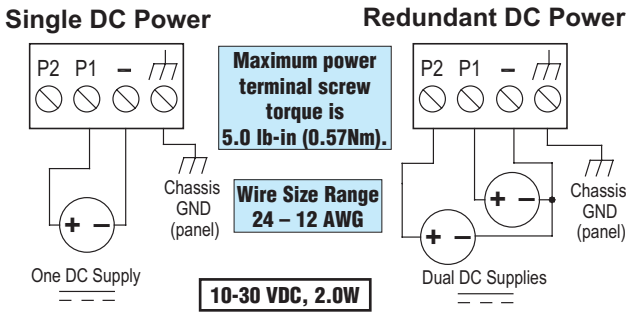
AVERTISSEMENT – RISQUE D'AVERTISSEMENT – NE DÉBRANCHEZ PAS L'ÉQUIPEMENT PENDANT QUE LE CIRCUIT EST DIRECT OU À MOINS QUE L'ENVIRONNEMENT SOIT CONNU POUR ÊTRE LIBRE DE CONCENTRATIONS INFLAMMABLES.

AVERTISSEMENT – RISQUE D'EXPLOSION – DANS LES ENDROITS DANGEREUX OU POTENTIELLEMENT DANGEREUX, NE PAS SEPARER UNE PARTIE DE L'UNITE SOUS TENSION. SEULEMENT UTILISEZ L'APPAREIL POUR LES CONNEXIONS INTERNES.

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 PSL-24-030. When powering multiple switches from a common power supply, it is most reliable to power the switches sequentially rather than simultaneously. The characteristics of the power supply and the significant startup current of the switches may result in an error in booting the switches when powered simultaneously.



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.