

Stride™ Media Converter

2-Port Media Converter

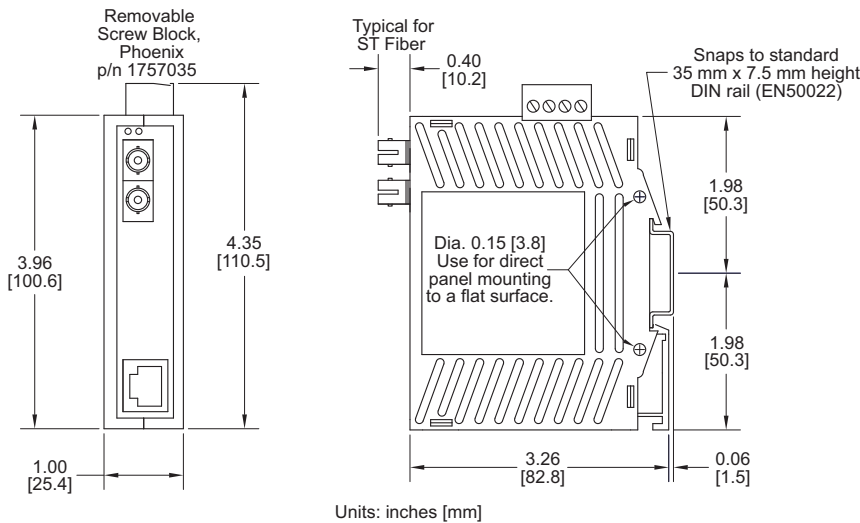
STRIDE™ Industrial Ethernet to Fiber Converter with one 10/100BaseT auto-detecting, auto-crossover and auto-polarity RJ45 Ethernet port and one 100BaseFX Fiber optic port (ST type multimode fiber connector for links up to 4km). Redundant power inputs with surge and spike protection. DIN rail mounting.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

Mounting dimensions



SE-MC2U-ST

Media Converter – SE-MC2U-ST



ACT/LNK LED

This is the **Yellow** LED on models with two LEDs per RJ45 port.

ON (yellow) (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
ON (yellow) (flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Speed 10/100 LED

This is the **Green** LED on models with two LEDs per RJ45 port.

ON (green)	A 100 Mbps (100BaseT) connection is detected.
OFF	A 10 Mbps (10BaseT) connection is detected.

Fiber LED

This is the **Green** LED on the fiber optic models.

ON (green) (not flashing)	Indicates that there is a proper fiber connection (link) between the port and another fiber device, but no communications activity is detected.
ON (green) (flashing)	Indicates that there is a proper fiber connection (link) between the port and another fiber device, and that there is communications activity.
OFF	Indicates that there is not a proper fiber connection (Link) between the port and another fiber device. Make sure the fiber optic cable has been plugged securely into the ports at both ends.






Specifications

The following are specifications relevant to the SE-MC2U-ST Media Converter.

Input power (typical with all ports active at 100 Mbps)	2.0 W
Weight	4 oz (0.11 kg)
Power connector max. screw torque	3.48 lb-in

Stride™ Industrial Ethernet Switches & Media Converter

At a glance...

Industrial Ethernet Switches and Media Converter	
Part Number	Description
SE-SW5U	 STRIDE™ Industrial Ethernet Switch with five 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection. Auto-crossover. DIN rail mounting. Supports store & forward wire speed switching and full-duplex with flow control. UL, CSA (CUL), & CE
SE-SW8U	 STRIDE™ Industrial Ethernet Switch with eight 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection. Auto-crossover. DIN rail mounting. Supports store & forward wire speed switching and full-duplex with flow control. UL, CSA (CUL), & CE
SE-SW5U-ST	 STRIDE™ Industrial Ethernet Switch with four 10/100BaseT RJ45 Ethernet ports and one 100BaseFX Fiber optic port (ST type multimode fiber connector for links up to 4km). Redundant power inputs with surge and spike protection. Auto-crossover. DIN rail mounting. Supports store & forward wire speed switching and full-duplex with flow control. UL, CSA (CUL), & CE
SE-SW9U-ST	 STRIDE™ Industrial Ethernet Switch with eight 10/100BaseT RJ45 Ethernet ports and one 100BaseFX Fiber optic port (ST type multimode fiber connector for links up to 4km). Redundant power inputs with surge and spike protection. Auto-crossover. DIN rail mounting. Supports store & forward wire speed switching and full-duplex with flow control. UL, CSA (CUL), & CE
SE-MC2U-ST	 STRIDE™ Industrial Ethernet to Fiber Converter with one 10/100BaseT auto-detecting, auto-crossover and auto-polarity RJ45 Ethernet port and one 100BaseFX Fiber optic port (ST type multimode fiber connector for links up to 4km). 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

Specifications – all RJ45

Copper RJ45 Ports: (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

Specifications – all Fiber

ST Fiber Ports: (100BaseFX multimode)	
100BaseFX ports	1
Fiber port mode	Multimode (mm)
Fiber port connector	ST
Optimal fiber cable	50/125 or 62.5/125 µm
Center wavelength	1300 nm
Multimode	Links up to 4 km typ.; 1310 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

Complete documentation
Documentation can be downloaded from
www.automationdirect.com



NOTE: All part numbers are rated Class 1, Div 2.



RoHS



Stride Industrial Ethernet Switches & Media Converter

Specifications – General

General Specifications	
Ethernet switch type	Up to 9 ports
Operating mode	Store & 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 SE-MC2U-ST, 2.0 W SE-SW5U, 3.0 W SE-SW5U-ST, 4.0 W SE-SW8U, 5.0 W SE-SW9U-ST
Input voltage (all models)	10-30 VDC (continuous)
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
Vibration, shock & freefall	IEC68-2-6, -27, -32
Electrical safety	UL508/CSA C22, EN61010-1 (file #E20031)
EMI emissions	FCC part 15, ICES-003, EN55022
EMC immunity	IEC61326-1
Hazardous locations	UL1604, CSA C22.2/213 (Class I, Div.2); EN50021/EN60079-15 (Zone2)
MTBF	Mean Time Between Failure: >1,000,000 hours
RoHS and WEEE	RoHS (Pb free) and WEEE compliant
Packaging and protection	IP30
Dimensions (L x W x H)	See mechanical diagrams for details
Weights (typical)	4 oz (0.11 kg) for media con- verter and 5-port (SE-SW5U, SE-SW5U-ST, SE-MC2U-ST); 6 oz (0.17 kg) for 8/9-port (SE-SW8U, SE-SW9U-ST)

Installation

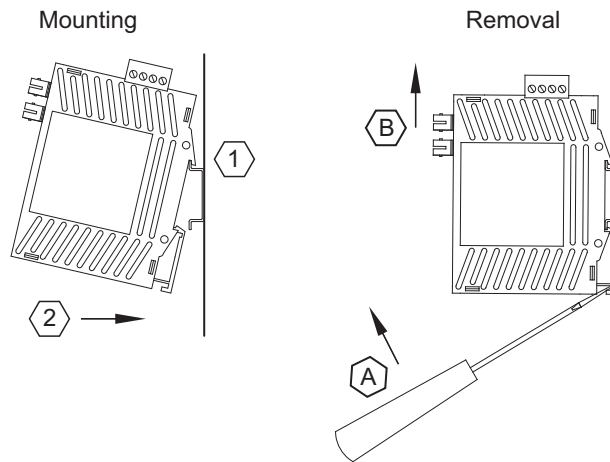
DIN Rail Mounting

Recommended 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.

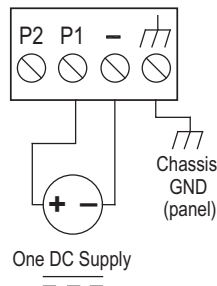
Recommended DIN rail removal steps:

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

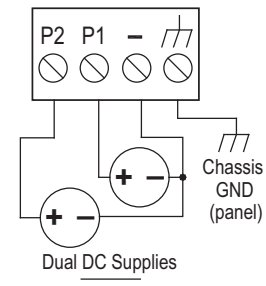


Power wiring

Single DC Power



Redundant DC Power



Unmanaged Ethernet Switches and Media Converters

Performance and Quality

Stride™



Introducing Stride

Stride is our NEW line of industrial grade unmanaged Ethernet switches and media converters. Designed with our PLC, HMI and drive customers in mind, Stride Ethernet switches are specifically built for industrial environments. With a Stride industrial Ethernet switch on an isolated control LAN, you can reduce data collisions that slow down your network. Stride Ethernet switches automatically determine and remember the devices connected to each port and route messages only through the appropriate ports. Install Stride switches and your Ethernet control network will maintain more consistent cycle times even under heavy I/O and data exchange.

Fiber Optic Support

Stride offers models that support ST type Multimode Fiber Optic connections. Fiber optic cables are immune to electrical and magnetic interference. Fiber optics cannot be damaged by induced voltage transients. Fiber optic cabling not only enhances reliability, it saves time you might have spent tracking down those nasty communications problems caused by electrical interference. Also, your network distance is greatly increased when using Fiber optic cabling.

Simple Installation

With no user setup required, the Stride switches and media converters will immediately start operating as soon as you power them up and connect them to the network.

Features

Advanced Hardware

- All 10/100 RJ45 ports are auto-detecting, auto-crossover and auto-polarity
- Redundant power inputs with industrial surge and spike protection
- Optional 100Mbps multimode fiber optic port for distances up to 4km

Real-time Performance

- Store and forward wire speed switching - no delays
- Full-duplex operation with flow control (no collisions!)
- Auto crossover (MDI/MDIX) and auto polarity

True Industrial Design

- UL, CSA (CUL), & CE certified
- Hazardous locations rated for Class 1, Div. 2

PLC Overview

DL05/06 PLC

DL105 PLC

DL205 PLC

DL305 PLC

DL405 PLC

Field I/O

Software

C-more HMIs

Other HMI

AC Drives

Motors

Steppers/ Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Current Sensors

Pushbuttons/ Lights

Process

Relays/ Timers

Comm.

TB's & Wiring

Power

Circuit Protection

Enclosures

Appendix

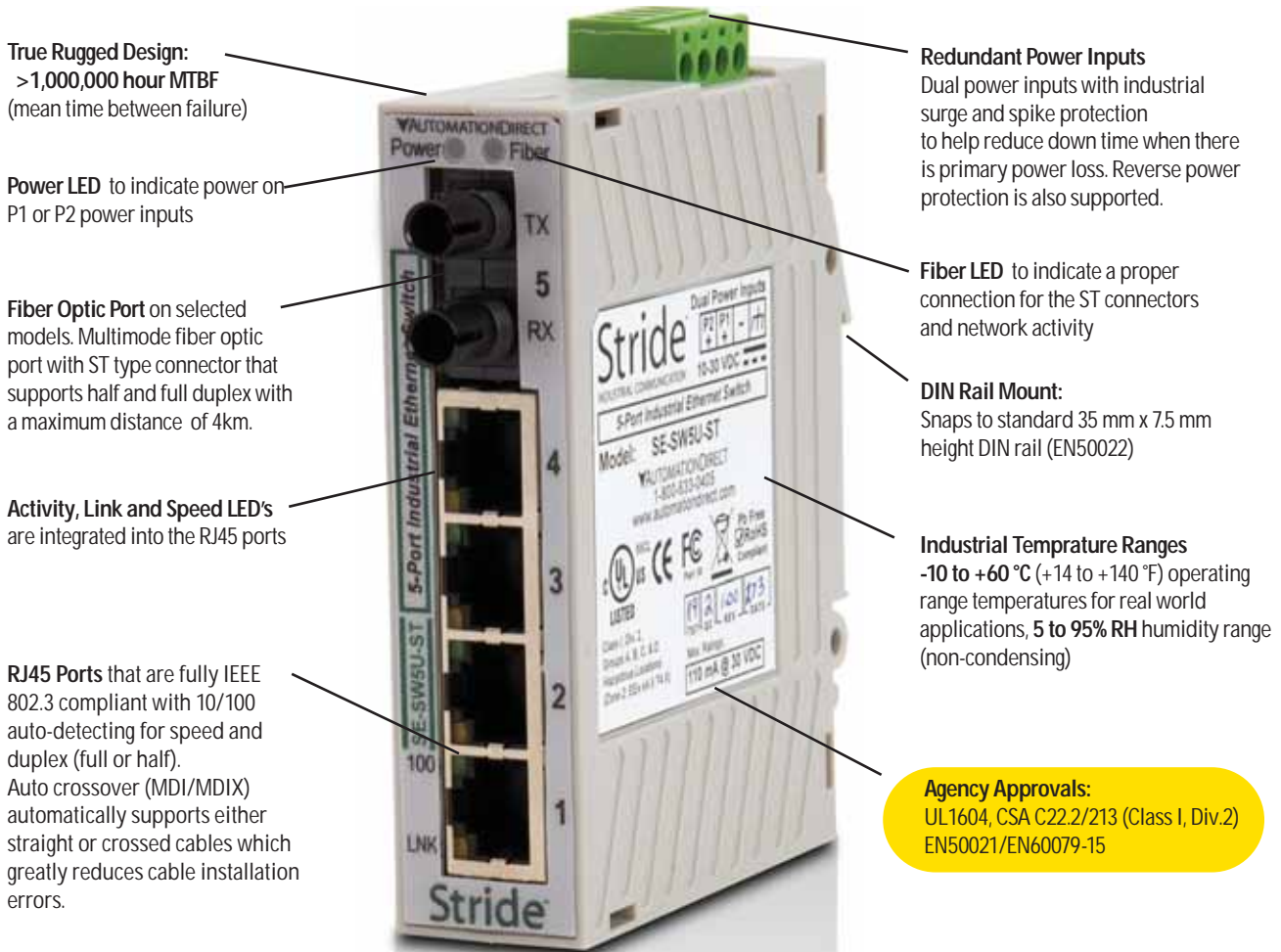
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Deterministic Control

The Stride switches automatically determine and remember where each Ethernet device is located and route messages only through the appropriate port. This gives devices on the network an open communications channels and helps minimize network loading. Another benefit is the 10/100 auto-speed selection that enhances the performance of 10 Megabit Ethernet devices by speeding up their message transmissions to 100 Megabit when they are passed to a faster Ethernet backbone.

Increased Reliability

The Stride Ethernet switches have been designed for the industrial environment. They will survive extreme temperatures, as well as dirty, unreliable industrial power. Meeting UL 1604 (Class I Div. 2), and the IEC68-2 standard for vibration resilience, the Stride switches will provide years of reliable performance in applications too tough for commercial grade switches.



For detailed specifications, refer to the Specification Charts in the STRIDE technical section of the Catalog