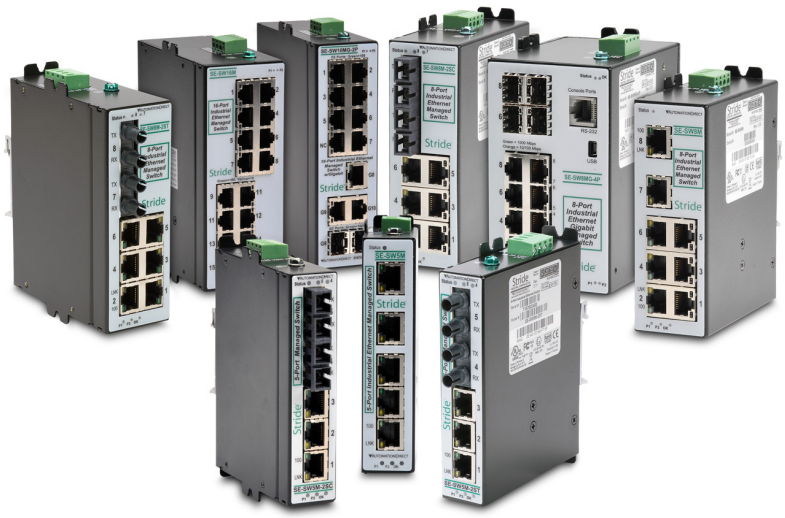
Stride® Managed Industrial Ethernet Switches

Industrial Hardened Full Feature Layer 2 Switch

• For detailed specifications on all models, see following pages

		SE Series
Price		
		starting at $571.00 (5 port)
Full Feature Layer 2 Switch		
		✓
Industrial Temperature Ranges		
	Wide Temp	-40 to +75°C
Ethernet Connectivity		
	RJ45 Ports	up to 1000 Mbps
	Fiber Optic Ports	✓
	SFP Ports	✓
Port Count		
		5,8,10,16
Industrial Protocol Management		
	Modbus TCP	Read
	EtherNet/IP	—
Network Redundancy		
	STP/RSTP	✓
	Proprietary Fast Recovery	Real-Time Ring
Mounting		
	DIN Rail Mount	✓
	Panel Mount	Integrated
Input Power		
	Redundant Power Inputs	✓
	Reverse Polarity Protection	✓
	Power LED	✓
	Power Alarm	✓
Agency Approvals		
	UL508 / 61010	✓
	Haz Loc–Class 1 Div 2	✓
	ATEX Zone 2	✓
	CE	✓
Warranty		
		5 years

Stride® SE Series Managed Switches



Features

- Modbus TCP read capability
- Wide temp range
- DIN-rail mount with integrated panel mount option
- Metal housing
- 12, 24 VDC redundant input
- Gigabit Ethernet (GbE) models
- Haz Loc
- 5 -year warranty

RoHS Compliant

Stride SE Series Managed Models				
Part Number	*Price*	*Ethernet Ports*	*Fiber Ports*	*Input Power (max)*
SE-SW5M	$571.00	5	–	3.6 W
SE-SW5M-2SC	$1,048.00	3	2 SC	5.6 W
SE-SW5M-2ST	$1,048.00		2 ST	
SE-SW10MG-2P	$1,682.00	7, 1 GbE, 2 GbE combo	2 GbE SFP combo*	7W
SE-SW16M	$1,429.00	16	–	

*Optional SFP modules sold separately.

StrideSE Series Managed Industrial Ethernet Switches

Specifications

General Specifications	
Ethernet Switch Type	Industrial Ethernet managed switch with 5 or 8 ports
Operating Mode	Store and forward wire speed switching, non-blocking. Broadcast and multicast storm protection
Devices Supported	All IEEE 802.3 compliant devices are supported
Ethernet Compliance	IEEE 802.3 (10Mbps Ethernet supports legacy devices) IEEE 802.3u (Fast Ethernet 100Mbps for newer devices) IEEE 802.3x (Full-Duplex with Flow Control) IEEE 802.1D/w (Rapid Spanning Tree for redundant rings and Spanning Tree for interoperability) IEEE 802.1p (Priority Queuing – QoS, CoS, ToS/DS) IEEE 802.1Q (VLAN for traffic segregation) IEEE 802.3ab
Ethernet Protocols Supported	SNMPv1 / v2 / v3, RMON, DHCP, SNTP, TFTP, STP, RSTP, QoS / CoS / ToS / DS, IGMPv1 / v2, VLAN (tag and port based), HTTP, HTTPS (SSL and TSL), Telnet, SSH and more
Industrial Protocols Supported	Modbus / TCP, EtherNet / IP, PROFInet, Foundation Fieldbus HSE and others
MAC Addresses	2048 addresses
Memory Bandwidth	3.2 Gbps
Latency (typical)	10M ports 16 µs + frame time 100M & 1000M ports 5 µs + frame time
Transient Protection	15,000 watts peak
Spike Protection	5,000 watts (10x for 10 µs)
Ethernet Isolation	1500 VRMS 1 minute
Operating Temperature Range	-40 to +75°C (cold startup at -40°C), -40 to +167°F (cold startup at -40°F)
Storage Temperature Range	-40 to +85°C [-40 to +185°F]
Humidity (non-condensing)	5 to 95% RH
Environmental Air	For use in Pollution Degree 2 environment. No corrosive gases permitted
Vibration and shock	IEC60068-2-6 and -27
EMI Emissions	FCC part 15, ICES-003, EN61000-6-4
EMC Immunity	IEC61000-6-2, CE
Eye Safety (fiber models)	IEC60825-1, Class 1; FDA 21 CFR 1040.10 and 1040.11
RoHS and WEEE	RoHS and WEEE compliant
Packaging and Protection	Metal case; IP40
Agency Approvals	Electrical safety: UL Haz Loc (Class 1, Div 2, Group A, B, C, D) E200031 CSA C22.2/14; EN61010-1, CE, Marine and offshore rated per ABS

Power Details	
Power Input	Redundant input terminals
Input Voltage	10-30 VDC (continuous)–Class 2 Power Supply
Reverse Power Protection	Yes
"OK" Output Indicates Power and Operational Status	Voltage same as switch input voltage Maximum current output 0.5 Amp
Power Consumption	Refer to Stride SE Series Managed Models table

RJ45 Ports	
Port Type	Shielded RJ45
Ethernet Compliance	IEEE 802.3i, 802.3u, 802.3x for 10/100 Ethernet IEEE 802.3ab, 802.3z for Gigabit Ethernet
Auto-Crossover	Yes, allows you to use straight-through or crossover wired cables
Auto-Sensing Operation	Yes, full and half duplex
Auto-Negotiating Speed	Yes
Flow Control	Automatic
Cable Requirements	Twisted pair (Cat5e or better) (shielded recommended)
Max. Cable Distance	100 meters

SC or ST Fiber Port: (100BaseFX multimode)	
100BaseFX Ports	2
Fiber Port Connector	ST or SC, by model
Optimal Fiber Cable	50/125 or 62.5/125 µm
Center Wavelength	1300 nm
Multimode	Links up to 4 km typ.; > Transmitter power (dBm): -21 min, -17 typ, -14 max > Receiver sensitivity (dBm): -34 typ, -31 max
Nominal Max. Distance (full duplex)	4 km
Eye Safety (laser)	IEC 60825-1, Class 1; FDA 21 CFR 1040.10 and 1040.11

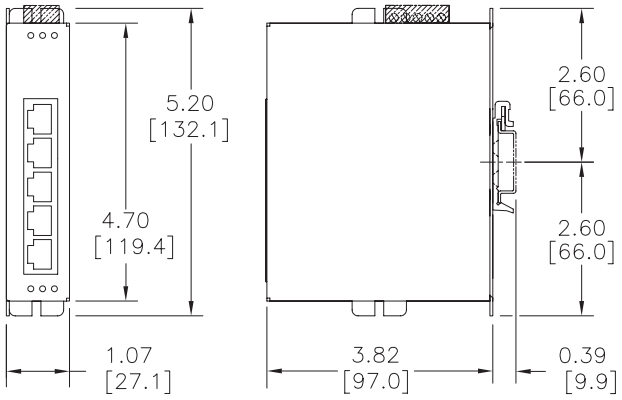
SFP Ports
SFP (pluggable) ports accept Mini-GBIC (SFP) transceivers with a speed of 1000Mbps or 100Mbps
See SFP datasheet for optional fiber transceiver specification

Management Interfaces	
Ethernet ports (RJ45)	Browser (Secure), Text (Telnet and SSH), CLI (command line interface) and SNMP (see the user manual for supported MIBs)
Console ports: USB and RS232 (RJ45)	Text (Telnet), CLI (command line interface)

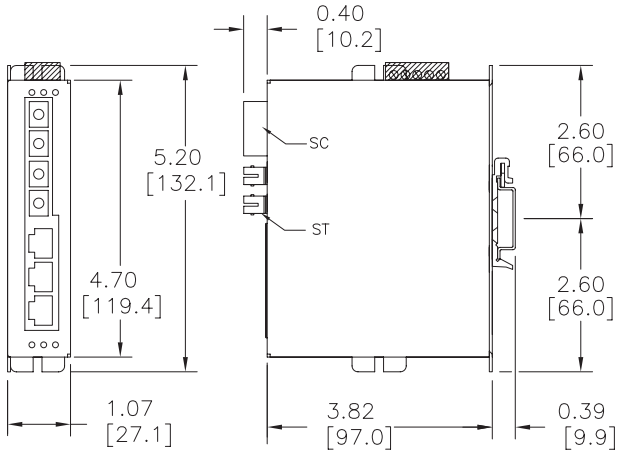
StrideSE Series Managed Industrial Ethernet Switches

Dimensions

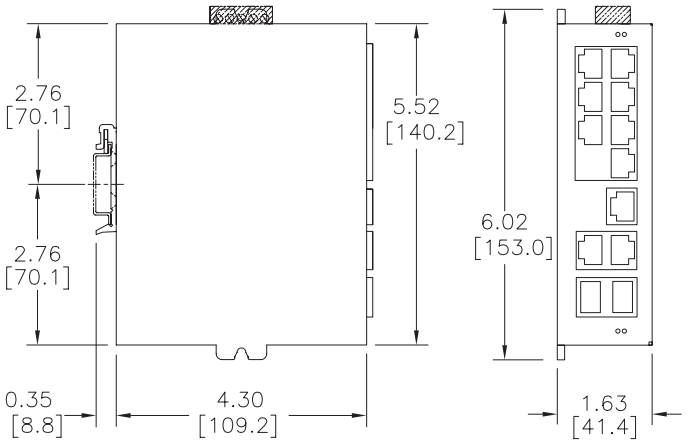
Inches [mm]



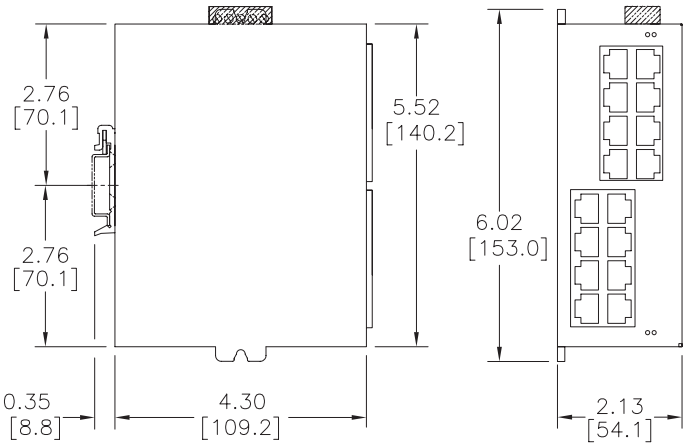
SE-SW5M



SE-SW5M-2SC
SE-SW5M-2ST



SE-SW10MG-2P



SE-SW16M

See our website: www.AutomationDirect.com for complete engineering drawings.

Stride Industrial Ethernet Fiber Transceivers Fast Ethernet

Description:
STRIDE 100Mb Small Form Factor Pluggable (SFP) transceiver modules (Transmit/Receive). Hot Swappable. 1310nm wavelength. Data transmission up to 4km multimode fiber (SFP-4K-FMF) or 30km singlemode fiber (SFP-30K-FSF). LC duplex receptacle, SFP Multi-Source Agreement compliant.

NOTE: Port speed settings for the Stride switch must be manually set to 100 Mbps.

Part Number	Mode	Light Source	Max Trans. Distance	Price
SFP-4K-FMF	Multi-mode	1310 nm, FP	4km	$54.00
SFP-30K-FSF	Single-mode		30 km	$48.50
Note: Use only Gigabit speed SFPs with SE2-SW10UG-2P-T				

Transmitter Optical characteristics

Parameter (unit)		Minimum	Typical	Maximum
Output optical power (dBM)	SFP-4K-FMF	-9		0
	SFP-30K-FSF	-15		-8
Extinction Ratio (dB)	SFP-4K-FMF	8.2		
	SFP-30K-FSF			
Center Wavelength (nm)	SFP-4K-FMF	1261	1310	1360
	SFP-30K-FSF			
Spectral width - RMS (nm)	SFP-4K-FMF			7
	SFP-30K-FSF			4
Rise / Fall Time - 10% - 90% (ns)	SFP-4K-FMF			2
	SFP-30K-FSF			

General Specifications

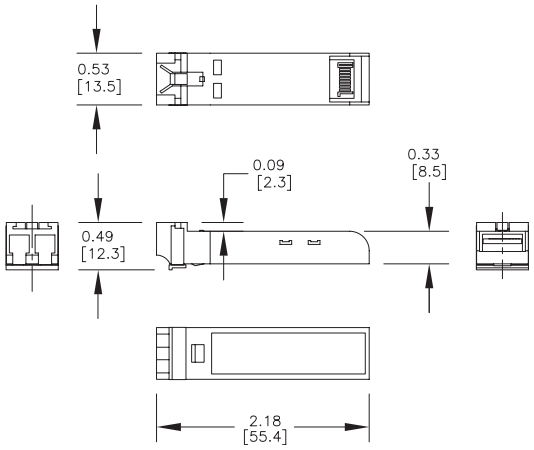
Connector Type		Type LC connector with bail latch
Operating Temperature range		-40 to +85 °C [-40 to +185 °F]
Storage temperature range		-40 to +85 °C [-40 to +185 °F]
Humidity (non-condensing)		5 to 95% RH
Link Speed		Gigabit Ethernet
Laser Type		FP laser diode (Class 1 laser safety standard IEC 60825 compliant)
Media	SFP-4K-FMF	Multi-mode Fiber
	SFP-30K-FSF	Single-mode Fiber
Fiber	SFP-4K-FMF	62.5 / 125 µm
	SFP-30K-FSF	9 / 125 µm
Code	SFP-4K-FMF	FX5
	SFP-30K-FSF	100LX
Distance	SFP-4K-FMF	4km
	SFP-30K-FSF	30 km
Compliances	SFP-4K-FMF	125Mbps IEEE802.3u 100BASE-FX compliant 125Mbps FDDI ISO/IEC 9314-1 compliant
	SFP-30K-FSF	125Mbps IEEE802.3ah 100BASE-LX10 compliant 155Mbps ITU-T G957 STM S-1.1/L-1.1 compliant 155Mbps SONET OC-3 IR-1/LR-1 compliant
Inputs / Outputs		AC-coupled differential inputs and outputs

Receiver Optical characteristics

Parameter (unit)		Minimum	Maximum
Sensitivity (dBm)	SFP-4K-FMF		-30
	SFP-30K-FSF		-34
Operating Wavelength (nm)	SFP-4K-FMF	1260	1620
	SFP-30K-FSF		
Loss of Signal - Deasserted (dBm)	SFP-4K-FMF		-30
	SFP-30K-FSF		-35
Loss of Signal - Asserted (dBm)	SFP-4K-FMF	-45	
	SFP-30K-FSF		
Loss of Signal - Hysteresis (dB)	SFP-4K-FMF	0.5	
	SFP-30K-FSF		

Dimensions

Inches [mm]



Safety Standards:

Electrical Safety | European Directives | WEEE Compliant | RoHS Compliant | US Emissions

Stride Industrial Ethernet Fiber Transceivers Gigabit Ethernet

Description:

STRIDE Gigabit (1.25GB) Small Form Factor Pluggable (SFP) transceiver module (Transmit/Receive). Hot Swappable. Short or long wavelength of 850nm or 1310nm, dependant on model. Supports data transmission up to 550 meters, 2km, 10 km, or 30 km on a single-mode or multi-mode fiber, dependant on model. LC duplex receptacle, SFP Multi-Source Agreement compliant.

Part Number	Mode	Light Source	Max Trans. Distance	Price
SFP-500-GMF	Multi-mode	850 nm, VCSEL	550m	$43.00
SFP-2K-GMF		1310 nm, FP	2km	$72.00
SFP-10K-GSF	Single-mode		10 km	$43.00
SFP-30K-GSF		1310 nm, DFB	30 km	$99.00

Note: Use only Gigabit speed SFPs with SE2-SW10UG-2P-T

Transmitter Optical characteristics

Parameter (unit)		Minimum	Typical	Maximum
Output optical power (dBM)	SFP-500-GMF	-9.5		-4
	SFP-2K-GMF	-9		-1
	SFP-10K-GSF	-9.5		-3
	SFP-30K-GSF	-2	1	3
Extinction Ratio (dB)	SFP-500-GMF	9		
	SFP-2K-GMF			
	SFP-10K-GSF			
	SFP-30K-GSF			
Center Wavelength (nm)	SFP-500-GMF	830	850	860
	SFP-2K-GMF	1270	1310	1355
	SFP-10K-GSF	1285		1343
	SFP-30K-GSF	1270		1355
Spectral width - RMS (nm)	SFP-500-GMF			0.85
	SFP-2K-GMF			4
	SFP-10K-GSF			2.8
	SFP-30K-GSF			1
Rise / Fall Time - 20% - 80% (ps)	SFP-500-GMF			260
	SFP-2K-GMF			
	SFP-10K-GSF			
	SFP-30K-GSF			

Receiver Optical characteristics

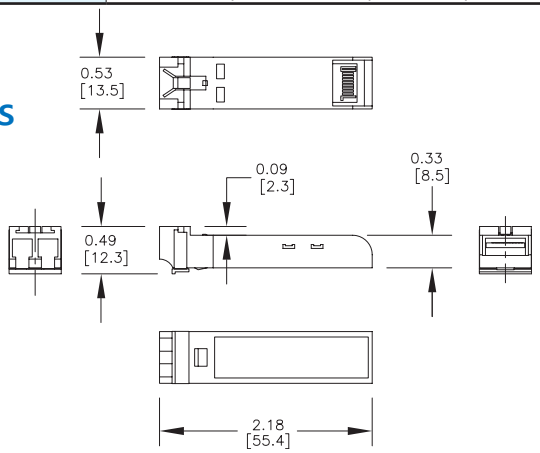
Parameter (unit)		Minimum	Maximum
Sensitivity (dBm)	SFP-500-GMF		-17
	SFP-2K-GMF		-19
	SFP-10K-GSF		-20
	SFP-30K-GSF		-23
Operating Wavelength (nm)	SFP-500-GMF	770	860
	SFP-2K-GMF	1260	1610
	SFP-10K-GSF	1270	1355
	SFP-30K-GSF		1580
Return Loss (dB)	SFP-500-GMF	12	
	SFP-2K-GMF		
	SFP-10K-GSF		
	SFP-30K-GSF		
Loss of Signal - Deasserted (dBm)	SFP-500-GMF		-17.5
	SFP-2K-GMF		-19
	SFP-10K-GSF		-20
	SFP-30K-GSF		-23
Loss of Signal - Asserted (dBm)	SFP-500-GMF	-35	
	SFP-2K-GMF		
	SFP-10K-GSF		
	SFP-30K-GSF		
Loss of Signal - Hysteresis (dB)	SFP-500-GMF	0.5	
	SFP-2K-GMF		
	SFP-10K-GSF		
	SFP-30K-GSF		

General Specifications

Connector Type		Type LC connector with bail latch
Operating Temperature range		-40 to +85 °C [-40 to +185 °F]
Storage temperature range		-40 to +85 °C [-40 to +185 °F]
Humidity (non-condensing)		5 to 95% RH
Link Speed		Gigabit Ethernet
Laser Type	SFP-500-GMF	VCSEL laser diode (Class 1 laser safety standard IEC 60825 compliant)
	SFP-2K-GMF	FP laser diode (Class 1 laser safety standard IEC 60825 compliant)
	SFP-10K-GSF	
	SFP-30K-GSF	DFB laser diode (Class 1 laser safety standard IEC 60825 compliant)
Media	SFP-500-GMF	Multi-mode Fiber
	SFP-2K-GMF	
	SFP-10K-GSF	Single-mode Fiber
	SFP-30K-GSF	
Fiber	SFP-500-GMF	50 / 125 µm and 62.5 / 125 µm
	SFP-2K-GMF	
	SFP-10K-GSF	9 / 125 µm
	SFP-30K-GSF	
Code	SFP-500-GMF	SX
	SFP-2K-GMF	SX2
	SFP-10K-GSF	LX
	SFP-30K-GSF	lhx
Distance	SFP-500-GMF	550m
	SFP-2K-GMF	2km
	SFP-10K-GSF	10 km
	SFP-30K-GSF	40 km
Compliances	SFP-500-GMF	1.0625Gbps Fiber Channel FC-PI 100-M5-SN-I compliant 1.0625Gbps Fiber Channel FC-PI 100-M6-SN-I compliant 1.25Gbps IEEE 802.3z 1000BASE-SX compliant 1.25Gbps IEEE 802.3ah 1000BASE-SX compliant
	SFP-2K-GMF	IEEE 802.3 1000BASE-SX+ compliant
	SFP-10K-GSF	1.0625Gbps Fiber Channel FC-PI 100-SM-LC-L compliant 1.25Gbps IEEE 802.3 1000BASE-LX compliant
	SFP-30K-GSF	1.25Gbps Gigabit Ethernet compliant
Inputs / Outputs		AC-coupled differential inputs and outputs

Dimensions

Inches [mm]



Safety Standards:

Electrical Safety

European Directives

WEEE Compliant

RoHS Compliant

US Emissions

Stride Industrial Ethernet Copper Transceivers Gigabit Ethernet

Description:

The STRIDE SFP-1GC-T is a hot-pluggable Small Form Factor Pluggable (SFP) transceiver. It has an RJ-45 connector, and can send and receive data at 1.25 Gbps up to 100m distance over 4-pair Cat5e/6a cable. The module is compliant with the SFP Multi-Source Agreement (MSA) and IEEE802.3:2002.

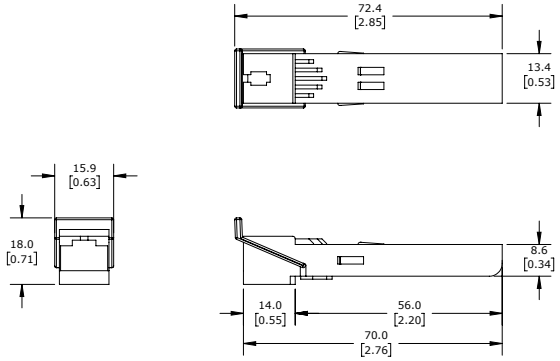
Part Number	Connector Type	Link Speed	Price
SFP-1GC-T	RJ-45	Gigabit Ethernet	$76.00

RJ45 Ports	
Ethernet Compliance	IEEE 802.3ab (1000Base-T) Gigabit Ethernet
Auto-Crossover	Yes, allows use of straight-through or crossover cables
Auto-Sensing Operation	Yes, full and half duplex
Port Speed	1000Base-T only
Cable Requirements	4-pair UTP/STP Cat.5e/6a cable EIA/TIA-568 100-ohm
Max. Cable Distance	100m [328ft]

General Specifications	
Operating Temperature Range	-40 to +85 °C [-40 to +185 °F]
Storage Temperature Range	-40 to +85 °C [-40 to +185 °F]
Humidity (non-condensing)	5 to 95% RH
Link Speed	Gigabit Ethernet
Compliances	SFP Multi-Source Agreement (MSA)

Dimensions

Inches [mm]



Safety Standards:

European Directives

WEEE Compliant

RoHS Compliant

US Emissions

Stride® Unmanaged Industrial Ethernet Switches

Features

- Reliable connectivity
- Industrially hardened
- Simple installation
- For detailed specifications on all models, see the specific series pages

		SE Series	SE3 Series DIN Rail	SE3 Series IP67
Price				
		starting at $142.00	starting at $72.00	starting at $279.00
Broadcast Storm Protection				
		—	—	—
Industrial Temperature Ranges				
	Standard Temp	-10 to +60°C [14 to 140°F]	-10 to +65°C [14 to 149°F]	—
	Wide Temp	-40 to +85°C [-40 to +185°F]	-40 to +75°C [-40 to +167°F]	-40 to +75°C [-40 to +167°F]
Port Connectivity				
	Port Count	2 to 9	5 to 16	5
	RJ45 Port Speed	up to 100 Mbps	up to 1000 Mbps	—
	M12 Port Speed	—	—	up to 100 Mbps
	Fiber Optic Ports	✓	✓	—
	PoE+ Ports	—	✓	—
	SFP Ports	—	✓	—
Mounting				
	DIN Rail Mount	✓	✓	✓
	Panel Mount	✓	✓	✓
Input Power				
	Redundant Power Inputs	✓	✓	✓
	Reverse Polarity Protection	✓	✓	✓
	Power LED	✓	✓	✓
Agency Approvals				
	UL508 or UL61010	✓	✓	✓
	Haz Loc–Class 1 Div 2	✓	✓ (certain models)	—
	IECEx	✓	—	—
	ATEX Zone 2	✓	—	—
	CE	✓	✓	✓
	EN50155 & EN50121	—	—	—
Warranty				
		5 years	5 years	5 years
Activity, Link & Speed LEDs				
		✓	✓	✓

Stride SE3 Series Unmanaged Industrial Ethernet Switches and Media Converters

SE3 Series Non-PoE DIN Rail Mounted

Features

- Wide temp range option
- DIN rail and panel mounting
- 12, 24 or 48 VDC redundant input
- GbE models
- Haz Loc models
- IP30 metal cases
- 5-year warranty

RoHS Compliant

Stride SE3 Non-PoE DIN Rail Mounted Unmanaged Models							
Part Number	*Price*	*RJ45 10/100*	*RJ45 GbE*	*Fiber*	*Input power (max.)*	*Operating Temp*	*Agency Approvals*
SE3-SW5U	$72.00	5	–	–	1.2 W	-10 to +65°C [14 to 149°F]	See General Specifications Table for each model's approvals
SE3-SW5U-T	$105.00				1.2 W	-40 to +75°C [-40 to 167°F]	
SE3-SW8U	$121.00	8			2.2 W	-10 to +65°C [14 to 149°F]	
SE3-SW8U-T	$136.00				2.2 W	-40 to +75°C [-40 to 167°F]	
SE3-SW5UG-T	$170.00	–	5		6.6 W		
SE3-SW8UG-T	$229.00		8		9.2 W		
SE3-SW5U-1C1-T	$167.00	4	–	1 SC	5W		
SE3-SW5U-1T1-T	$167.00			1 ST	5W		
SE3-SW6U-2C1-T	$219.00			2 SC	6W		
SE3-SW6U-2T1-T	$219.00			2 ST	6W		
SE3-SW7U-2P-T	$219.00	5		2 SFP*	8W		
SE3-SW5UG-1P-T	$199.00	–	4	1 SFP*	5.6 W		
SE3-SW10UG-2P-T	$329.00		8	2 SFP*	12W		
SE3-SW16UG-4P-T	$499.00		12	4 SFP*	15.4 W		
SE3-MC2U-C1-T	$141.00	1	–	1 SC	1.92 W	-40 to +80°C [-40 to 176°F]	
SE3-MC2U-T1-T	$141.00			1 ST			
SE3-MC2UG-1P-T	$179.00	–	1	1 SFP*	1.8 W		

*** Optional SFP modules sold separately.**

Stride SE3 Series Unmanaged Industrial Ethernet Switches and Media Converters

SE3 Series Non-PoE DIN Rail Mounted

General Specifications																		
		SE3-SW5U	SE3-SW5U-T	SE3-SW8U	SE3-SW8U-T	SE3-SW5UG-T	SE3-SW8UG-T	SE3-SW5U-1C1-T	SE3-SW5U-1T1-T	SE3-SW6U-2C1-T	SE3-SW6U-2T1-T	SE3-SW7U-2P-T	SE3-SW5UG-1P-T	SE3-SW10UG-2P-T	SE3-SW16UG-4P-T	SE3-MC2U-C1-T	SE3-MC2U-T1-T	SE3-MC2UG-1P-T
Processing Type		Store and forward																
Devices Supported		All IEEE 802.3 compliant devices are supported																
MAC Addresses	**1K**	●	●	●	●											NA		
	2K							●	●	●	●							
	8K					●	●					●	●	●	●			●
Memory Buffer	**128Kbits**															●	●	
	448Kbits	●	●	●	●			●	●	●	●							
	1Mbit					●							●					●
	4Mbits						●					●		●	●			
Packet Forwarding Rate		14.88 Kpps for Ethernet ports 148.8 Kpps for Fast Ethernet ports 14,888 Kpps for Gigabit Ethernet ports																
Jumbo Frame Support	**9.6 Kbytes**						●					●		●	●			
	10Kbytes					●							●					●
Storage Temperature Range		-40 to +85 °C [-40 to +185 °F]																
Humidity (Non-Condensing)		5 to 95% RH																
Environmental Air		No corrosive gases permitted																
Vibration, Shock & Freefall		IEC60068-2-6, -27, -32																
EMI Emissions		FCC Part 15 Subpart B Class A, CE EN55032/EN61000-6-4 Class A																
EMS		CE EN55035/EN61000-6-2 Class A: IEC61000-4-2 (ESD), IEC61000-4-3 (RS), IEC61000-4-4 (EFT), IEC61000-4-5 (Surge), IEC61000-4-6 (CS), IEC61000-4-8 (Magnetic Field)																
RoHS		RoHS (Pb-free) compliant																
Packaging and Protection		Metal case, IP30																
Hazardous Locations (Class I, Div. 2)	**ANSI/ISA 12.12.01**					●	●	●	●	●	●	●	●	●				
Agency Approvals	**FCC, CE**	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	UL 61010-1, 61010-2-201	●	●	●	●	●	●					●	●	●	●	●	●	●
	UL 508							●	●	●	●							

Stride SE3 Series Unmanaged Industrial Ethernet Switches and Media Converters

SE3 Series Non-PoE DIN Rail Mounted

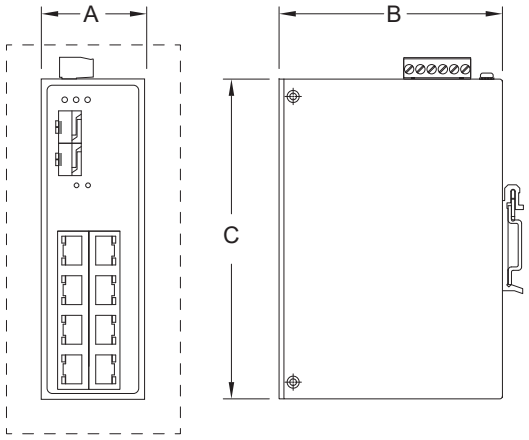
Power Details	
Power Input	Redundant input terminals, removable terminal block
Input Voltage	Class 2 power supply: 12-48 VDC
Reverse Power Protection	Yes
Power Consumption	Refer to Models table
Relay Contact	24VDC, 1A resistive, open on fault (not present on SE3-SW5U, SE3-SW5U-T, SE3-MC2UG-1P-T)

RJ45 Ports	
Ethernet Compliance	IEEE 802.3i, 802.3u, 802.3x for 10/100 Ethernet IEEE 802.3ab for Gigabit Ethernet, IEEE 802.3z for Gigabit Fiber
Auto-Crossover	Yes, allows use of straight-through or crossover cables
Auto-Sensing Operation	Yes, full and half duplex
Auto-Negotiating Speed	Yes
Flow Control	IEEE 802.3x flow control, back pressure flow control
Cable Requirements	10BaseT: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm 100BaseTX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm 1000BaseTX: UTP/STP Cat.5e/6a cable EIA/TIA-568 100-ohm
Max. Cable Distance	100m [328ft]

SC/ST Fiber Port (100BaseFX multimode)	
Optimal Fiber Cable	50/125 or 62.5/125 µm
Center Wavelength	1310 nm
Multimode	Transmitter power into 50/125 cable (dBm): -20 min, -14 max Transmitter power into 62.5/125 cable (dBm): -23.5 min, -14 max Receiver sensitivity (dBm): -32
Nominal Max. Distance	2km [1.24 mi]
Eye Safety (laser)	IEC 60825-1, Class 1; FDA 21 CFR 1040.10 and 1040.11

SFP Ports	
Ethernet Compliance	IEEE 802.3, 802.3u, 802.3x for 10/100 Ethernet IEEE 802.3ab, 802.3z for Gigabit Ethernet
SFP (pluggable) ports accept 100/1000 Mbps Mini-GBIC (SFP) transceivers. See SFP module datasheet for optional fiber transceiver specifications	

Dimensions					
Part Number	***Weight kg [lb]***	***Width (A)***	***Depth (B)***	***Height (C)***	***Drawing***
		mm [inches]			
SE3-SW5U	0.30 [0.66]	26 [1.0]	75 [3.0]	95 [3.7]	PDF
SE3-SW5U-T					PDF
SE3-SW8U	0.34 [0.74]	40 [1.6]	70 [2.8]	95 [3.7]	PDF
SE3-SW8U-T					PDF
SE3-SW5UG-T	0.45 [0.99]	30 [1.2]	95 [3.7]	140 [5.5]	PDF
SE3-SW8UG-T	0.52 [1.14]				PDF
SE3-SW5U-1C1-T	0.50 [1.10]	30 [1.2]	99 [3.9]	142 [5.6]	PDF
SE3-SW5U-1T1-T					PDF
SE3-SW6U-2C1-T					PDF
SE3-SW6U-2T1-T					PDF
SE3-SW7U-2P-T	0.57 [1.24]				PDF
SE3-SW5UG-1P-T	0.59 [1.30]				PDF
SE3-SW10UG-2P-T	0.71 [1.56]	46 [1.8]			PDF
SE3-SW16UG-4P-T	1.16 [2.57]	67 [2.6]			PDF
SE3-MC2U-C1-T	0.25 [0.55]	26 [1.0]	75 [3.0]	95 [3.7]	PDF
SE3-MC2U-T1-T					PDF
SE3-MC2UG-1P-T					PDF



Stride SE3 Series Unmanaged Industrial Ethernet Switches and Media Converters

SE3 Series Non-PoE DIN Rail Mounted

SE3-SW5UG-1P-T DIP Switch Settings			
DIP Switch	***Description***	***ON***	***OFF***
1	Energy Efficient Ethernet	Enable	Disable
2	SFP Speed	100Mbps	1Gbps

SE3-MC2UG-1P-T DIP Switch Settings			
DIP Switch	***Description***	***ON***	***OFF***
1	Link Fault Pass (LFP)*	Enable	Disable
2	SFP Speed	100Mbps	1Gbps

*** See explanation below.**

SE3-MC2U-C1-T & SE3-MC2U-T1-T DIP Switch Settings				
DIP Switch	***Description***		***ON***	***OFF***
1	Link Fault Pass (LFP)*		Enable	Disable
2	Operating Mode		Converter	Switch**
3	Fiber Port Settings	Duplex Mode	Half-Duplex	Full-Duplex
4	Copper Port Settings	Auto-negotiation	Disable	Enable
5		Speed	10Mbps	100Mbps
6		Duplex Mode	Half-Duplex	Full-Duplex

*** See explanation below.**
**** Switch mode is used to buffer incoming packets from the fiber port when the copper port is operating at 10Mbps.**

Front Panel LEDs		
LED	***State***	***Description***
PWR/PWR1/ PWR2	On	Power connected and operational
	Off	No voltage
FAULT	On	Power input 1 or 2 is inactive
	Off	Power input 1 and 2 are both functional
RJ45/SC/ ST/SFP Port LINK/ACT*	On	Indicates that there is a proper Ethernet connection (link) between the port and another Ethernet device but that no communications activity is detected
	Blinking	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

*** See user manual (SE3-USER-M) for details of LED operation for each model.**
**** Upper LED indicates connection at highest available speed on RJ45 ports.**

Link Fault Pass (LFP)

Link Fault Pass (LFP) technology allows for detection of a loss of connection as if there was no conversion from copper to fiber.

If the media converter detects a loss of connection on the copper port, it will in response automatically shut down the fiber port. This allows the receiving end of the fiber signal to detect the loss of ability to communicate to the end device at the copper side.

Stride SE3 Series Unmanaged Industrial Power Over Ethernet Switches

SE3 Series PoE+ DIN Rail Mounted

Features

- Wide temp range
- DIN rail and panel mounting
- Redundant power inputs from 9 to 55VDC
- GbE models
- 30W per port PoE+, 90W per port PoE++
- Haz Loc models
- IP30 and IP40 metal cases
- 5-year warranty

RoHS Compliant

Stride SE3 PoE+ DIN Rail Mounted Unmanaged Models

Part Number	Price	RJ45 10/100 PoE+	RJ45 GbE PoE+	RJ45 10/100 Non-PoE	RJ45 GbE Non-PoE	Fiber	System Power Requirements (max.)	Operating Temp	Agency Approvals
SE3-SWP1A5U-T	$249.00	4	–	1	–	–	4W	-40 to +75°C [-40 to 167°F]	FCC, CE, UL 508
SE3-SWP2A5U-T	$259.00						5.5 W		
SE3-SWP2A5UG-T	$349.00	–	4	–	1		6.3 W		FCC, CE, UL 61010-1, 61010-2-201
SE3-SWP2A7U-2P-T	$299.00	4	–	1	–	2 SFP*	9W		
SE3-SWP2B5UG-1P-T	$579.00	–	4	–	–	1 SFP*	6.3 W		

* Optional SFP modules sold separately.

Power Details

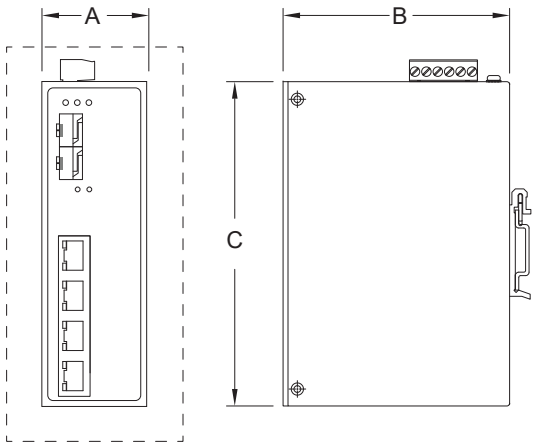
Power Input	Redundant input terminals, removable terminal block	
Input Voltage (Class 2 Power Supply)	SE3-SWP1A5U-T	48–55 VDC
	SE3-SWP2A5U-T, SE3-SWP2A5UG-T	12–36 VDC
	SE3-SWP2A7U-2P-T	12–55 VDC
	SE3-SWP2B5UG-1P-T	9–55 VDC
Reverse Power Protection	Yes	
Relay Contact	24VDC, 1A resistive, open on fault	

Dimensions

Part Number	Weight kg [lb]	Width (A)	Depth (B)	Height (C)	Drawing
		mm [inches]			
SE3-SWP1A5U-T	0.50 [1.10]	30 [1.2]	99 [3.9]	142 [5.6]	PDF
SE3-SWP2A5U-T	0.76 [1.68]	46 [1.8]	99 [3.9]	142 [5.6]	PDF
SE3-SWP2A5UG-T	0.70 [1.54]				PDF
SE3-SWP2A7U-2P-T	0.82 [1.81]				PDF
SE3-SWP2B5UG-1P-T	0.912 [2.01]	65 [2.6]	90 [3.5]	110 [4.3]	PDF

PoE Details

Max PoE Power Output	SE3-SWP2B5UG-1P-T: 90W per PoE port (bt PoE-PSE)	
	All other models: 30W per PoE port	
Max PoE Power Budget	SE3-SWP1A5U-T	120W
	SE3-SWP2A5U-T	90–120W/12–36VDC
	SE3-SWP2A5UG-T	120W
	SE3-SWP2A7U-2P-T	60W/12VDC, 120W/36–55VDC
	SE3-SWP2B5UG-1P-T	60W/9VDC, 90W/12VDC, 150W/24VDC, 240W/48–55VDC with iPoE budget control
PoE Pinout	V+, V+, V-, V-, for pin 1, 2, 3, 6 (Endspan, MDI Alternative A)	
	SE3-SWP2B5UG-1P-T: also V+, V+, V-, V-, for pin 4, 5, 7, 8	
PD (Powered Device) Detection	Yes - the switch port will detect the presence of a PoE enabled device before sending power. If a non-PoE device is detected, power will not be sourced on that port but Ethernet communications will be permitted.	
PoE Overload Protection	Yes	
Reverse Protection	Yes	
Redundancy Protection	Yes	



Stride SE3 Series Unmanaged Industrial Power Over Ethernet Switches

SE3 Series PoE+ DIN Rail Mounted

General Specifications

	SE3-SWP1A5U-T	SE3-SWP2A5U-T	SE3-SWP2A5UG-T	SE3-SWP2A7U-2P-T	SE3-SWP2B5UG-1P-T
Processing Type	Store and forward				
Devices Supported	All IEEE 802.3 compliant devices are supported				
MAC Addresses	2K	8K			
Memory Buffer	448Kbits	1Mbit	4Mbits		1Mbit
Packet Forwarding Rate	14.88 Kpps for Ethernet ports 148.8 Kpps for Fast Ethernet ports 14,888 Kpps for Gigabit Ethernet ports				
Jumbo Frame Support	–	10Kbytes	9.6 Kbytes		10Kbytes
Storage Temperature Range	-40 to +85°C [-40 to +185°F]				
Humidity (Non-Condensing)	5 to 95% RH				
Environmental Air	No corrosive gases permitted				
Vibration, Shock & Freefall	IEC60068-2-6, -27, -32				
EMI Emissions	FCC Part 15 Subpart B Class A, CE EN55032/EN61000-6-4 Class A				
EMS	CE EN55035/EN61000-6-2 Class A: IEC61000-4-2 (ESD), IEC61000-4-3 (RS), IEC61000-4-4 (EFT), IEC61000-4-5 (Surge), IEC61000-4-6 (CS), IEC61000-4-8 (Magnetic Field)				
RoHS	RoHS (Pb-free) compliant				
Packaging	Metal case				
Protection	IP30				IP40
Hazardous Locations (Class I, Div.2)	ANSI/ISA 12.12.01				NA
Agency Approvals	FCC, CE				
	UL 508	UL 61010-1, 61010-2-201			

SE3-SWP2B5UG-1P-T Only SFP/PRRT DIP Switch Settings

DIP Switch	Description	ON	OFF
1	PD Remote Reset Technology (PRRT)*	Enable	Disable
2	SFP Speed	100Mbps	1Gbps

*** Reboots PoE Ethernet switch when the fiber link drops for 3 seconds.**
NOTE: Power the device off and on again to apply changes to these settings.

Front Panel LEDs

LED	State	Description
PWR1/PWR2	On	Power connected and operational
	Off	No voltage
FAULT	On	Power input 1 or 2 is inactive, or other fault condition
	Off	Power input 1 and 2 are both functional
RJ45*/ SFP Port LINK/ACT	On	Proper Ethernet connection (link) but no communications activity is detected
	Blinking	Proper Ethernet connection (link) and communications activity detected
	Off	No Ethernet connection (link) detected
PoE (Ports 1–4)	On	The port is supplying power to the powered device
	Off	No powered device attached or failure in PoE power
PoE Draw	**	SE3-SWP2B5UG-1P-T only. PoE consumption is ≤50%, 51-70%, 71-90% or 91-100%.

*** Upper LED indicates connection at highest available speed on RJ45 ports.**
**** See user manual for details.**

RJ45 Ports

Ethernet Compliance	IEEE 802.3i, 802.3u, 802.3x for 10/100 Ethernet IEEE 802.3ab for Gigabit Ethernet IEEE 802.3af or 802.3at for PoE IEEE 802.3bt for PoE on SE3-SWP2B5UG-1P-T
Auto-Crossover	Yes, allows use of straight-through or crossover cables
Auto-Sensing Operation	Yes, full and half duplex
Auto-Negotiating Speed	Yes
Flow Control	IEEE 802.3x flow control, back pressure flow control
Cable Requirements	10BaseT: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm 100BaseTX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm 1000BaseTX: UTP/STP Cat.5e/6a cable EIA/TIA-568 100-ohm
Max. Cable Distance	100m [328ft]

SFP Ports

Ethernet Compliance	IEEE 802.3, 802.3u, 802.3x for 10/100 Ethernet IEEE 802.3ab, 802.3z for Gigabit Ethernet
SFP (pluggable) ports accept 100/1000 Mbps Mini-GBIC (SFP) transceivers. See SFP module datasheet for optional transceiver specifications.	

SE3-SWP2B5UG-1P-T Only Safe PoE Disable DIP Switch Settings

DIP Switch	Description	ON	OFF
1	Port 2 PoE Function*	Enable	Disable
2	Port 3 PoE Function*	Enable	Disable
3	Port 4 PoE Function*	Enable	Disable
4	Port 5 PoE Function*	Enable	Disable

*** Allows user to deactivate PoE power on a port before disconnecting the cable.**

Stride SE3 Series Unmanaged Industrial Power Over Ethernet Injectors

SE3 Series PoE+ DIN Rail Mounted

Features

- Inject power into Gigabit Ethernet link
- IEEE 802.3af/at/bt compliant PoE
- Wide temp range
- DIN rail and panel mounting
- 9–55 VDC redundant input
- Up to 100W per port PoE++
- IP30 metal cases
- 5-year warranty

RoHS Compliant

Stride SE3 PoE+ DIN Rail Mounted Unmanaged Injector Models

Part Number	Price	RJ45 GbE PoE+	RJ45 GbE Non-PoE	Maximum PoE Power Budget	Operating Temp
SE3-IJ2A2UG-T	$279.00	1	1	100W	-40 to +75°C [-40 to 167°F]
SE3-IJ2B2UG-T	$259.00			90W	

General Specifications

Storage Temperature Range	-40 to +85°C [-40 to +185°F]
Humidity (Non-Condensing)	5 to 95% RH
Environmental Air	No corrosive gases permitted
Vibration, Shock & Freefall	IEC60068-2-6, -27, -32
EMI Emissions	FCC Part 15 Subpart B Class A, CE EN55032/EN61000-6-4 Class A
EMS	CE EN55035/EN61000-6-2 Class A: IEC61000-4-2 (ESD), IEC61000-4-3 (RS), IEC61000-4-4 (EFT), IEC61000-4-5 (Surge), IEC61000-4-6 (CS), IEC61000-4-8 (Magnetic Field)
RoHS	RoHS (Pb-free) compliant
Packaging	Metal case
Protection	IP30
Agency Approvals	FCC, CE
	UL 61010-1, 61010-2-201

Power Details

Power Input	Redundant input terminals, removable terminal block
Input Voltage (Class 2 Power Supply)	9–55 VDC
Maximum Current	8A (including PoE power budget)
Reverse Power Protection	Yes
System Power Consumption	1.6 W
Relay Contact	24VDC, 1A resistive, open on fault

PoE Details

Max PoE Power Budget	SE3-IJ2A2UG-T	Standard PoE Mode: 60W@9VDC, 90W@12–55VDC Enhanced PoE Mode: 60W@9VDC, 90W@12VDC, 100W@24–55VDC
	SE3-IJ2B2UG-T	Standard PoE Mode: 60W@9VDC, 90W@12–55VDC
PoE Pinout	V-, V-, V+, V+, for pin 1, 2, 3, 6 Also V+, V+, V-, V-, for pin 4, 5, 7, 8	
PD (Powered Device) Detection	Yes - the switch port will detect the presence of a PoE enabled device before sending power. If a non-PoE device is detected, power will not be sourced on that port but Ethernet communications will be permitted.	
PoE Overload Protection	Yes	
Reverse Protection	Yes	
Redundancy Protection	Yes	

Stride SE3 Series Unmanaged Industrial Power Over Ethernet Injectors

SE3 Series PoE+ DIN Rail Mounted

Front Panel LEDs

LED	Color	State	Description
PWR	Green	On	Power inputs 1 and 2 are active
	Red	On	Power input 1 or 2 is inactive, alarm relay triggered
	-	Off	No voltage on either power input
PoE	Amber	On	The PoE output port is supplying power to the powered device over 2 pairs
	Green	On	The PoE output port is supplying power to the powered device over 4 pairs
	Amber	Blinking	The PoE output port is supplying power over 2 pairs after the Dual PD Check event happens (only occurs when Dual PD Check function is disabled
	Green	Blinking	The PoE output port once supplied power over 2 pairs and now has recovered to supply power over 4 pairs
	-	Off	No powered device attached or failure in PoE power
P/L*	-	Off	Actual PoE power consumption is ≤ 30W
	Blue	On	30W < Actual PoE power consumption ≤ 60W
	Red	On	60W < Actual PoE power consumption ≤ 90W
	Red	Blinking	90W < Actual PoE power consumption ≤ 100W (This event only occurs when Enhanced mode is enabled)

* SE3-IJ2A2UG-T only

RJ45 Ports

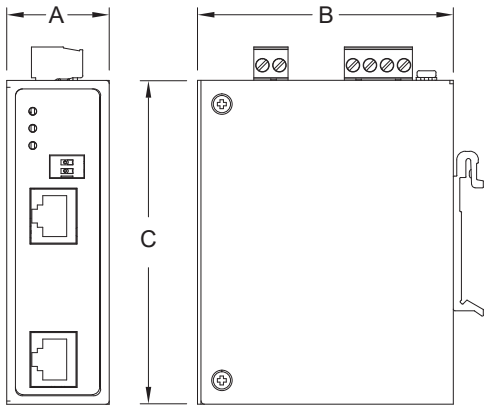
Ethernet Compliance	IEEE 802.3af/at/bt for PoE
Auto-Crossover	Yes, allows use of straight-through or crossover cables
Auto-Sensing Operation	Yes, full and half duplex
Auto-Negotiating Speed	Yes
Cable Requirements	10BaseT: 2-pair UTP/STP Cat. 3, 4, 5 cable EIA/TIA-568 100-ohm 100BaseTX: 2-pair UTP/STP Cat. 5 cable EIA/TIA-568 100-ohm 1000BaseTX: UTP/STP Cat.5e/6a cable EIA/TIA-568 100-ohm
Max. Cable Distance	100m [328ft] (total cable length from device A through the injector to device B)

SE3-IJ2A2UG-T DIP Switch Settings

DIP Switch	Description	ON	OFF
1	PoE Mode	Enhanced Mode 50W max PoE budget over 2 pairs 100W max PoE budget over 4 pairs	Standard Mode PoE output follows IEEE 802.3at/bt
2	Dual PD Check	Enabled Valid detection required on both channels for PoE classification and power	Disabled Valid detection required for operation of each channel independently

Dimensions

Part Number	Weight kg [lb]	Width (A) mm [inches]	Depth (B) mm [inches]	Height (C) mm [inches]	Drawing
SE3-IJ2A2UG-T	0.37 [0.82]	30 [1.2]	75 [3.0]	95 [3.7]	PDF
SE3-IJ2B2UG-T	0.36 [0.79]				PDF



Stride SE3 Series Unmanaged Industrial Ethernet Switches

SE3 Series IP67 Rated

Features

- Rugged IP67 rating
- Tight M12 connections
- Wide temp range
- Panel and DIN rail mount
- 12, 24 or 48 VDC redundant input
- 5-year warranty

RoHS Compliant

Stride SE3 Series IP67 Rated Models					
Part Number	*Price*	*M12, IP67 10/100Tx Ethernet Ports*	*Input power (max.)*	*Operating Temp*	*Agency Approvals*
SE3-SW5U-N67-T	$279.00	5	1.2 W	-40 to +75°C [-40 to 167°F]	FCC, CE, UL 61010-1, 61010-2-201

Stride SE3 Series Unmanaged Industrial Ethernet Switches

SE3 Series IP67 Rated

General Specifications	
Processing Type	Store and forward
Devices Supported	All IEEE 802.3 compliant devices are supported
MAC Addresses	1K
Memory Buffer	448Kbits
Packet Forwarding Rate	14.88 Kpps for Ethernet ports 148.8 Kpps for Fast Ethernet ports
Storage Temperature Range	-40 to +85°C (-40 to +185°F)
Humidity (Non-Condensing)	5 to 95% RH
Environmental Air	No corrosive gases permitted
Vibration, Shock & Freefall	IEC60068-2-6, -27, -32
EMI Emissions	FCC Part 15 Subpart B Class A, CE EN55032/EN61000-6-4 Class A
EMS	CE EN55035/EN61000-6-2 Class A: IEC61000-4-2 (ESD), IEC61000-4-3 (RS), IEC61000-4-4 (EFT), IEC61000-4-5 (Surge), IEC61000-4-6 (CS), IEC61000-4-8 (Magnetic Field)
RoHS	RoHS (Pb-free) compliant
Packaging and Protection	Plastic case, IP67
Agency Approvals	FCC, CE, UL 61010-1, 61010-2-201

Power Details	
Power Connection	Dual DC power inputs through M12 5-pin A-coded male connector
Input Voltage	Class 2 power supply: 12–48 VDC redundant power inputs
Reverse Power Protection	Yes
System Power Consumption	0.5 W
Relay Contact	No

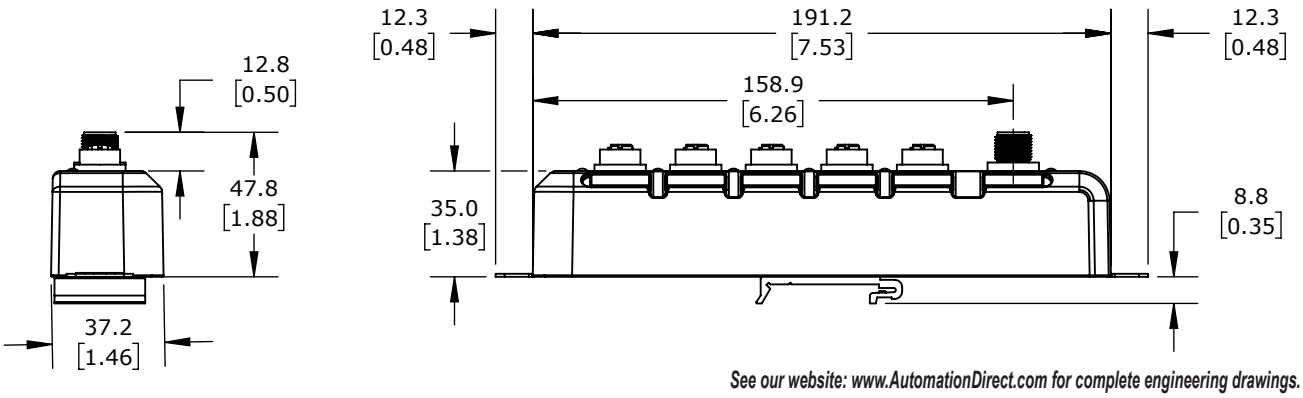
M12 Ethernet Ports	
10/100BaseT Ports	M12, female, D-coded, 4-pin
Ethernet Compliance	IEEE 802.3i, 802.3u, 802.3x for 10/100 Ethernet
Auto-Crossover	Yes, allows use of straight-through or crossover cables
Auto-Sensing Operation	Yes, full and half duplex
Auto-Negotiating Speed	Yes
Flow Control	IEEE 802.3x flow control, back pressure flow control
Cable Requirements	Twisted pair (Cat5e or better, shielded recommended)
Max. Cable Distance	100m [328ft]

Note: M12 caps need to be used on open (disconnected) ports. Replacement caps (Part # ZP-JBH-CAP) are available from AutomationDirect.com.

Front Panel LEDs		
LED	***State***	***Description***
PWR	On	Power input 1 or 2 is connected and operational
	Off	Power input 1 and 2 are both inactive
Ethernet Port LINK/ ACT	On	Indicates that there is a proper Ethernet connection (link) between the port and another Ethernet device but that no communications activity is detected
	Blinking	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

Dimensions

mm [Inches]



See our website: www.AutomationDirect.com for complete engineering drawings.

Stride SE Series Unmanaged Industrial Ethernet Switches and Media Converters

Features

- Wide temp range option
- Integrated panel mounting option
- 12, 24 VDC redundant input
- IP40 metal case models
  - IP30 plastic case models
- Haz Loc
- 5-year warranty

RoHS Compliant

Plastic Case Switches

Stride SE Series Unmanaged Models						
Part Number	*Price*	*10/100*	*Fiber Connector*	*Input Power*	*Operating Temp*	*Agency Approvals*
SE-SW5U	$142.00	5	–	2.0 W	-10 to +60°C [+14 to +140°F]	UL/cUL 508, Haz Loc, CE
SE-SW8U	$219.00	8	–	4.0 W		
SE-SW5U-ST	$274.00	4	1 ST	3.0 W		
SE-SW5U-SC	$263.00		1 SC			
SE-MC2U-ST	$262.00	1	1 ST	2.0 W		
SE-MC2U-SC	$259.00		1 SC			

Metal Case Switches

Stride SE Series Unmanaged Models						
Part Number	*Price*	*10/100*	*Fiber Connector*	*Input Power*	*Operating Temp*	*Agency Approvals*
SE-SW5U-WT	$254.00	5	–	2.0 W	-40 to +85°C [-40 to +185°F]	UL/cUL 508, Haz Loc, CE
SE-SW5U-ST-WT	$362.00	4	1 ST	3.0 W		
SE-SW5U-SC-WT	$362.00	4	1 SC			
SE-SW9U-ST-WT	$419.00	8	1 ST	5.0 W		
SE-SW9U-SC-WT	$409.00	8	1 SC			

Stride SE Series Unmanaged Industrial Ethernet Switches and Media Converters

General Specifications		
Ethernet Switch Type	Up to 9 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 µs + frame time (typical)	
Latency for 100 Mbps ports	5 µs + frame time (typical)	
Power Input	Redundant Input Terminals	
Input Power (typical with all ports active at 100 Mbps)	SE-MC2U-ST SE-MC2U-SC SE-SW5U SE-SW5U-WT	2.0 W
	SE-SW5U-ST SE-SW5U-SC SE-SW5U-ST-WT SE-SW5U-SC-WT	3.0 W
	SE-SW8U	4.0 W
	SE-SW9U-ST-WT SE-SW9U-SC-WT	5.0 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	SE-MC2U-ST SE-MC2U-SC SE-SW5U SE-SW8U SE-SW5U-ST SE-SW5U-SC	-10 to +60°C [+14 to +140°F], cold startup at -10°C [+14°F]
	SE-SW5U-WT SE-SW5U-ST-WT SE-SW5U-SC-WT SE-SW9U-ST-WT SE-SW9U-SC-WT	-40 to +85°C [-40 to +185°F], cold startup at -40°C [-40°F]
Storage Temperature Range	-40 to +85°C [-40 to +185°F]	
Humidity (non-condensing)	5 to 95% RH	
Environmental Air	No corrosive gases permitted. For use in Pollution Degree 2 environment	
Vibration and Shock	IEC60068-2 and -27	
EMI Emissions	FCC part 15, ICES-003, EN55022	
EMC Immunity	IEC61326-1	
RoHS and WEEE	RoHS (Pb free) and WEEE compliant	
Agency Approvals	UL/cUL 508, CSA C22 per EN61010-1, UL HazLoc (Class 1, Div. 2, Groups A, B, C, D) (UL file #E200031), CSA C 22.2/213/EN60079-15 (Zone 2, Category 3), CE (ATEX)	

General Specifications Cont'd		
Packaging and Protection	SE-MC2U-ST SE-MC2U-SC SE-SW5U SE-SW8U SE-SW5U-ST SE-SW5U-SC	UL94VO Lexan, IP30
	SE-SW5U-WT SE-SW5U-ST-WT SE-SW5U-SC-WT SE-SW9U-ST-WT SE-SW9U-SC-WT	Metal case, IP40

Copper RJ45 Ports: (10/100BaseT)	
10/100BaseT ports	Shielded RJ45
Protocols Supported	All standard IEEE 802.3
Ethernet Compliance	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 (Cat5e 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 – models SE-XXXX-ST and SE-XXXX-ST-WT SC – models SE-XXXX-SC and SE-XXXX-SC-WT
Optimal Fiber Cable	50/125 or 62.5/125 µm
Center Wavelength	1300 nm
Multimode	Links up to 4 km typ.; > Transmitter power (dBm): -21 min, -17 typ, -14 max > Receiver sensitivity (dBm): -34 typ, -31 max
Nominal Max. Distance (full duplex)	4 km
Ethernet Compliance	100BaseFX
Eye Safety (laser)	IEC 60825-1, Class 1; FDA 21 CFR 1040.10 and 1040.11

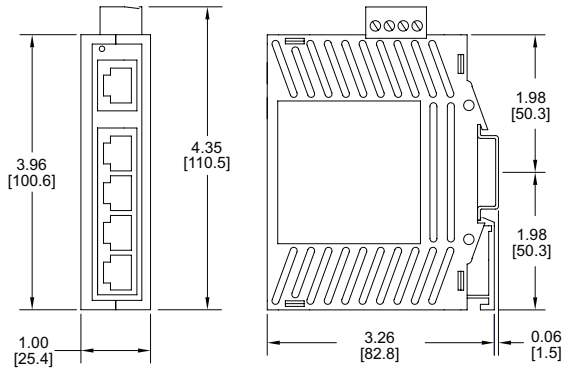
Complete documentation

Documentation can be downloaded from www.automationdirect.com.

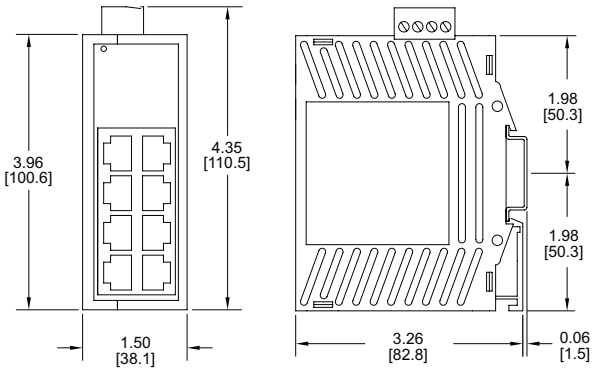
Stride SE Series Unmanaged Industrial Ethernet Switches and Media Converters

Dimensions

Inches [mm]



SE-SW5U



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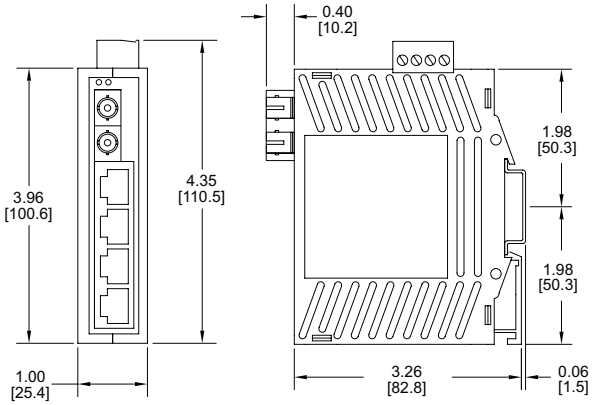
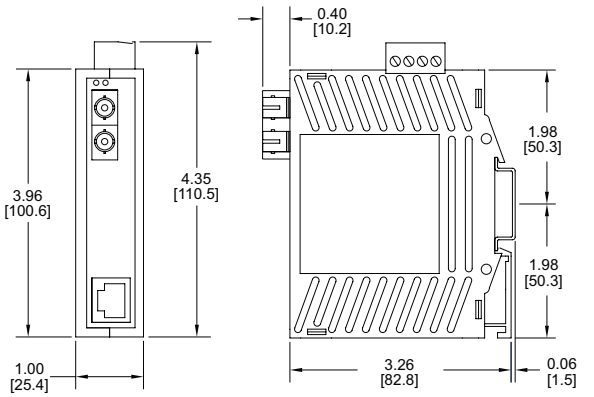


SE-SW5U-SC
SE-SW5U-ST



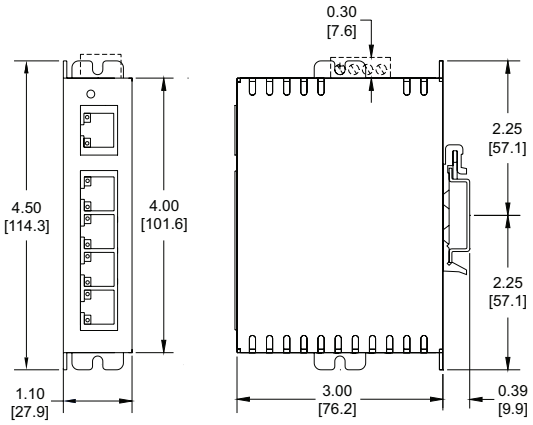
SE-MC2U-SC
SE-MC2U-ST

See our website: www.AutomationDirect.com for complete engineering drawings.

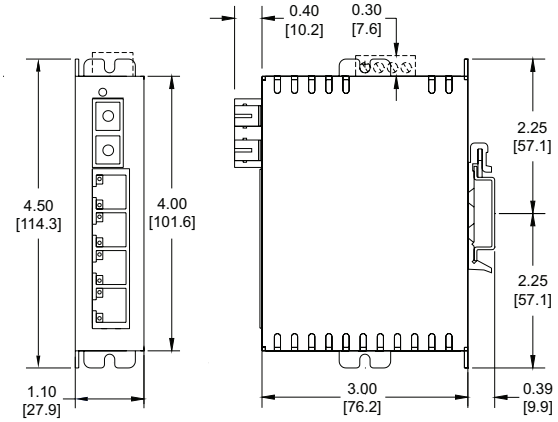
Stride SE Series Unmanaged Industrial Ethernet Switches and Media Converters

Dimensions

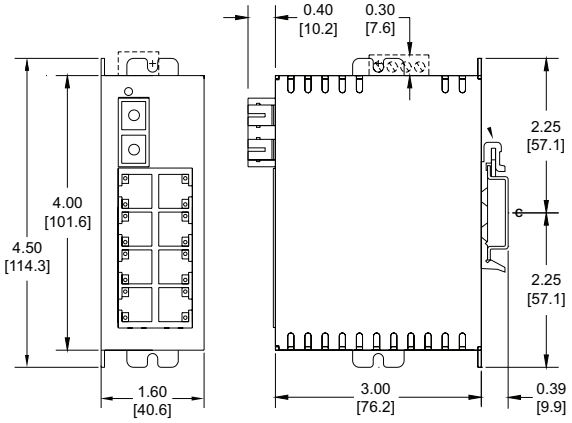
Inches [mm]



SE-SW5U-WT



SE-SW5U-SC-WT
SE-SW5U-ST-WT



SE-SW9U-SC-WT
SE-SW9U-ST-WT

See our website: www.AutomationDirect.com for complete engineering drawings.

WAGO Lean Managed Industrial Switches


852-1328


852-1322


852-1813/000-001


852-1812


852-1813


852-1816

Features

- Managed switch features with simple setup
- MAC Security Encryption available
- Network Topology Dashboard
- VLAN and Rapid Spanning Tree Protocol
- QoS (port prioritization)
- Modbus monitoring for control system
- Port mirroring for advanced system troubleshooting
- IGMP for Ethernet/IP network optimization.
- 10/100/1000 Mbps auto-detect speeds
- Redundant DC power inputs
- 9VDC to 60VDC input power available
- SFP combo GbE models
- Power over Ethernet model
- IP30 metal cases
- 35mm DIN rail mounting
- 2-year warranty

RoHS Compliant

WAGO Industrial Lean Managed Switches

Part Number	Price	Model Features																				
		RJ45 Gigabit Ports	PoE+ RJ45 Gigabit Ports	SFP Combo Gigabit Ports	MAC Security	Network Topology Dashboard	Alarm Contact	Ethernet Ring Protection Switching	Energy Efficient Ethernet	Command Line Interface (CLI)	IGMP (configurable via CLI only)	QoS	Modbus TCP and SNMP	VLAN Tree Protocol	Rapid Spanning Tree Protocol	Link Layer Discovery Protocol	Port Authentication	Port mirroring	Metal Housing	Operating Temperature Range	IP30 Rating	35mm DIN Rail Mount	2 Year Warranty
852-1322	$837.00	8			✓								✓	✓	✓	✓	✓	✓	✓	-20 to +70°C	✓	✓	✓
852-1328	$861.00	6		2*																			
852-1812	$713.00	8				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-40 to +60°C	✓	✓	✓
852-1813	$799.00	8		2*																			
852-1813/000-001	$1,189.00		8	2*																			
852-1816	$1,075.00	16																					

*** Optional SFP modules sold separately.**

WAGO Lean Managed Industrial Switches with MAC Security Encryption

852-1328

852-1322

RoHS Compliant

Features

- Supports MAC Security Encryption on 2 ports
- Secure configuration and diagnostics via HTTPS or SNMPv3
- 9–48 VDC redundant DC power supply
- Wide operating temperature range

MAC Security Encryption

MAC Security Encryption uses GCM-AES to implement point-to-point security for Ethernet links between switches. It can secure a network from a host of security threats, including intrusion, man-in-the-middle, masquerading, passive wiretapping, and playback attacks. And because MAC Security Encryption is hardware-based, there is no noticeable added latency.

WAGO Industrial Lean Managed Ethernet Switches

Part Number	Price	RJ45 Gigabit Ethernet Ports	SFP Combo Gigabit Ports	MAC Security Encryption
852-1322	$837.00	8	–	2 ports (RJ45)
852-1328	$861.00	6	2*	2 ports (SFP)

*** Optional SFP modules sold separately.**

Communications Specifications

Operating Mode	Store and forward, non-blocking
MAC Addresses	16000 addresses
Jumbo Frame Size	10kB
Communications Standards	IEEE 802.3, 802.3u, 802.3ab, 802.3z, 802.3x, 802.1p, 802.1x, 802.1Q, 802.1AE

General Specifications

Operating Temperature Range	-20 to +70°C [-4 to 158°F]
Storage Temperature Range	-40 to +80°C [-40 to +176°F]
Humidity (Non-Condensing)	5 to 95% RH
Environmental Air	No corrosive gases permitted. For use in Pollution Degree 2 environment
Vibration and Shock	IEC60068-2-6 and -2-27
EMC Emission of Interference	FCC Part 15, Subpart B, Class A, Class B EN 55032 Class A and Class B EN 61000-6-4, EN 61000-6-3, EN 55011
EMC Immunity to Interference	EN 55024, EN 61000-6-2, EN 61000-6-1
RoHS	RoHS (Pb-free) compliant
Packaging	Metal case
Protection	IP30
Agency Approvals	CE, cULus

Power Details

Power Input	Redundant inputs, removable terminal block
Input Voltage	9–48 VDC (Class 2 Power Supply)
Maximum Current	640 mA
System Power Consumption	5.8 W
Power Supply Wiring	12AWG max

RJ45 Ports

Auto-Crossover	Yes, allows straight-through or crossover cables
Auto-Sensing Operation	Yes, full and half duplex
Auto-Negotiating Speed	Yes
Cable Requirements	10BaseT: 2-pair UTP/STP Cat. 3, 4, 5 cable 100BaseTX: 2-pair UTP/STP Cat. 5 cable 1000BaseTX: UTP/STP Cat.5e/6a cable
Max. Cable Distance	100m [328ft]

852-1328 SFP Ports

SFP (pluggable) ports accept 1000Mbps or 100Mbps Mini-GBIC (SFP) transceivers.
See our selection of SFP modules for fiber and Gigabit copper options.

Front Panel LEDs

LED	Color	Description
PWR	Green	Primary power supply status
RPS	Green	Redundant power supply status
ALM	Red	No power at primary or secondary power supply
LINK/ACT	Green	Port link established, data traffic activity
100M/1G	Amber	Port operating speed

Dimensions

Part Number	Weight kg [lb]	Width	Depth	Height	Drawing
		mm [inches]			
852-1322	0.628 [1.38]	45 [1.78]	92 [3.62]	110 [4.33]	PDF
852-1328	0.639 [1.41]				PDF

WAGO Lean Managed Industrial Switches

852-1812 852-1813 852-1816

RoHS Compliant

Features

- Link Layer Discovery Protocol
- Port Authentication
- Ethernet Ring Protection Switching
- Energy Efficient Ethernet
- Command Line Interface
- Secure configuration and diagnostics via HTTPS or SNMPv3
- Alarm signal contact
- 24–48 VDC and 12–60 VDC models

WAGO Industrial Lean Managed Ethernet Switches

Part Number	Price	RJ45 Gigabit Ethernet Ports	SFP Combo Gigabit Ports
852-1812	$713.00	8	–
852-1813	$799.00		2*
852-1816	$1,075.00	16	–

*** Optional SFP modules sold separately.**

Communications Specifications

Operating Mode	Store and forward, non-blocking
MAC Addresses	8000 addresses
Jumbo Frame Size	10kB
Communications Standards	IEEE 802.3, 802.3u, 802.3ab, 802.3z, 802.3x, 803.2az, 802.1d, 802.1w, 802.1p, 802.1x, 802.1Q, 802.1ab, ITU-T G8032v1/v2

General Specifications

Operating Temperature Range	-40 to +60°C [-40 to 140°F]
Storage Temperature Range	-40 to +85°C [-40 to +185°F]
Humidity (Non-Condensing)	5 to 95% RH
Environmental Air	No corrosive gases permitted. For use in Pollution Degree 2 environment
Vibration and Shock	IEC60068-2-6 and -2-27
EMC Emission of Interference	FCC Part 15, Subpart B Class A, EN 55011 Class A, EN 55032 Class A, EN 61000-6-4
EMC Immunity to Interference	EN 55024, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, EN 61000-6-2
RoHS	RoHS (Pb-free) compliant
Packaging	Metal case
Protection	IP30
Agency Approvals	CE, cULus

Power Details

Part Number	852-1812	852-1813	852-1816
Power Input	Redundant inputs, removable terminal block		
Input Voltage	24–48 VDC		12–60 VDC
Maximum Current	350 mA	400 mA	1500 mA
System Power Consumption	10W	11W	12W
Power Supply Wiring	12 AWG max		
Relay Contact	24VDC, 1A resistive, open on fault		

RJ45 Ports

Auto-Crossover	Yes, allows straight-through or crossover cables
Auto-Sensing Operation	Yes, full and half duplex
Auto-Negotiating Speed	Yes
Cable Requirements	10BaseT: 2-pair UTP/STP Cat. 3, 4, 5 cable 100BaseTX: 2-pair UTP/STP Cat. 5 cable 1000BaseTX: UTP/STP Cat.5e/6a cable
Max. Cable Distance	100m [328ft]

852-1813 SFP Ports

SFP (pluggable) ports accept 1000Mbps or 100Mbps Mini-GBIC (SFP) transceivers. See our selection of SFP modules for fiber and Gigabit copper options.

Front Panel LEDs

LED	Color	Description
PWR	Green	Primary power supply status
RPS	Green	Redundant power supply status
ALM	Red	Failure of a port connection, miscellaneous alarm
SFP	Green	SFP link established, data traffic activity (852-1813 only)
LINK/ACT	Green	Port link established, data traffic activity
1000	Amber	Port operating speed

Dimensions

Part Number	Weight kg [lb]	Width	Depth	Height	Drawing
		mm [inches]			
852-1812	0.550 [1.21]	50 [1.97]	100 [3.94]	116 [4.57]	PDF
852-1813	0.570 [1.26]				PDF
852-1816	0.840 [1.85]		120 [4.72]	160 [6.30]	PDF

WAGO Lean Managed Industrial Switches with PoE+ Power over Ethernet

852-1813/000-001

RoHS Compliant

Features

- 30W Power over Ethernet on all RJ45 ports
- Link Layer Discovery Protocol
- Port Authentication
- Ethernet Ring Protection Switching
- Energy Efficient Ethernet
- Command Line Interface
- Secure configuration and diagnostics via HTTPS or SNMPv3
- Configurable alarm signal contact
- 24–57 VDC redundant DC power supply

WAGO Industrial Lean Managed Ethernet Switches

Part Number	Price	PoE+ RJ45 Gigabit Ethernet Ports	SFP Combo Gigabit Ports
852-1813/000-001	$1,189.00	8	2*

*** Optional SFP modules sold separately.**

Power over Ethernet

Power per Port	30W
Max PoE Power Budget	≥24 to <48 VDC: 120W ≥48 to 57 VDC: 240W

Communications Specifications

Operating Mode	Store and forward, non-blocking
MAC Addresses	8000 addresses
Jumbo Frame Size	10kB
Communications Standards	IEEE 802.3, 802.3u, 802.3ab, 802.3x, 803.2az, 802.3af, 802.3at, 802.1d, 802.1w, 802.1p, 802.1x, 802.1Q, 802.1ab, ITU-T G8032v1/v2

General Specifications

Operating Temperature Range	-40 to +60°C [-40 to 140°F]
Storage Temperature Range	-40 to +85°C [-40 to +185°F]
Humidity (Non-Condensing)	5 to 95% RH
Environmental Air	No corrosive gases permitted. For use in Pollution Degree 2 environment
Vibration and Shock	IEC60068-2-6 and -2-27
EMC Emission of Interference	FCC Part 15, Subpart B Class A, EN 55011 Class A, EN 55032 Class A, EN 61000-6-4
EMC Immunity to Interference	EN 55024, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, EN 61000-6-2
RoHS	RoHS (Pb-free) compliant
Packaging	Metal case
Protection	IP30
Agency Approvals	CE, cULus

Power Details

Power Input	Redundant inputs, removable terminal block
Input Voltage	24–57 VDC
Maximum Current	6000 mA
System Power Consumption	13W excluding PoE power
Power Supply Wiring	12 AWG max
Relay Contact	24VDC, 1A resistive, open on fault

RJ45 Ports

Auto-Crossover	Yes, allows straight-through or crossover cables
Auto-Sensing Operation	Yes, full and half duplex
Auto-Negotiating Speed	Yes
Cable Requirements	10BaseT: 2-pair UTP/STP Cat. 3, 4, 5 cable 100BaseTX: 2-pair UTP/STP Cat. 5 cable 1000BaseTX: UTP/STP Cat.5e/6a cable
Max. Cable Distance	100m [328ft]

SFP Ports

SFP (pluggable) ports accept 1000Mbps or 100Mbps Mini-GBIC (SFP) transceivers.
See our selection of SFP modules for fiber and Gigabit copper options.

Front Panel LEDs

LED	Color	Description
PWR	Green	Primary power supply status
RPS	Green	Redundant power supply status
ALM	Red	Failure of a port connection, miscellaneous alarm
SFP	Green	SFP link established, data traffic activity
PoE	Green	PoE port power status
LINK/ACT	Green	Port link established, data traffic activity
1000	Amber	Port operating speed

Dimensions

Part Number	Weight kg [lb]	Width	Depth	Height	Drawing
		mm [inches]			
852-1813/000-001	0.560 [1.23]	50 [1.97]	120 [4.72]	160 [6.30]	PDF

MB-GATEWAY Modbus TCP/IP to RTU Gateway

MB-GATEWAY $275.00

AutomationDirect's MB-GATEWAY is a single port Modbus Gateway module that converts Modbus TCP to Modbus RTU. It supports up to 12 simultaneous Modbus TCP Client (master) Ethernet connections, and up to 128 RTU Server (slaves) serial connections. MB-GATEWAY requires 10VDC to 36VDC from an external power supply. Each module has one RJ45 10/100 Mbps Ethernet port and one RS-422/485 2 or 4-wire serial port. It supports NetEdit* or Web Browser based configuration tools.

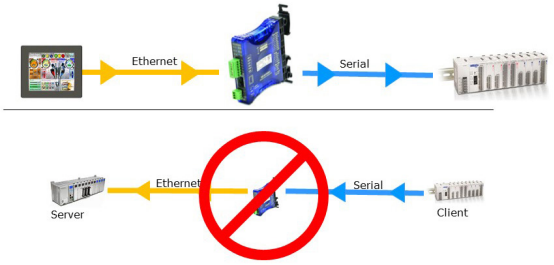
Key features

- Automatic read function
- RJ45 10/100 Mbps Ethernet port
- RS-422/485 2 or 4 wire serial port
- Supports NetEdit* and Web browser configuration tools
- Auto detects Ethernet cable types (MDI/MDX)
- 35 mm DIN rail mount

NetEdit version 3.8 or later is required to support MB-GATEWAY.

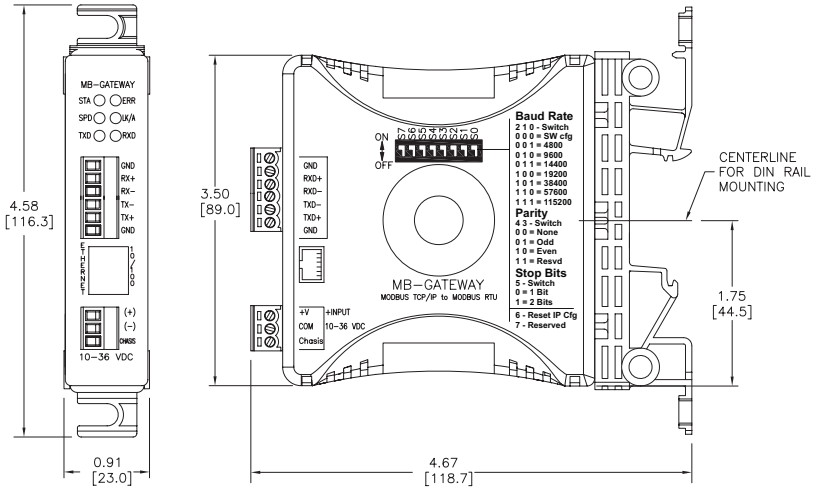
Specifications		
Ethernet Interface	Port	RJ-45
	Speed	10/100 Mbps
	Protection	Built-in 1.5 KV magnetic isolation
	Protocol Supported	Modbus TCP/IP Server (Slave)
	Clients (Masters) Supported	12 simultaneous Modbus TCP connections
	Cable Type	Auto detects Ethernet cable types (MDI/MDX)
Serial Interface	Port	6-position terminal strip (Phoenix #1863194) provided
	Supported Signal Lines	RS-422 (5-wire) Signals: TX+, TX-, RX-, RX+, GND RS-485 (3-wire) Signals: Data+, Data -, GND
	Supported Baud Rates	300*, 600*, 1200*, 4800, 9600, 14.4k, 19.2k, 38.4k, 57.6k, 115.2k *Cannot be set with DIP switches. Must be set via Web browser configuration.
	Parity	Odd, Even, None
	Data Bits	8
	Stop Bits	1, 2
	Protocol Supported	Modbus RTU Client (Master)
	Servers (Slaves) Supported	128
	Termination	Permanently installed 120Ω resistor between Data+ and Data -

Specifications	
Power Consumption	2W Use Class 2 power supply Use conductors rated 60/75°C 3-position terminal strip (Phoenix #1863165) provided
Wire Range	16–28AWG Solid or Stranded Conductor (1.5 mm2)
Wire Strip Length	0.24–0.27 in [6–7 mm]
Screw Torque	1.7 lb-in [0.2 N·m]
Operating Temperature Range	0 to 60°C [32 to 140°F]
Storage Temperature Range	-20 to 70°C [-4 to 158°F]
Humidity	5 to 95% RH (non-condensing)
Environmental Air	For use in Pollution Degree 2 Environment
Vibration	MIL STD 810C 514.2
Shock	MIL STD 810C 516.2
Weight	0.2 lbs [0.09 kg]
Agency Approval	UL (file #E185989), CE



Dimensions

Inches [mm]



Replacement Part

Part Number	Description	Price
MB-GW-CON	MB-Gateway-Connector Kit 1ea: Phoenix 3 pin power connector AND 1 ea: Phoenix 6 pin serial connector	$21.00

See our website: www.AutomationDirect.com for complete engineering drawings.

FA-ISOCON Universal Isolated Network Adapter

FA-ISOCON $166.00

The FA-ISOCON Universal Isolated Network Adapter is used to place RS-232 devices such as PLCs, operator interfaces, industrial computers, etc., on an RS-422 or RS-485 multidrop network. The Network Adapter converts RS-232 signal levels to isolated RS-422 or RS-485 signal levels. This network adapter is similar to our other RS-232/422 converters, but it offers the added benefit of network isolation. This adapter is especially useful in noisy environments where data corruption due to induced noise is possible.

The FA-ISOCON features Automatic Network Transmitter Enable (ANTE) so that an RTS output is not required on the connected RS-232 device. The FA-ISOCON is a direct functional replacement for the FA-ISONET when CTS Controlled Transmit Enable (CCTE) mode is active. Having both ANTE and CCTE modes, the FA-ISOCON is compatible with most RS-232 devices.

The diagram below shows a simple example of an FA-ISOCON used for PC to multiple PLC communications.

Key features

Following are some of the key features and benefits of the FA-ISOCON:

- DIP switch selectable Automatic Network Transmitter Enable so that an RTS output is not required on the connected RS-232 device.
- DIP switch selectable CTS Controlled Transmit Enable mode for backwards compatibility with the FA-ISONET.
- DIP switch select termination and bias resistors; short/open TXD+/RXD+ and TXD-/RXD- terminals for 1/2 duplex comm.
- Isolation removes ground loop currents from data lines. Noise voltages resulting from transformer-like coupling are also eliminated.
- Many forms of radiated noise are reduced to negligible levels.
- FA-ISOCON can be powered from 24 VDC or 5 VDC. (Unit may be powered directly from CPU pins on CPUs with +5V pins or the auxiliary 24 VDC power supply on I/O bases.)
- Unit has RS-232 transmit and receive LEDs and an RS-422/485 Transmitter Enable LED to simplify troubleshooting.

RJ12 port allows you to use the modular cables (included) to quickly connect the D0-05xx, D2-240 or D3-340 to the FA-ISOCON. Connections can be made to the D3-350, DL405 CPUs and PCs with the connectors that are included.

Specifications

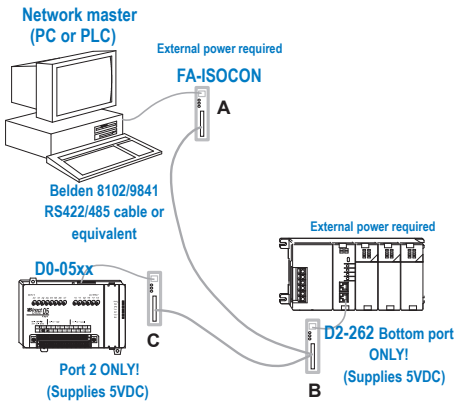
- Max. network distance: 4000 feet
- Max. number of devices: 32 per network
- Max. baud rate: 115.2 Kbaud
- Supply voltage: 5 VDC @ 100 mA max. (from CPU) or 24 VDC @ 70 mA (external source)
- Max. driver load: 62 ohms
- Driver voltage: ±1.5V minimum
- No load current: 80 mA
- Max. current: 100 mA (62 h)
- Isolation resistance: >1014 h/7pF
- Voltage withstand: 1.2 KVrms/1s 1.0 KVrms/1 minute
- Operating temp: 0 to 60°C [32 to 140°F]

Installation is a 'snap'

The FA-ISOCON comes with an attached DIN rail connector. Simply hook the top of the DIN connector on the DIN rail, then pull the unit down and rotate the bottom of the DIN connector onto the DIN rail (or use the provided holes to flush-mount it on a panel). The adapter's RJ12 serial port can be connected to a PC or a DirectLogic CPU port using one of the supplied cables/connectors. Or, use the adapter's RS-232 terminal block to connect to a serial device. Connect the RS-422/485 communications wiring to the convenient RS-422/485 terminal blocks.

Adapter components

- FA-ISOCON Isolated Network Adapter with attached DIN mounting bracket
- 25-pin male to RJ12 6P6C connector
- 9-pin female to RJ12 6P6C connector
- 1' cable with RJ12 6P6C plug to RJ11 4P4C plug for use with D3-340.
- 1' cable with RJ12 6P6C plug to RJ12 6P6C plug

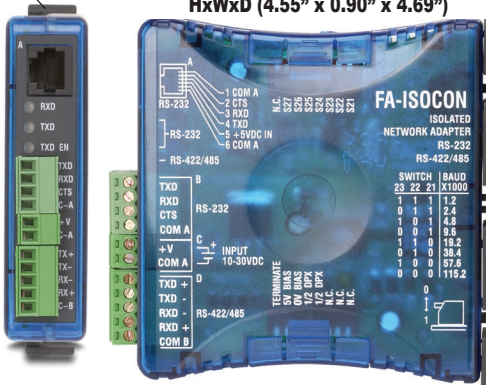


A) FA-ISOCON converts the network master's (computer or PLC, etc.) RS-232 communication signal levels to RS-422/485.

B) FA-ISOCON converts the RS-422/485 signal levels back to RS-232 for a connection to the D2-262 CPU bottom port.

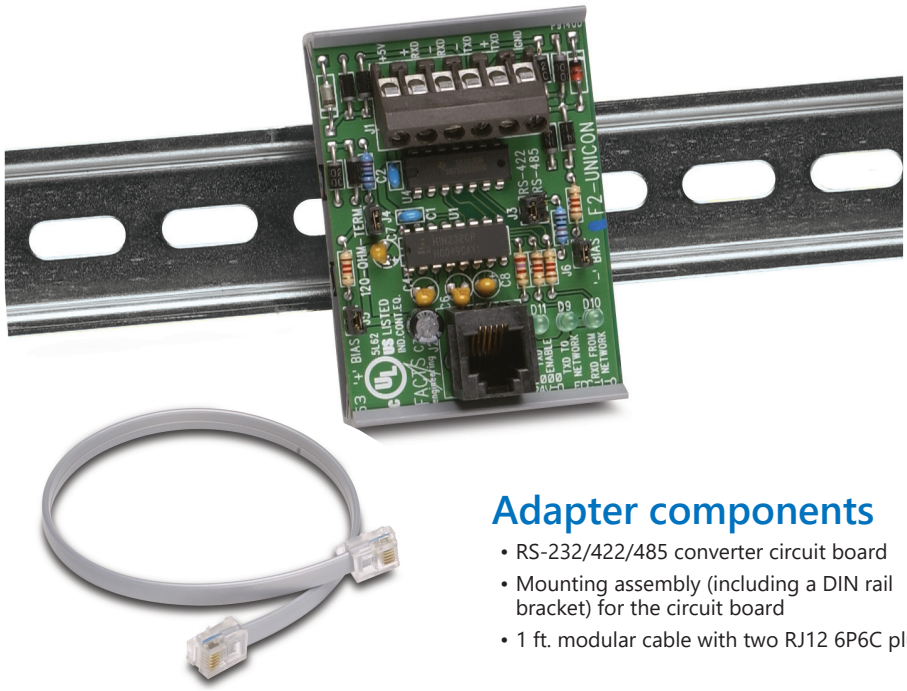
C) FA-ISOCON converts the RS-422/485 signal levels back to RS-232 for a connection to the D0-05xx CPU port 2.

Dimensions including DIN bracket and terminal block. HxWxD (4.55" x 0.90" x 4.69")



Removable terminal blocks make it easy to connect communication wiring. (Replacement terminal plug kit FA-ISOCON-P)

F2-UNICON Universal Converter



General specifications

- Max. network distance: 4000 feet
- Max. baud rate: 19.2 Kbaud
- Supply voltage: 5 VDC (from CPU)
- Max. driver load: 62 h
- Driver voltage: ±1.5V minimum
- No load current: 65 mA
- Max. current: 100 mA
- Operating temp: 60°C [140°F]
-

Adapter components

- RS-232/422/485 converter circuit board
- Mounting assembly (including a DIN rail bracket) for the circuit board
- 1 ft. modular cable with two RJ12 6P6C plugs

F2-UNICON $123.00

The F2-UNICON Universal Converter converts RS-232 signal levels to RS-422 signal levels or RS-422 signal levels into RS-232 signals. The F2-UNICON does not offer the benefit of network isolation that the FA-ISOCON offers. The F2-UNICON has been specifically designed to be used with the DL05 CPUs. It offers features such as:

- Easily mounts to DIN rail
- Does not require an external power source. It obtains power from the +5V pin on the DL05 (port 2).
- Has transmit and receive LEDs to simplify troubleshooting.

Installation is a "snap"

The F2-UNICON comes with a DIN rail housing for the circuit board. Simply snap the board into the housing and mount it on a DIN rail (or flush-mount it on a panel). Connect the communications wiring to the convenient terminal blocks, then connect the adapter to the CPU port with the cable.

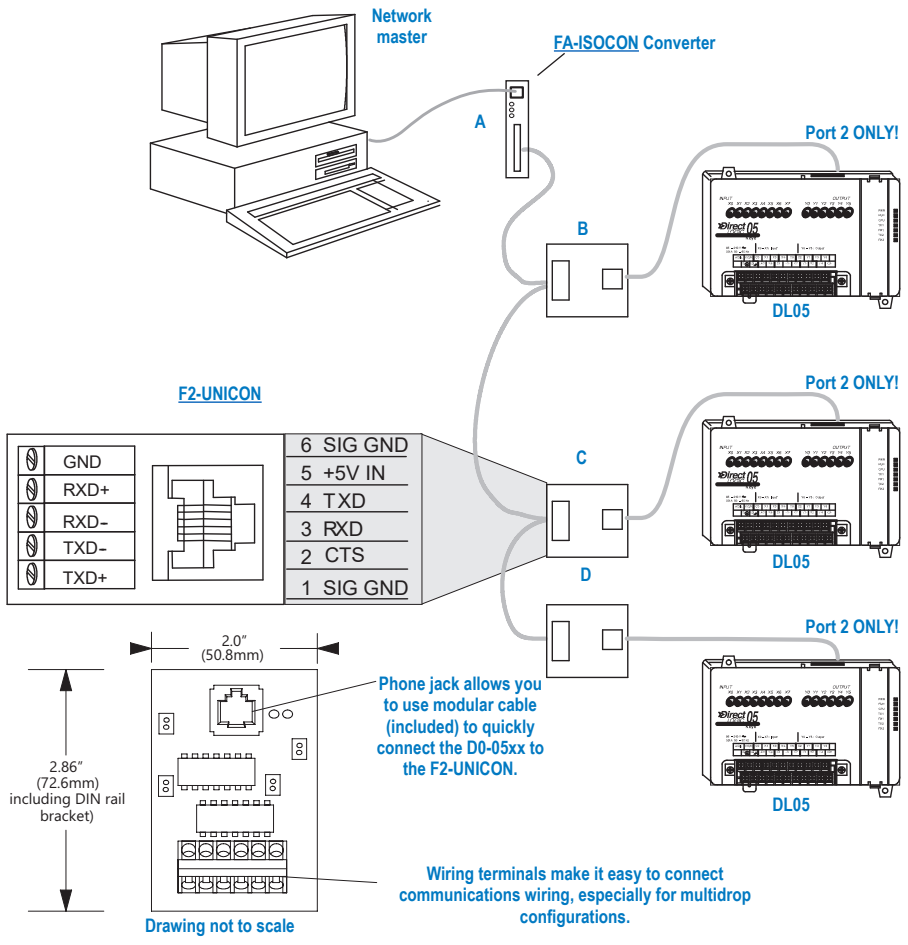
Example of system using F2-UNICON

A) F2-UNICON converts the network master's (computer) RS-232 communications card signal levels to RS-422/485, which is suitable for a multi-drop network.

B) F2-UNICON converts the RS-422/485 signal levels back to RS-232 for a connection to the DL05 port 2.

C) F2-UNICON converts the RS-422/485 signal levels back to RS-232 for a connection to the DL05 port 2.

D) F2-UNICON converts the RS-422/485 signal levels back to RS-232 for a connection to the DL05 port 2.



FA-CABKIT Universal Cable Kit

FA-CABKIT $71.00

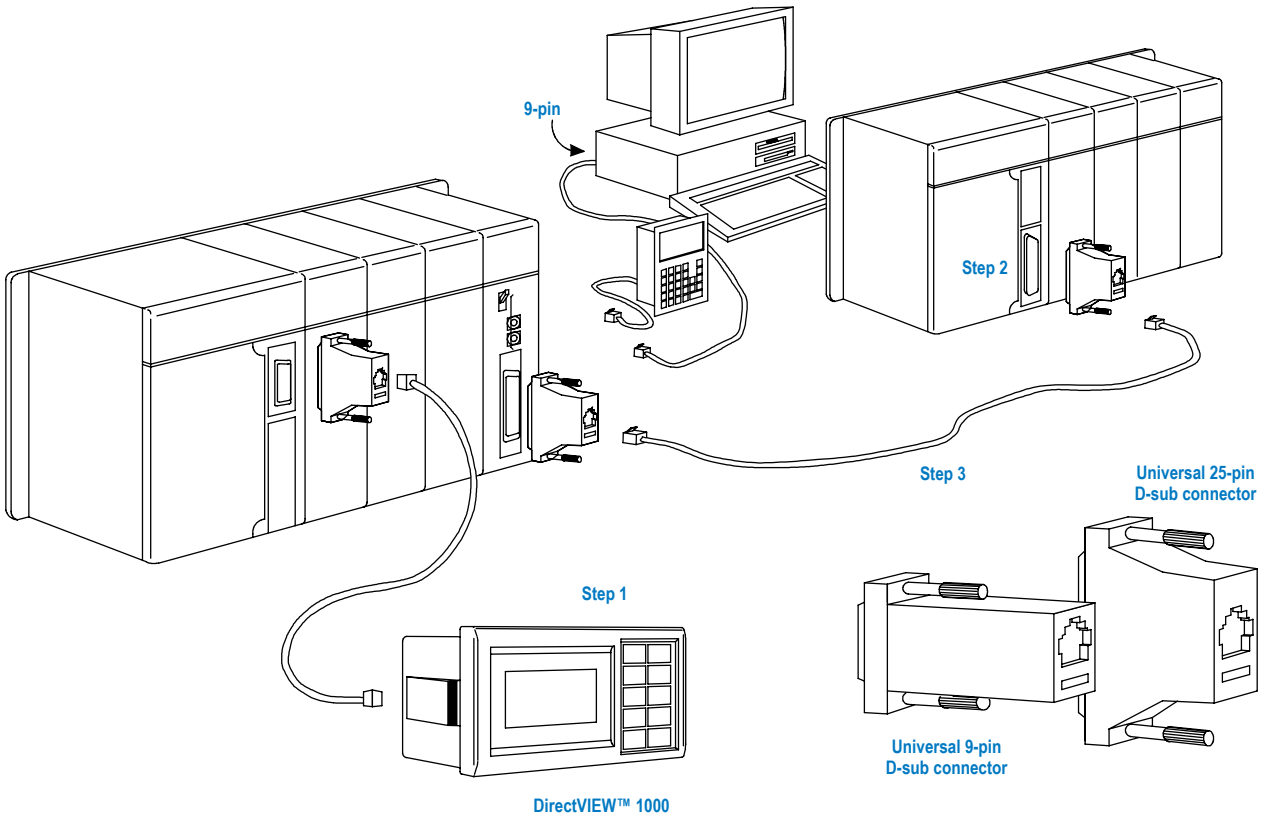
The Universal Cable Kit (FA-CABKIT) allows you to connect various types of ***Direct***LOGIC™ products with an RS-232 cable in a matter of minutes. The kit consists of two phone cables (with male plugs already attached) and several specially wired connectors. The special connectors are a D-sub style with built-in female phone jacks. This kit, with its wide variety of special connectors, allows for easy connections to many different products from each of the ***Direct***LOGIC product families. The individual pieces of the kit are not sold separately except for the FA-15HD high density 15-pin connector.

Note: For D-sub to terminal block adapters, see the Wiring Solutions section

Follow these simple steps to use the cable kit:

1. Plug the proper universal connector (or cable) into the appropriate communication port of the host product (CPU, DCM, CoProcessor module, personal computer, operator interface, etc.).
2. Plug the proper universal connector onto the other device to be connected to the host system : (DL05, DL06, DL105, DL205, DL305, DL405, CoProcessor module, PC communication card, etc.).
3. Connect the universal cable between the two connectors.
4. Verify that the circuit you created is correct before applying power.

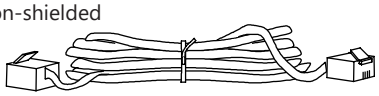
WARNING: This cable system is designed for temporary testing situations and should not be used in actual applications. This cable is not shielded and is susceptible to electrical noise. Electrical noise can cause unpredictable operation that may result in a risk of personal injury or damage to equipment.



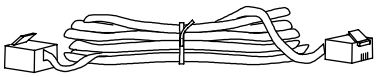
FA-CABKIT Universal Cable Kit

The table lists various devices that can be connected quickly with the universal cable kit. To determine which parts you need to use, simply use the table to find the connection you wish to make. Then match each device required for that connection with its part number. Snap the pieces together and you're ready to communicate. The following seven parts are included in the Universal Cable Kit. These parts are not sold separately, except for the FA-15HD high density 15-pin connector.

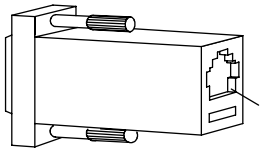
1. Standard phone-style connectors (RJ12), non-shielded



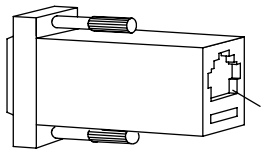
2. Standard phone and handset style connectors (RJ12, RJ11), non-shielded



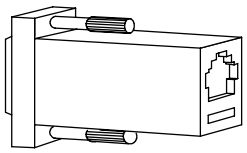
3. Universal 9-pin female D-sub connector



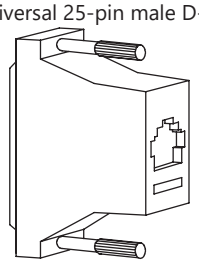
4. Universal 9-pin male D-sub connector



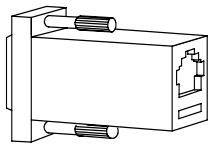
5. Universal 15-pin male D-sub connector



6. Universal 25-pin male D-sub connector



7. Universal 15-pin HD male D-sub connector (FA-15HD)



Universal cable kit

Items included in the universal cable kit

Device Description

1. 7 ft. standard cable, 6P6C to 6P6C phone type
2. 6 ft. adapter cable, 6P6C to 4P4C phone type
3. AT connector 9-pin female to 6P6C connector
4. (ASCII BASIC module) 9-pin male connector to 6P6C connector
5. DL405 15-pin male connector to 6P6C connector
6. DL405 CPU and DCM 25-pin male connector to 6P6C connector
7. DL06, D2-250(-1) and D2-260 CPUs 15-pin HD male connector to 6P6C connector

Common connection examples
DL05, DL06, DL105, DL205, D3-350 and (D4-450 port 2) CPU connections

Connection desired	Devices required
1. DL05/06/105/205/DL350/D4-450 to AT type computer 9-pin	1,3
2. CPU to DV-1000	1
3. CPU to DL205 or DL405 DCM	1,6
4. CPU to DL340 CPU	2
5. CPU to ABM (DL205 only)	1,4

DL06, D2-250(-1), D2-260 CPU port 2 connections

Connection desired	Devices required
1. DL06/250(-1)/260 port 2 to AT type computer 9-pin	1,3,7
2. DL06/250(-1)/260 port 2 to DV-1000	1,3,7

DL305 D3-232-DCU connections

Connection desired	Devices required
1. DCU to AT type computer 9-pin	1,6,3
2. DCU to DL405 series DCM (requires 2 kits)	1,6,6
3. DCU to DL340 CPU	2,6
4. DCU to ABM	1,6,4

DL305 CPU connections

Connection desired	Devices required
1. DL340 CPU to AT type computer 9-pin	2,3
2. DL340 CPU to DL405 series CPU/DCM	2,6
3. DL340 CPU to DL240 CPU	2
4. DL340 to ABM	2,4
5. DL340 CPU to DCU CPU	2,6

DL405 CPU (15-pin) top port connections

Connection desired	Devices required
1. DL405 CPU to AT type computer 9-pin	1,5,3
2. DL405 CPU to DV-1000	1,5

DL405 CPU (25-pin) bottom port connections

Connection desired	Devices required
1. DL405 CPU to AT type computer 9-pin	1,6,3
2. DL405 CPU to DL405 series DCM (requires 2 kits)	6
3. DL405 CPU to DL340 CPU	2,6
4. DL405 CPU to ABM	1,6,4

USB Programming Cables

USB Cables

AutomationDirect's high quality USB cables are used to connect USB devices to a USB port on a PC. Each cable has Standard-A plug to Standard-B plug end connectors, both gold plated, and meet the USB 2.0 requirements. These cables can be used for programming Productivity Series CPUs, ***C-more*** panels, certain ***C-more*** Micro panels and PC to touchscreen connections for Atlas Industrial Monitors that include touchscreen capability.

Standard A to standard B

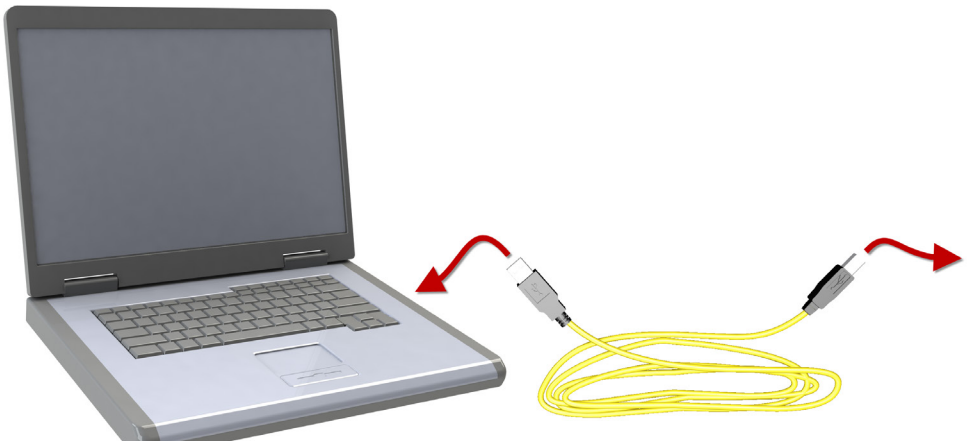
Part Number	Description	Price
USB-CBL-AB3	3-ft [0.9 meter] Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices.	$12.00
USB-CBL-AB6	6-ft [1.8 meter] Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices.	$16.00
USB-CBL-AB10	10-ft [3 meter] Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices.	$36.50
USB-CBL-AB15	15-ft [4.6 meter] Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices.	$42.50

Standard A to micro B

Part Number	Description	Price
USB-CBL-AMICB6	Programming cable, USB A to micro-B USB, 6ft cable length.	$5.75
USB-CBL-AMICB15	Programming cable, USB A to micro-B USB, 15ft cable length.	$11.50

Standard A to Standard C

Part Number	Description	Price
USB-CBL-AC6	Programming cable, USB A to USB C, 6ft cable length.	$7.75



- Productivity Series CPUs
- ***C-more*** panels
- ***C-more*** Micro panels
- Atlas Industrial Monitors with touchscreen capability.

USB to RS-232 Converter

USB-RS232 Retired

This quality USB to RS-232 converter transparently connects serial devices to PC applications via a USB port. It is perfect for the user needing to connect to a serial port-based peripheral from a laptop PC with an available USB port but no serial port. The adapter driver creates a virtual serial port (using the next available COM number). Applications connect to the virtual COM port as if it were a standard serial port. The USB-serial conversion is completely transparent to the peripheral device.

Features:

- Flexible cable
- Premium quality
- Gold connectors
- Ergonomic molding for easy connection
- Foil and braid shielding to reduce EMI/RFI interference
- Designed for high-speed transmissions
- LED power and TX/RX indicators
- Mates with PC DB9 serial cables (such as our D2-DSCBL PLC cable)
- 2 hex nuts included

Compatible with AutomationDirect's:

- ***Direct***LOGIC PLCs (***Direct***SOFT 3.0C build 80 and later versions)
- Optimate panels (OP-WINEDIT software)

Specifications:

- RS-232 standard
- Powered by the USB bus
- DB 9 male connector
- USB A male connector
- 6ft [1.8m] cable
- USB 2.0 compliant
- Plug and Play

Operating Systems:

- Windows 11
- Windows 10
- Windows 8.1–64-bit, 32-bit
- Windows 8–64-bit, 32-bit
- Windows 7–64-bit, 32-bit
- Windows XP

Hardware Requirements:

- One available USB port
- If the RS232 port on your device is not a nine pin female, you will need an additional adapter. USB-RS232 converter is a nine-pin male connector.

USB to RS-232 Converter

USB-RS232-1 $45.00

This intelligent USB to RS-232 adapter cable provides high-speed serial connectivity via a USB port. It includes bundled virtual COM port drivers for plug and play convenience. The serial port is fully compatible with RS-232 DTE serial standard. The adapter driver creates a virtual serial port (using the next available COM number). Applications connect to the virtual COM port as if it were a standard serial port. The USB-serial conversion is completely transparent to the peripheral device.

Features:

- Ergonomic molding for easy connection
- Foil and braid shielding to reduce EMI/RFI interference
- Designed for high-speed transmissions
- TXD and RXD Activity LED Indicators
- Mates with PC DB9 femail serial cables, such as our D2-DSCBL PLC cable. (Coupling nut not included)
- Supports USB Bus Power

Hardware Requirements:

- One available USB port on your PC
- If the RS-232 port on your device is not a 9-pin female connector, you will need an additional adapter. The USB-RS232-1 converter uses a 9-pin male connector.

USB-RS232-1 Specifications	
Serial port connection	RS-232 (9-pin D-sub male)
USB connection	USB A, 2.0 plug
Communications standards	Serial port: RS-232, DTE USB port: USB 2.0 compliant
Serial port parameters	Baud Rate from 300bps to 921.6Kbps 7 or 8 Data Bits, 1 or 2 Stop Bits Odd, Even, Mark, Space, or None parity mode
Cable length	5.9ft [1.8m]
Operating system compatiblity	Windows 7, 8.x, 10, 11 Linux Mac OS
LED indicators	Tx, Rx
Included accessories	Removable hex nuts
Power requirements	5VDC, 135mA (max), USB bus power
Operating temperature	0°C to +55°C [+32°F to +131°F]
Operating relative humidity	5 to 95%

USB to RS-485 PC Adapter

USB-485M $69.00

Convenient 2-wire USB to RS-485 serial communication adapter for universal RS-485 use (GS drives, SureServo servos, Solo temperature controllers, CLICK PLCs, etc.). Does not require an external power supply or complicated configuration process.

Features:

- Type A (plug) USB connector
- Universal female RJ45/RJ12 modular connector (accepts RJ12 & RJ45 plugs)
- Supports multiple baud rates
- USB v2.0 compliant
- RoHS compliant
- CE compliant

Components Included:

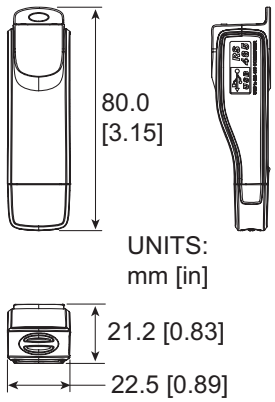
- Adapter
- Cable – 6-wire RJ12 crossover; 2m [79 in] (for plug & play connectivity to GS drives)
- Cable – 2-wire RJ12–flying leads; 2m [79in] (for universal RS-485 connectivity to SureServo, Solo, etc.)

Specifications	
Description	USB TO RS-485 PC Adapter; includes (2) RJ12 cables, instructions
Component Compatibility *	GS series AC drives – GSOFT/GSOFT2 configuration software & Modbus polling Ironhorse AC drives – VFD Suite configuration & Modbus polling Toshiba AS3 AC drives – ASD Pro configuration software & Modbus polling SureServo(2) servo drives – SV(2)-PRO configuration software & Modbus polling** SOLO process controllers – SL-SOFT configuration software SOLO process controllers – Modbus polling CLICK PLCs – Modbus polling Productivity PLCs – Modbus polling
Power Supply	No external power supply needed
Power Consumption	0.4 W
Voltage Isolation	3000 VDC
Baud Rates Supported	75, 150, 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 (bps)
Transmission Type	RS-485 half-duplex (2-wire)
LED Display	Steady Green LED ON: power is ON. Blinking orange LED: data is transmitting.
USB Connector	Type A (plug)
RS-485 Connector	RJ45
Compatibility	USB v2.0 specification
PC Compatibility	Windows Operating System required for bridge & driver installation: 32-bit driver: Windows 7, 8, 8.1, 10 64-bit driver: Windows 7, 8, 8.1, 10

*** NOT compatible with DirectSOFT PLC software.**
(*Direct*SOFT RS-485 programming requires 4-wire full-duplex data transmission.)
**** Requires SVC-485CFG-CBL-2 cable.**

USB-485M

USB-485M Dimensions



USB-485M RJ-45 Pin-out

8 ← 1

RJ-45

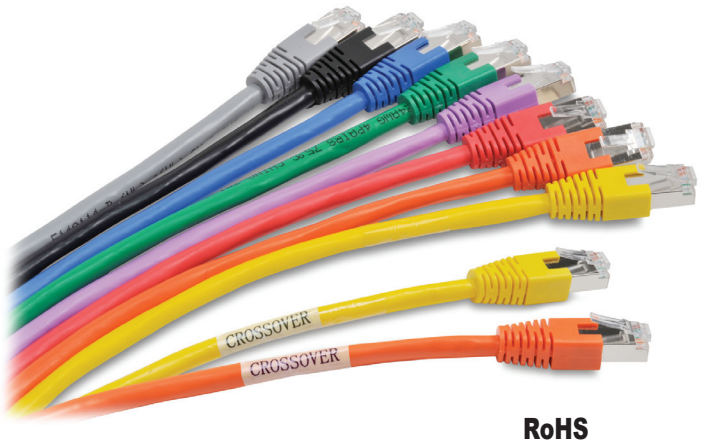
Pinout	
Pin	***Description***
1	reserved
2	reserved
3	reserved
4	SG+
5	SG–
6	reserved
7	reserved
8	reserved

Ethernet Patch Cables

Cat5e STP Ethernet Patch Cables

Connectivity

Ethernet is a networking technology that includes the protocol, port, cable, and computer chip needed to interconnect intelligent devices on to a local area network.



RoHS
RoHS Compliant

Designed for Industrial Use

The noise interference radiated from electrical components that is often associated with factory floor environments can result in partial or complete data loss. This may result in delays or complete communication loss in extremely noisy environments.

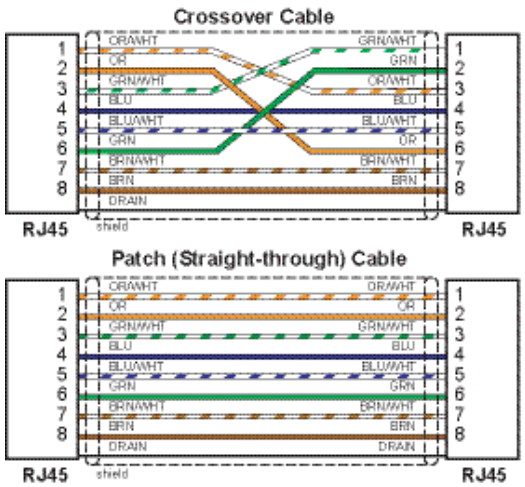
Our Ethernet patch cables are designed to reduce the effects of (EMI) electromagnetic interference by incorporating a single metal foil shield that wraps around the entire set of 8 wires in the Cat5e cable. The RJ45 connectors are also shielded against electrical interference and designed to be robust. Our 350 MHz cables exceed all Cat5e TIA/EIA standards, and drastically reduce both impedance and structural return loss (SRL) when compared to standard 100 MHz cables.

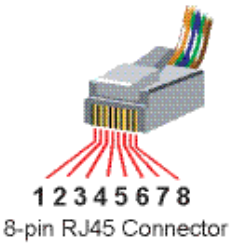
The cables comply with the PoE+ standard to deliver an enhanced 30W of power.

With several colors and lengths to choose from at great pricing, these cables should help you in creating solid, reliable Ethernet networks with any application.

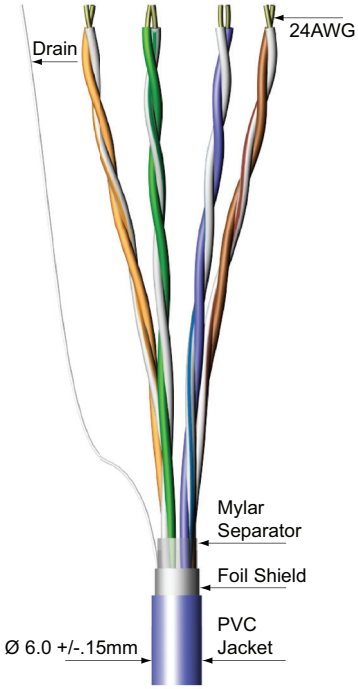
Features

- Connector; 50-micron gold plated RJ45 male plugs
- Conductor; 4-pair 24 AWG stranded copper
- Overall foil shielded cable for industrial applications
- Crossover cables have "crossover" label on each end.
- Exceeds Category 5e specifications, 350MHz
- 30W Power over Ethernet (PoE+)
- Multiple lengths and colors
- CM rated, suitable for general use other than plenum spaces
- RoHS compliant





8-pin RJ45 Connector



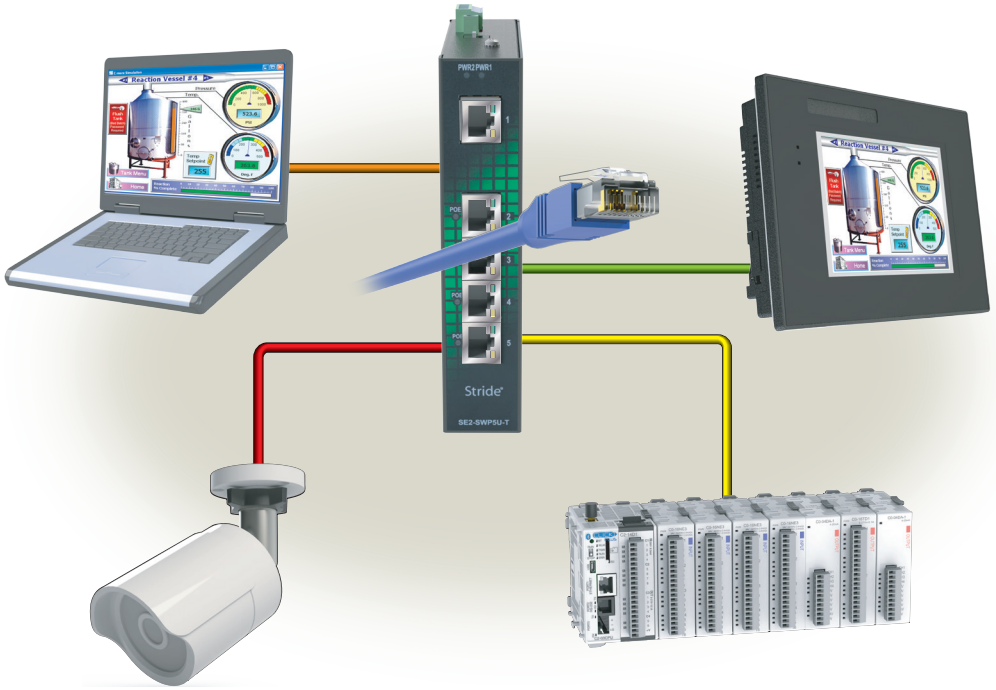
Ethernet Patch Cables

Cat 5e Straight Through Patch Cables				
Part Number	***Color***	***Description***	***Length***	***Price***
C5E-STPBK-S3	Black	AutomationDirect Cat5e Ethernet straight-through patch cable, STP (overall foil shield), RJ45 male to RJ45 male. For use with 10/100/1000 Mbps networks. Exceeds Category 5e cable specifications.	3' [0.91 m]	$7.75
C5E-STPBL-S3	Blue			$7.75
C5E-STPGN-S3	Green			$7.75
C5E-STPGY-S3	Gray			$7.75
C5E-STPOR-S3	Orange			$7.75
C5E-STPPL-S3	Purple			$8.00
C5E-STPRD-S3	Red			$8.25
C5E-STPYL-S3	Yellow			$8.00
C5E-STPBK-S7	Black	AutomationDirect Cat5e Ethernet straight-through patch cable, STP (overall foil shield), RJ45 male to RJ45 male. For use with 10/100/1000 Mbps networks. Exceeds Category 5e cable specifications.	7' [2.13 m]	$12.00
C5E-STPBL-S7	Blue			$11.50
C5E-STPGN-S7	Green			$12.00
C5E-STPGY-S7	Gray			$11.50
C5E-STPOR-S7	Orange			$13.00
C5E-STPPL-S7	Purple			$13.00
C5E-STPRD-S7	Red			$13.00
C5E-STPYL-S7	Yellow			$12.00
C5E-STPBK-S10	Black	AutomationDirect Cat5e Ethernet straight-through patch cable, STP (overall foil shield), RJ45 male to RJ45 male. For use with 10/100/1000 Mbps networks. Exceeds Category 5e cable specifications.	10' [3.05 m]	$15.00
C5E-STPBL-S10	Blue			$15.00
C5E-STPGN-S10	Green			$15.00
C5E-STPGY-S10	Gray			$15.00
C5E-STPOR-S10	Orange			$15.00
C5E-STPPL-S10	Purple			$17.50
C5E-STPRD-S10	Red			$17.50
C5E-STPYL-S10	Yellow			$17.50
C5E-STPBK-S14	Black	AutomationDirect Cat5e Ethernet straight-through patch cable, STP (overall foil shield), RJ45 male to RJ45 male. For use with 10/100/1000 Mbps networks. Exceeds Category 5e cable specifications.	14' [4.3 m]	$18.50
C5E-STPBL-S14	Blue			$20.00
C5E-STPGN-S14	Green			$14.00
C5E-STPGY-S14	Gray			$19.00
C5E-STPRD-S14	Red			$14.50
C5E-STPYL-S14	Yellow			$14.50
C5E-STPBK-S25	Black	AutomationDirect Cat5e Ethernet straight-through patch cable, STP (overall foil shield), RJ45 male to RJ45 male. For use with 10/100/1000 Mbps networks. Exceeds Category 5e cable specifications.	25' [7.6 m]	$31.00
C5E-STPBL-S25	Blue			$31.00
C5E-STPGN-S25	Green			$20.00
C5E-STPGY-S25	Gray			$28.50
C5E-STPYL-S25	Yellow			$20.00
C5E-STPBK-S50	Black	AutomationDirect Cat5e Ethernet straight-through patch cable, STP (overall foil shield), RJ45 male to RJ45 male. For use with 10/100/1000 Mbps networks. Exceeds Category 5e cable specifications.	50' [15.2 m]	$52.00
C5E-STPBL-S50	Blue			$54.00
C5E-STPGY-S50	Gray			$49.50
C5E-STPPL-S50	Purple			$34.00
C5E-STPYL-S50	Yellow			$31.50

Ethernet Patch Cables

Cat5e Crossover Patch Cables				
Part Number	***Color***	***Description***	***Length***	***Price***
C5E-STPOR-C3	Orange	AutomationDirect Cat5e Ethernet crossover patch cable, STP (overall foil shield), RJ45 male to RJ45 male. For use with 10/100 Mbps networks. Labeled as CROSSOVER on both ends. Exceeds Category 5e cable specifications.	3' [0.91 m]	$8.50
C5E-STPYL-C3	Yellow			$8.25
C5E-STPOR-C7	Orange		7' [2.13 m]	$11.50
C5E-STPYL-C7	Yellow			$11.00
C5E-STPOR-C10	Orange		10' [3.05 m]	$15.50
C5E-STPOR-C14	Orange		14' [4.3 m]	$19.00
C5E-STPOR-C25	Orange		25' [7.6 m]	$28.50
C5E-STPYL-C25	Yellow			$22.50
C5E-STPOR-C50	Orange		50' [15.2 m]	$50.00
C5E-STPYL-C50	Yellow			$36.00

Cat5e Cable Specifications	
Transfer Parameters	Cat5e
Transfer Rate	Up to 1 Gbit/s full duplex
Temperature Range	Bare cable temperature rating is 75°C
Protection Degree	RJ45 connector: IP20
Outer Diameter	6.0 mm ±0.2 mm
Bend Radius	60mm (10 x outer diameter)
Connection	Shielded RJ45 plug
Wire Material	Stranded copper
Approvals	Bare cable is cULus Recognized (file number E132276)



Ethernet Patch Cables

Cat6a STP Ethernet Patch Cables

RoHS
RoHS Compliant

Connectivity

Ethernet is a networking technology that includes the protocol, port, cable, and computer chip needed to interconnect intelligent devices on to a local area network.

Designed for High-Speed Industrial Use

The noise interference radiated from electrical components that is often associated with factory floor environments can result in partial or complete data loss. This may result in delays or complete communication loss in extremely noisy environments.

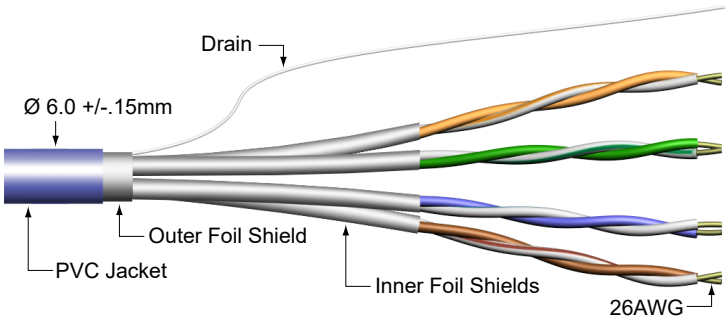
Our Cat6a Ethernet patch cables have a tighter twist rate than Cat5e cables to reduce crosstalk. The Cat6a cables are further designed to reduce the effects of (EMI) electromagnetic interference by incorporating a foil shield around each twisted pair, plus a single metal foil shield that wraps around the entire set of 8 wires. The RJ45 connectors are also shielded against electrical interference and designed to be robust.

The cables comply with the PoE+ standard to deliver an enhanced 30W of power.

With several lengths to choose from at great pricing, these cables should help you in creating solid, reliable Ethernet networks with any application.

Features

- Up to 10Gbps transfer rate
- 30W Power over Ethernet (PoE+)
- Connector: 50-micron gold plated RJ45 male plugs
- Conductor: 4-pair 26 AWG stranded copper
- Foil shielded twisted pairs with overall foil shielded cable for industrial applications
- CM rated, suitable for general use other than plenum spaces
- RoHS compliant



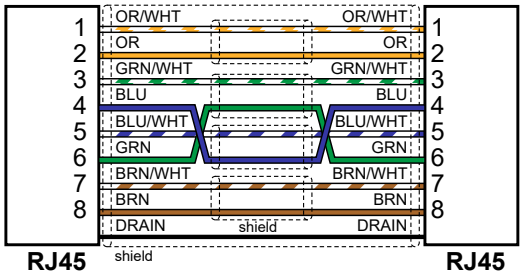
Cat6a Straight Through Patch Cables

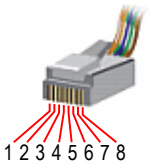
Part Number	Color	Description	Length	Price
C6A-STPBL-S3	Blue	AutomationDirect Cat6a Ethernet straight-through patch cable, STP (overall foil shield), RJ45 male to RJ45 male. For use with 10/100/1000/10000 Mbps networks.	3' [0.91 m]	$12.50
C6A-STPBL-S7			7' [2.13 m]	$19.00
C6A-STPBL-S10			10' [3.05 m]	$23.50
C6A-STPBL-S14			14' [4.3 m]	$29.50

Cat6a Cable Specifications

Transfer Parameters	Cat6a
Transfer Rate	Up to 10 Gbit/s full duplex
Temperature Range	Bare cable temperature rating is 75°C
Protection Degree	RJ45 connector: IP20
Outer Diameter	6.0 mm ±0.2 mm
Bend Radius	60mm (10 x outer diameter)
Connection	Shielded RJ45 plug
Wire Material	Stranded copper
Approvals	Bare cable is cULus Recognized (file number E515747)

Patch (Straight-through) Cable



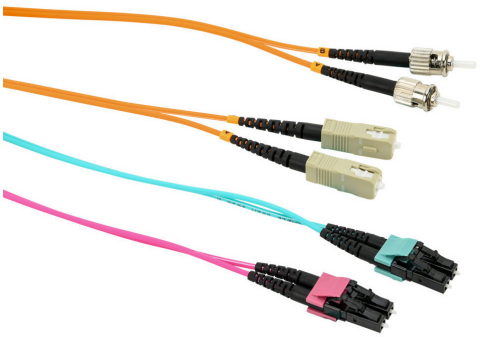


8-pin RJ45 Connector (8P8C)

AchieVe™ Fiber Optic Patch Cables

Features

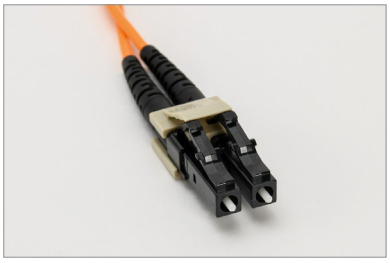
- Metal-free indoor cable
- Completely dry design
- High flexibility and light weight
- Halogen-free and non-corrosive combustion gases
- Low fire load for high safety requirements
- Jacket material complies with UL 94V-0



RoHS
RoHS Compliant

Fiber Optic Patch Cables					
Part Number	***Description***	***Color***	***Connectors***	***Length***	***Price***
FOM-OM1-LCLC-001	AchieVe OM1 multi-mode fiber optic Ethernet patch cable	Orange	LC duplex to LC duplex	3.2' [1m]	$8.00
FOM-OM1-LCLC-003				9.8' [3m]	$8.75
FOM-OM1-LCLC-005				16.4' [5m]	$10.50
FOM-OM1-LCLC-010				32.8' [10m]	$16.50
FOM-OM1-LCST-001			LC duplex to ST duplex	3.2' [1m]	$8.25
FOM-OM1-LCST-003				9.8' [3m]	$9.00
FOM-OM1-LCST-005				16.4' [5m]	$10.00
FOM-OM1-LCST-010				32.8' [10m]	$16.50
FOM-OM1-SCLC-001			SC duplex to LC duplex	3.2' [1m]	$8.00
FOM-OM1-SCLC-003				9.8' [3m]	$8.75
FOM-OM1-SCLC-005				16.4' [5m]	$10.50
FOM-OM1-SCLC-010				32.8' [10m]	$16.50
FOM-OM1-SCSC-001			SC duplex to SC duplex	3.2' [1m]	$8.00
FOM-OM1-SCSC-003				9.8' [3m]	$8.75
FOM-OM1-STST-001			ST duplex to ST duplex	3.2' [1m]	$10.00
FOM-OM1-STST-003				9.8' [3m]	$14.00
FOM-OM2-SCLC-001	AchieVe OM2 multi-mode fiber optic Ethernet patch cable		SC duplex to LC duplex	3.2' [1m]	$8.00
FOM-OM2-SCLC-003				9.8' [3m]	$8.75
FOM-OM2-SCLC-005				16.4' [5m]	$10.00
FOM-OM2-SCLC-010				32.8' [10m]	$14.00
FOM-OM3-LCLC-001	AchieVe OM3 multi-mode fiber optic Ethernet patch cable	Aqua	LC duplex to LC duplex	3.2' [1m]	$8.75
FOM-OM3-LCLC-003				9.8' [3m]	$10.00
FOM-OM3-LCLC-005				16.4' [5m]	$11.00
FOM-OM3-LCLC-010				32.8' [10m]	$16.50
FOM-OM4-LCLC-001	AchieVe OM4 multi-mode fiber optic Ethernet patch cable	Violet		3.2' [1m]	$10.50
FOM-OM4-LCLC-003				9.8' [3m]	$16.50
FOM-OM4-LCLC-005				16.4' [5m]	$20.00
FOM-OM4-LCLC-010				32.8' [10m]	$23.00

AchieVe™ Fiber Optic Patch Cables



LC Connector

ST Connector

SC Connector

Optical Characteristics and Physical Properties

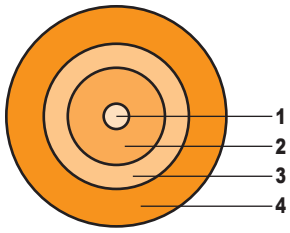
Fiber Type		OM1	OM2	OM3	OM4
Jacket Color		Orange	Orange	Aqua	Violet
Core Diameter (µm)		62.5 ±2.5	50 ±2.5		
Cladding Diameter (µm)		125 ±5.0			
Primary Coating Diameter (µm)		245 ±10			
Attenuation (max. in cable) (dB/km)	@850nm	≤ 3.4	≤ 3.0		
	@1300nm	≤ 1.0			
Bandwidth (overfilled) (MHz*km)	@850nm	200	500	1500	3500
	@1300nm	500			
Serial Ethernet 1 Gigabit (meters)	@850nm	–	–	1000	1040
	@1300nm	–	–	600	600
Serial Ethernet 10 Gigabit (meters)	@850nm	–	–	300	550
	@1300nm	–	–	300	300

Cable Mechanical and Environmental Properties

Type		2 cores duplex fiber optic cable
Cable Outer Diameter		2.0 x 4.1 mm
Jacket Material		low smoke zero halogen (LSZH), UL94 V-0 compliant
Minimum Bending Radius	During Installation	50mm (IEC 60794-1-2 E11)
	In Service	25mm (IEC 60794-1-2 E11)
Crush Resistance	Short Term	4000 N/dm (IEC 60794-1-2 E3)
	Long Term	1000 N/dm (IEC 60794-1-2 E3)
Impact Resistance	Wp=0.74J	40 impact (IEC 60794-1-2 E4)
	Wp=1J	20 impact (IEC 60794-1-2 E4)
Repeated Bending	r=25mm w=0.5 kg	5000 cycles (IEC 60794-1-2 E6)
Length Tolerance		±50mm
Max. Tensile Strength		300N
Temperature Range	In Service	−13°F to +158°F [−25°C to +70°C]
	In Storage	−40°F to +158°F [−40°C to +70°C]
Fire Load		0.22 MJ/m

Cable Construction

1	Fiber	250µm multimode
2	Semi-tight Buffer Tube	900µm LSZH
3	Strength Member	Aramid yarn
4	Outer Jacket	LSZH



Connector Specifications

LC Connector Compliance	IEC 61754-20, TIA 604-10-A, RoHS
SC Connector Compliance	IEC 61754-4, TIA 604-3, RoHS
ST Connector Compliance	IEC 61754-2, TIA 604-2, RoHS
Alignment Technology	Full ceramic ferrule (Zirconia ZrO_2)
Operating Temperature	−40°F to +185°F [−40°C to +85°C]
Flammability	UL94 V-0 compliant
Durability	<0.1 dB typical change for >500 matings

Optical Performance

Insertion Loss (Multi-mode)	≤ 0.30 dB Max., 0.15 dB Typ. IEC 61300-3-4 Method B
Return Loss (Multi-mode)	≥35dB IEC 61300-3-6 Method B

End-face Control Parameters

Geometry Inspection	IEC 61755-3-1
Visual Inspection	IEC 61300-3-35

StrideLinx Remote Access Solution

SE-SL Series Industrial VPN Routers

c UL us LISTED ITE E495151

CE FC

RoHS

RoHS Compliant

verizon

Model SE-SL3011-4GG Only

AT&T and T-Mobile compatible with LTE router

StrideLinx Industrial VPN Router Models				
Part Number	*Price*	*Gigabit Ethernet*	*WiFi*	*4G LTE (2)*
SE-SL3001 (1)	$400.00	✓		
SE-SL3011	$519.00	✓		
SE-SL3011-WF	$652.00	✓	✓	
SE-SL3011-4GG	$763.00	✓		✓ (Global)

(1) SE-SL3001 does not support data logging or notifications.
(2) SIM card and data plan compatible with the frequencies and bands supported by the device and identified in the spec table are required for 4G LTE operation from the carrier. An M2M SIM card is configured with an amount of data and a duration of validity at the time of purchase.
Antennas required for WiFi and 4G models and must remain connected during operation.
WARNING: DO NOT insert or remove the SIM card when power is applied to the router.

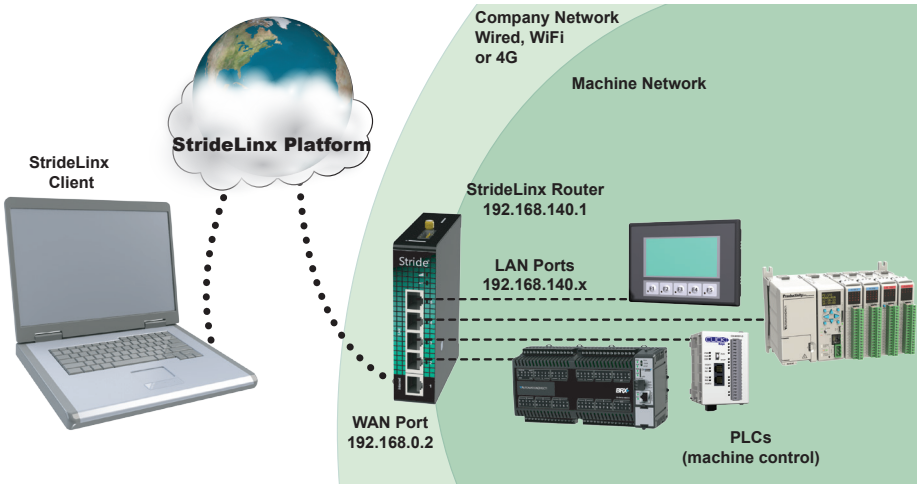
Key features

- Gigabit port speed
- Wired, WiFi, or 4G LTE WAN connectivity
- Easy, secure VPN networking
- Available Notification and Data Logging service
- Available Service Level Agreement (SLA)

4G LTE Router Options	
Features	*SE-SL3011-4GG*
*Verizon**	Yes – Certified
AT&T	Yes – Tested
T-Mobile	Yes – Tested
International Frequency Bands	Yes, but not tested with carriers

*** Requires router firmware version 3.20 or later.**

The StrideLinx Platform is a secure and powerful VPN platform based on a worldwide network of servers. It is focused on delivering and enhancing innovative remote service. A typical StrideLinx setup is illustrated as follows.



Please visit the StrideLinx page at AutomationDirect.com for an overview of the StrideLinx Remote Access Solution.

StrideLinx Remote Access Solution

SE-SL Series Industrial VPN Routers

Power Details	
Input Voltage	Class 2 LPS Power Supply, 12-24 VDC
Maximum Input Power	10W
Maximum Input Current	2A
Internal Voltage Protection	29V max
Reverse Polarity Protection	Yes
Isolation	1.5 kV

General Specifications	
USB	USB 2.0 (for configuration only)
Processor	MIPS 800MHz
Digital Input for Local Control	Yes
Operating Temperature Range	-20 to +65°C [-4 to +149°F]
Storage Temperature Range	-20 to +65°C [-4 to +149°F]
Relative Humidity	10 to 95% non-condensing
Operating Altitude	Up to maximum 2000m
Storage Altitude	Up to maximum 3000m
Environmental Air	For use in Pollution Degree 2 Environment. No corrosive gases permitted.
EMI	FCC CFR47 Part 15, EN55022/CISPR22, Class B
EMS	IEC61000-4-2 (ESD): ± 8kV (contact), ± 15kV (air) IEC61000-4-3 (RS): 10V/m (80MHz ~ 2GHz) IEC61000-4-4 (EFT): Power Port ± 4kV; Data Port: ± 2kV IEC61000-4-5 (Surge): Power Port: ± 2kV/DM, ± 4kV/CM; Data Port ± 2kV IEC61000-4-6 (CS): 10V (150kHz ~ 80MHz)
RoHS and WEEE	RoHS (Pb free) and WEEE compliant
Packaging and Protection	Metal case, IP20
Mounting	DIN rail
Weight	270–310 gram
Certification	CE, cULus, RoHS, REACH, AT&T (SE-SL3011-4G), FCC
Warranty	2 years
Agency Approvals	UL/cUL 60950-1, CE

WiFi Specifications (P/N SE-SL3011-WF Only)	
WiFi IEEE 802.11 Version	b/g/n
WiFi Modes	Station (Client) Mode and Access Point
Speed	72 Mbps
Antenna Connection	RP-SMA plug (male)
Antenna Connector Torque	3–5 lb·in [0.3–0.6 N·m]
FCC ID	XPYLILYW1

Ethernet Interface	
Ethernet ports	Five GbE (4x LAN, 1x WAN)
Port Type	Shielded RJ45
Auto-Crossover	Yes, allows you to use straight-through or crossover wired cables
Auto-Sensing Operation	Yes, full and half duplex
Auto-Negotiating Speed	Yes
Flow Control	Automatic
Operating Mode	Store and forward wire speed switching, non-blocking
Devices Supported	All IEEE 802.3 compliant devices are supported
Protection	Built-in 1.5 kV magnetic isolation
Cable Requirements	Twisted pair (Cat5e or better) (shielded recommended)
Max. Cable Distance	100 meters

4G LTE Specifications (P/N SE-SL3011-4G Only)	
Protocols and Frequencies (AT&T)	LTE-FDD - B2, B4, B12 WCDMA - B2, B4, B5
Speed	LTE-FDD - Max. 100 Mbps (DL)/Max. 50 Mbps (UL) WCDMA - Max. 384 kbps (DL)/Max. 384 kbps (UL)
Antenna Connection	Two (2) SMA plugs (male)
Antenna Connector Torque	3–5 lb·in [0.3–0.6 N·m]
SIM size	Standard SIM (2FF)
FCC ID	XMR201605EC25A

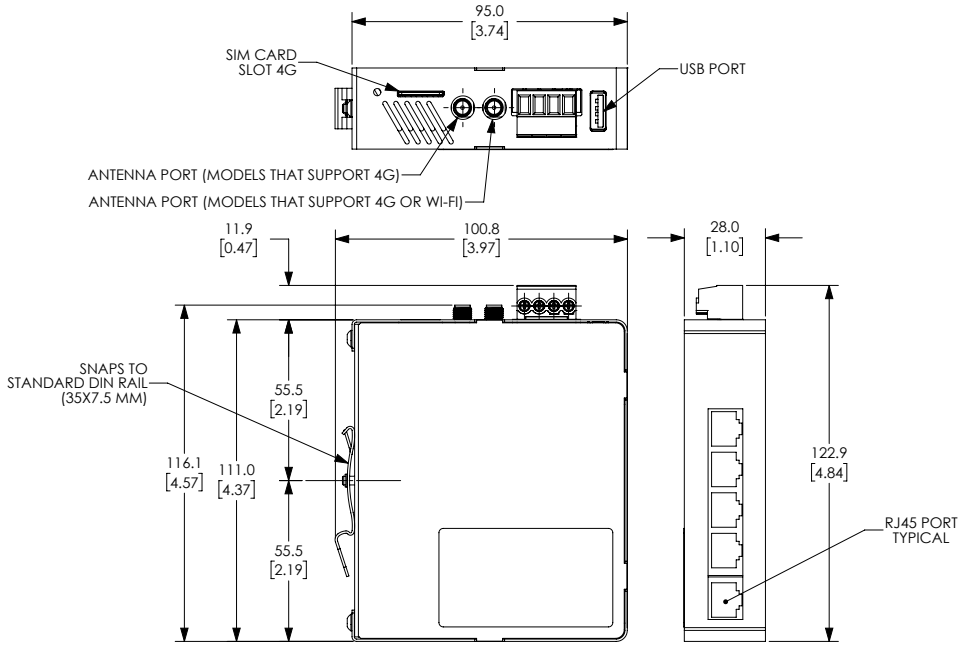
4G LTE Specifications (P/N SE-SL3011-4GG Only)	
Protocols and Frequencies (Global)	LTE FDD: B1,B2,B3,B4,B5,B7,B8,B12,B13,B18,B19, B20,B25,B26,B28 LTE TDD: B38,B39,B40,B41 WCDMA: B1,B2,B4,B5,B6,B8,B19 GSM: B2,B3,B5,B8 GPRS: B2,B3,B5,B8
Speed	LTE-FDD: Max. 150 Mbps (DL)/Max. 50 Mbps (UL) LTE-TDD: Max. 130 Mbps (DL)/Max. 30 Mbps (UL) WCDMA: Max. 384 kbps (DL)/Max. 384 kbps (UL) GSM (EDGE): Max. 296 kbps (DL)/Max. 236.8 kbps (UL) GPRS: Max 107 kbps (DL)/Max. 85.6 kbps (UL)
Antenna Connection	Two (2) SMA plugs (male)
Antenna Connector Torque	3–5 lb·in [0.3–0.6 N·m]
SIM size	Standard SIM (2FF)
FCC ID	XMR201903EG25G

StrideLinx Remote Access Solution

SE-SL Series Industrial VPN Routers

Dimensions

mm [inches]



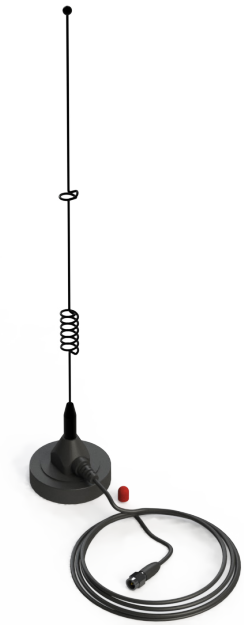
See our website: www.AutomationDirect.com for complete engineering drawings.

StrideLinx Remote Access Solution

Cellular Antennas for SE-SL3011-4GG Routers

SE-ANT110 $14.00

STRIDE whip/tilt LTE antenna, connector mount.



SE-ANT130 $33.50

STRIDE whip/straight LTE antenna, magnetic base mount, 9.8ft/3m cable length.

SE-ANT150 $43.00

STRIDE dome LTE antenna, IP67, panel mount, 9.8ft/3m cable length.

4G LTE Antenna Specifications

	SE-ANT110	SE-ANT130*	SE-ANT150
Price	$14.00	$33.50	$43.00
Fits	SE-SL3011-4GG		
Antenna Connector	SMA (M)		
Application	LTE, CDMA, GSM, HSPA, UMTS, GPRS		
Impedance	50Ω		
Antenna Type	whip, tilt	whip, straight	dome
Cable Length	N/A	3m [9.8 ft]	3m [9.8 ft]
Frequency Range	700–960MHz / 1.71–3.8 GHz	700–960MHz / 1.71–3.5 GHz	700–960MHz / 1.71–2.7 GHz
Gain	-3.0 dBi / 0.9 dBi	-2.5dBi / 0.1dBi	1.2 dBi / 3.2 dBi
Height	2.84 in	13 in	1.89 in
IP Rating	–	–	IP67
Maximum Power	10W	50W	5W
Mounting Screw Torque	NA	NA	2.94 N·m

*** Gains listed are based on the antenna being mounted on a suitable ground plane.**

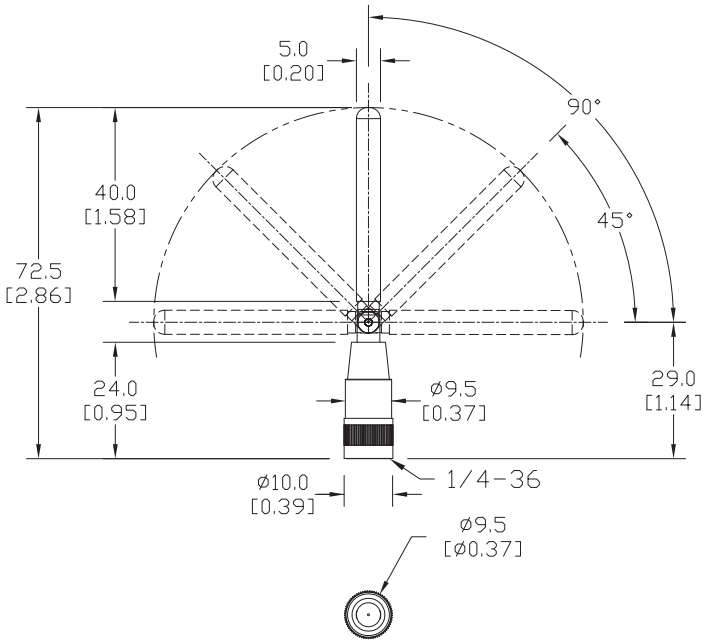
StrideLinx Remote Access Solution

Cellular Antennas for SE-SL3011-4G and SE-SL3011-4GG Routers

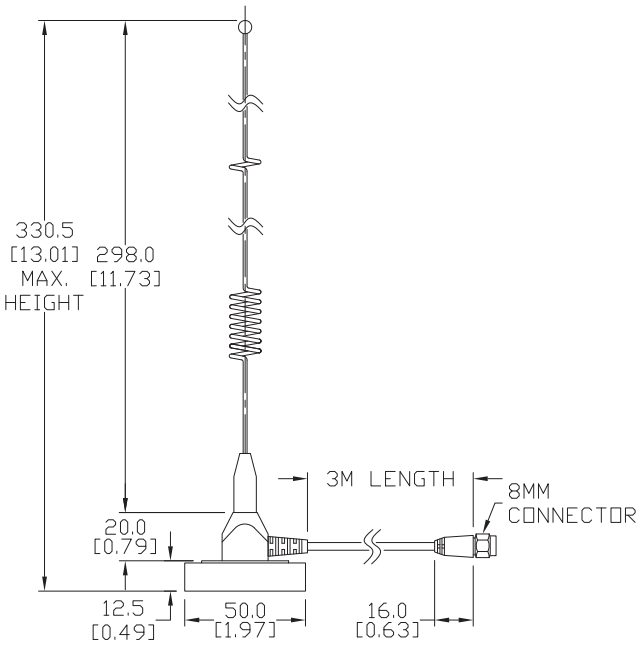
Dimensions

mm [inches]

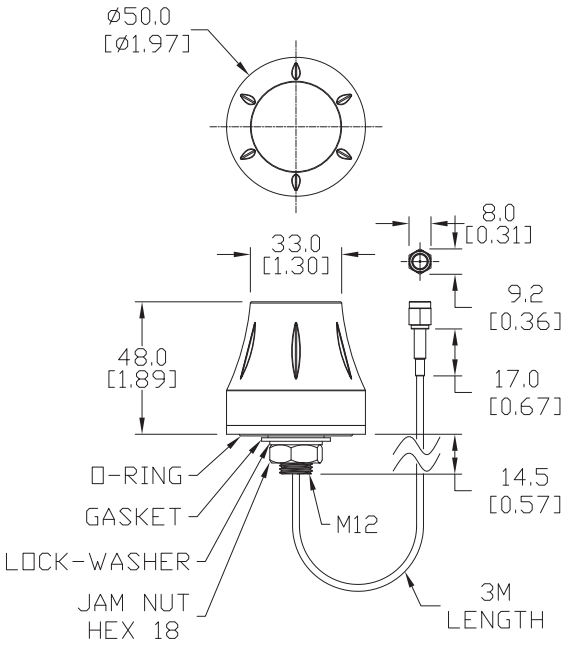
SE-ANT110:



SE-ANT130:



SE-ANT150:



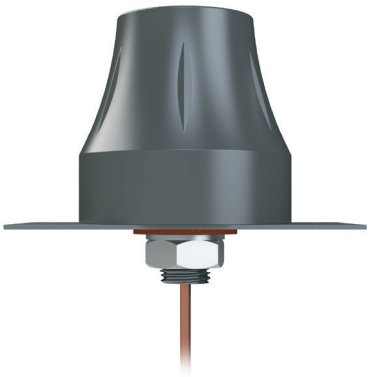
See our website: www.AutomationDirect.com for complete engineering drawings.

StrideLinx Remote Access Solution

2.4GHz WiFi Antennas for SE-SL3011-WF Routers (1 antenna required)

SE-ANT210 $11.00

STRIDE whip/straight 2.4 GHz WiFi antenna, IP65, connector mount.



SE-ANT250 $39.00

STRIDE dome 2.4 GHz WiFi antenna, IP67, panel mount, 9.8ft/3m cable length.

802.11 b/g/n 2.4 GHz WiFi Antenna Specifications		
	SE-ANT210	***SE-ANT250***
Price	$11.00	$39.00
Fits	SE-SL3011-WF	
Antenna Connector	RP-SMA (M)	
Application	802.11 b/g/n	
Impedance	50Ω	
Antenna Type	whip, straight	dome
Cable Length	N/A	3m [9.8 ft]
Frequency Range	2.4–2.5 GHz	2.4–2.5 GHz
Gain	1.8 dBi	1.5 dBi
Height	1.2 in	1.89 in
IP Rating	IP65	IP67
Maximum Power	1W	5W
Mounting Screw Torque	NA	2.94 N·m

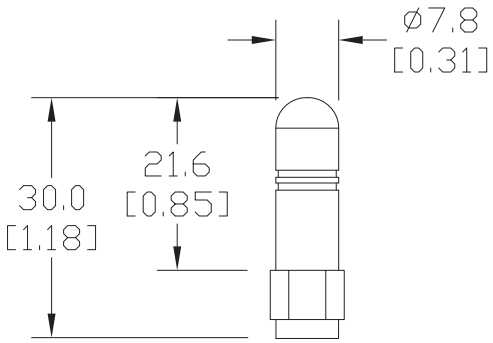
StrideLinx Remote Access Solution

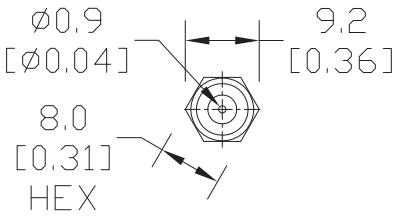
2.4GHz WiFi Antennas for SE-SL3011-WF Routers

Dimensions

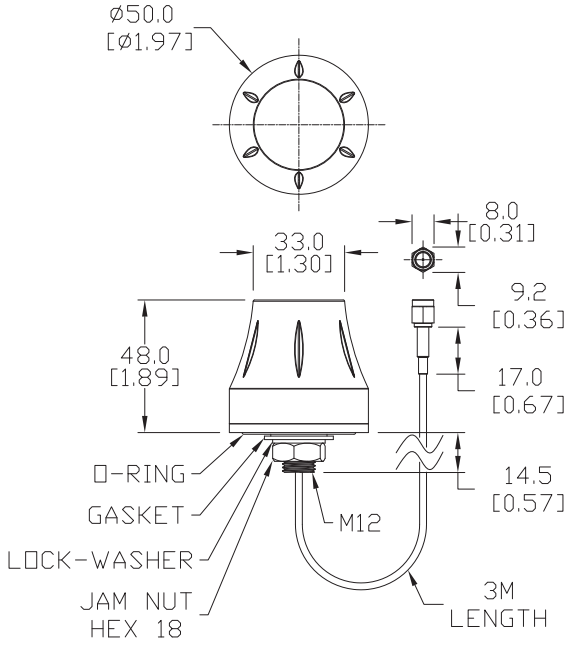
mm [inches]

SE-ANT210:





SE-ANT250:



See our website: www.AutomationDirect.com for complete engineering drawings.

StrideLinx Remote Access Solution

Add-on Services – Add value to Remote Access

These licenses provide added services to your StrideLinx remote access. These are not needed for the basic function of the VPN remote access, but can be added to enhance the value of the platform to you and your customers.

Cloud Reporting licenses also include:

- unlimited cloud storage for up to 7 years with active license
- unlimited real time and user configurable dashboards
- unlimited data reports, and unlimited data tags per device

To see StrideLinx Cloud in action, please scan the QR code or visit https://go2adc.com/vpn-cloud and click the StrideLinx demo site link to sign up for an interactive product tour.

StrideLinx Cloud Logging and Reporting Licenses

Part #	Price	Description	Term	Data Logging Points/Hour	Data Retention	Features
SE-SLR010-1	$279.00	StrideLinx Basic Reporting and Logging License	1 year	1,000	6 months	License includes email notification, data logging enabled at 1,000 data samples per hour with schedule reporting. For use with (1) StrideLinx router. Includes StrideLinx Notify License (#SE-SL021-1).
SE-SLR011-1	$499.00	StrideLinx Professional Reporting and Logging License	1 year	10,000	7 years	License includes email notification, data logging enabled at 10,000 data samples per hour with schedule reporting. For use with (1) StrideLinx router. Includes StrideLinx Notify License (#SE-SL021-1).

WARNING: *DATA COLLECTED THROUGH CLOUD REPORTING WILL BE LOST IF YOUR LICENSE LAPSES. DATA FOR A SPECIFIC DEVICE WILL BE LOST IF A LICENSE IS REMOVED FROM THAT DEVICE. DATA IS ONLY STORED FOR THE DATA RETENTION DURATION OF YOUR LICENSE. IF DATA OLDER THAN THAT DURATION IS IMPORTANT, PLEASE ARCHIVE YOUR DATA LOCALLY BEFORE THE RETENTION LIMIT IS REACHED.*

StrideLinx Add-on Licenses

Part #	Price	Description	Term	Features
SE-SL021-1	$131.00	StrideLinx Notify License	1 year	License includes alarm, trigger, recipient, and priority management with push and email notifications. For use with (1) StrideLinx router.
SE-SLR001-1	$949.00	StrideLinx Professional License	1 year	License includes white label StrideLinx platform, unlimited VPN data traffic and advanced user and device access management. For use with (1) StrideLinx company.
SE-SL051	$936.00	StrideLinx Mobile App Sustained Service License	1 year	License includes sustained service of white label StrideLinx iOS/Android mobile app with branding. For use with (1) existing white label StrideLinx iOS/Android mobile app. **ONLY AVAILABLE FOR EXISTING CUSTOM MOBILE APP USERS.**

Pocket Portal IIoT Bridge

SE-PB100 **$90.00**

Stride Pocket Portal IIoT Bridge

Features

- **Wireless Industrial IoT end-to-end solution to log your data in the cloud**
- **Faster Monitoring**: Unmonitored assets can get connected and become monitored assets in minutes
- **Remote Control**: Write to Modbus coils, registers, or 3.3–24 VDC digital outputs using the mobile app
- **Reduce Costs**: Enterprises can implement IIoT capabilities without needing technical expertise and without modifying equipment
- **Retrofit Solution**: Industrial controls, commercial buildings, retail spaces, or factories can be entirely retrofitted with IIoT capabilities in days instead of months
- **Work Smarter**: Continuously monitor and optimize asset performance

** Requires Wi-Fi Internet connection*
** iOS/Android device with Bluetooth needed for provisioning*

Modbus Interface	
Port Connector	4-pin pigtail connector (shared with power)
Interface Mode	RS-485
Serial Devices Supported	1 Modbus Slave
Protocols Supported	Modbus RTU Master

Local Digital and Analog I/O	
Digital Input/Output	4 Connections configured as Input/Output (3.3–24 VDC)
Analog Input	2 Analog Inputs (0–10 VDC / 4–20 mA)

Wi-Fi Interface for Cloud Connectivity	
IEEE Wi-Fi Standard	802.11 b/g/n
Speed	Up to 72.2 Mbps
Frequency Band	2.4 GHz
Antenna	Internal PCB Antenna

Power Details	
Input Voltage	12–24 VDC
Max. Input Voltage Range	10–26VDC
Power Consumption	Max 10W
Reverse Power Protection	Yes
Overload Protection	No

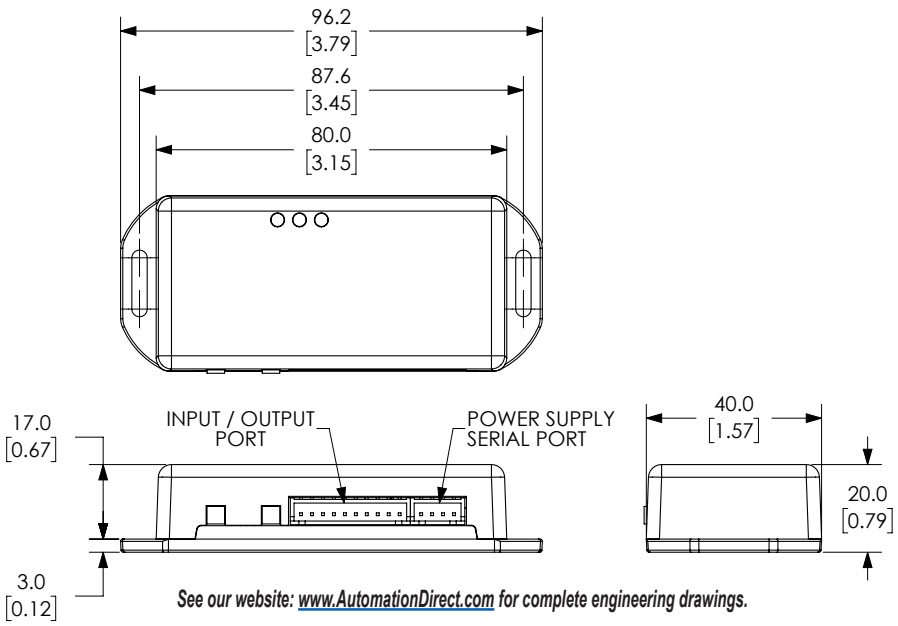
LED Indicators	
Wi-Fi LED	LED OFF: Wi-Fi not provisioned SLOW BLINK: Connecting to Wireless Access Point FAST BLINK: Connecting to Pocket Portal Cloud Service LED ON: Connected to Pocket Portal Cloud Service
Power LED	LED OFF – Power OFF LED ON – Power ON
BLE LED (Bluetooth Low Energy, used in initial setup only)	LED OFF – BLE off or not advertising SLOW BLINK – BLE advertising LED ON – Connected to mobile app

Environmental	
Operating Temperature Range	-20 to +70°C [-4 to 158°F]
Storage Temperature Range	-40 to +85°C [-40 to +185°F]
Humidity	5 to 85% RH (non-condensing)
Protection Level	plastic case, IP40
EMI	EN 55032 Class A
	FCC Part 15 Subpart C (15.247)
EMS	IEC61000-4-2 (ESD): ±4kV (contact), ±8kV (air discharge)
	IEC 61000-4-3 (RS): 10V/m (80MHz–6GHz)
	IEC 61000-4-6 (CS): 10V (150KHz–80MHz)
Mechanical Standards	IEC60068-2-64 (Random Vibration)
	IEC60068-2-32 (Drop Test / Free Fall)
Agency Approvals	CE, FCC

Pocket Portal IIoT Bridge

Dimensions

mm [inches]



See our website: www.AutomationDirect.com for complete engineering drawings.

DIN Rail Mounting Brackets

The Pocket Portal IIoT Bridge can be directly mounted to a flat surface, with no restrictions on mounting orientation. An optional DIN-rail adapter will allow mounting on a standard 35mm x 7.5 mm DIN rail.

DIN Rail Mounting Brackets		
Part Number	***Price***	***Description***
DRA-2B	$6.00	35mm DIN rail adapters, 1.70"x0.45"x0.83" [43.7x11.4x21.0 mm], 2pcs/pkg.

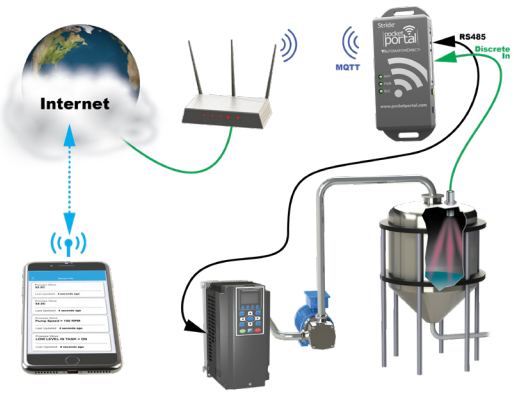
NOTE: Installation in a metal cabinet is not recommended, as the cabinet may block the Wi-Fi signal.

Data Subscriptions

Each Pocket Portal IIoT Bridge requires a Pocket Portal monthly data subscription. Subscriptions are available at https://www.pocketportal.com.

Pocket Portal Platform Subscriptions		
	SE-PP5M	***SE-PP500K***
Price	$15.50/mo.*	$8.25/mo.*
Description	Data Logging and Notify Gold Subscription	Data Logging and Notify Silver Subscription
Subscription Duration	Monthly or Annual Up to 23% discounts available for annual subscriptions.	
Supports	(1) STRIDE Pocket Portal IIoT bridge	

*** Available for purchase only on the Stride Pocket Portal platform at https://www.pocketportal.com. Details and limits for each subscription are available on the Pocket Portal platform.**



Stride MQTT Gateway

Features

- Convert Modbus RTU/TCP to MQTT
- IIoT MQTT protocol with SSL/TLS
- Configurable via web page
- Hardware watchdog function
- Full electrical isolation
- Add this to your MQTT cloud, compatible with AWS, Mosquitto and more
- Wired or Wi-Fi models available

MQTT.ORG

Stride MQTT Gateway Models				
Part Number	*Ethernet*	*RS-485*	*WiFi*	*Price*
SGW-MQ1611	✓	✓		$303.00
SGW-MQ1611-WF	✓	✓	✓	$307.00

Ethernet Specifications	
Connector	RJ-45
Ethernet Port Speed	10/100Mbps auto-detected
Protocol	MQTT, Modbus TCP
Simultaneous Ethernet Connections	8

RS-485 Specifications	
Connector	Removable screw terminals, 5.08 mm pitch
Baud rate	Up to 115.2 kbps
Parity	Even, odd or none
Stop bit	1 or 2
Number of Serial Devices	32 max.
Switching Time TX/RX (RS-485)	150µs
Termination Resistance	120Ω

WiFi Specifications (Model SGW-MQ1611-WF Only)	
WiFi Standards	802.11 a/b/g/n/ac
Frequency Bands	2.4/5.5 GHz
Antenna	Internal

Network Ports	
Web User Interface: HTTP (Unsecure)	80
Modbus	502 (default, software configurable)
MQTT	Software configurable, determined by MQTT Broker

CE FC RoHS

RoHS Compliant

Stride MQTT Gateway

Electrical Specifications	
Power Supply Connector	Removable screw terminals, 5.08 mm pitch
Input Voltage Range	10–30 VDC
Current Consumption	max 300mA @ 24VDC
Isolation	
Power Supply / RS-485	1500VAC, 50Hz, 1 min.
Ethernet / RS-485	1000VAC, 50Hz, 1 min.
Ethernet / Power Supply	1500VAC, 50Hz, 1 min.
Reverse Polarity Protection	Yes

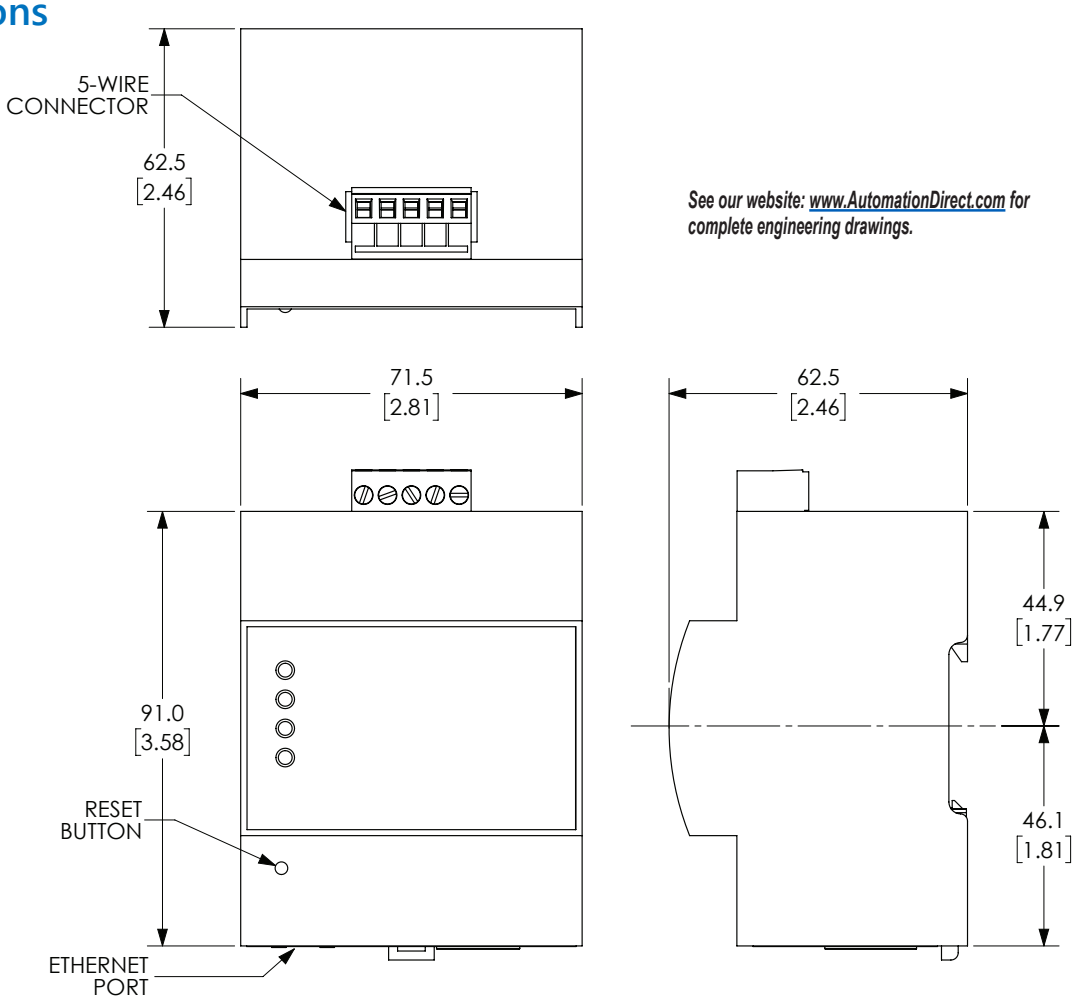
Environmental Specifications	
Operating Temperature	0 to +60°C [32 to 140°F]
Storage Temperature	−20 to +70°C [−4 to +158°F]
Humidity	0–90%, noncondensing
Maximum Altitude	2000m
IP Rating	IP20
Installation	Indoor
Category of Installation	II
Pollution Degree	2
EMC	
Immunity	EN61000-6-2
Emission	EN61000-6-4
Agency Approvals	CE, FCC, RoHS

Mechanical Specifications	
Material	Self-extinguishing plastic
Mounting	35mm DIN rail (EN50022 and EN50035)
Weight	Approximately 200g

NOTE: Installation of the Wi-Fi model in a metal cabinet is not recommended, as the cabinet may block the Wi-Fi signal.

Dimensions

mm [inches]



See our website: www.AutomationDirect.com for complete engineering drawings.

ADVANTECH Modbus Gateways

- Integrates Modbus TCP and Modbus RTU/ASCII networks
- 2 x 10/100 Mbps Ethernet ports for LAN redundancy
- Client Mode can support 16 peer devices
- Server mode can have 32 peer devices per port on the serial side, with up to 64 TCP sessions per gateway
- Software-selectable RS-232/422/485-2w/485-4w communication
- Serial ports support up to 921.6 kbps
- Automatic RS-485 data flow control
- Built-in 15 kV ESD protection for all RS-422/RS-485 serial signals
- Metal housing with IP30 protection
- Class 1 Div 2 HazLoc
- 35mm DIN rail or wall mountable

RoHS Compliant

Advantech Modbus Gateway Models

Part Number	Price	RJ45 10/100	Serial D-sub 9-pin	Input Power (Max.)
EKI-1221-CE	$278.00	2	1	3.2 W
EKI-1222-CE	$385.00	2	2	3.2 W
EKI-1224-CE	$525.00	2	4	4.1 W

Ethernet Interface

Port Type	8-pin RJ45
Speed	10/100 Mbps
Protection	Built-in 2.25 kV magnetic isolation
Protocol Supported	Modbus TCP/IP Client and Server
Cable Type	Autodetects MDI/MDIX Ethernet cable
Default IP address	Eth1: 10.0.0.1 Eth2: 10.0.0.2

Serial Interface

Port	D-sub 9-pin male port
Interface Mode	RS-232, RS-422, 2-wire RS-485, 4-wire RS-485
Supported Baud Rates	50bps – 921.6 kbps
Parity	Odd, Even, Space, Mark or None
Data Bits	5, 6, 7 or 8 bits
Stop Bits	1, 1.5 or 2
Flow Control	XON/XOFF, RTS/CTS or None
Termination	External 120Ω matching resistor required at termination of RS-485 line.
ESD Protection	15kV for all RS-422/RS-485 signals
Serial Devices Supported	Modbus client mode: 16 connections per serial port Modbus servers mode: 32 devices
Protocols Supported	Modbus RTU Client/Server, Modbus ASCII Client/Server

LED Status Indicators

PWR1 (green)	LED ON indicates voltage applied to Power 1 terminals.
PWR2 (green)	LED ON indicates voltage applied to Power 2 terminals.
Status (amber)	LED FLASHING (1Hz) indicates normal function.

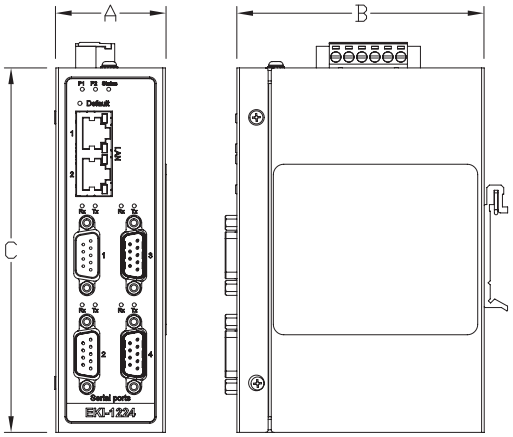
Power Details

Power Consumption	See Input Power in Models table
Power Input	Redundant input terminals
Input Voltage	12–48 VDC
Reverse Power Protection	Yes
Overload Protection	No
Power Fail Relay Contact	24VDC, 1A resistive, open on fault

Environmental

Operating Temperature Range	-10 to +60°C [+14 to +140°F]
Storage Temperature Range	-40 to +85°C [-40 to +185°F]
Humidity	10 to 95% RH (non-condensing)
Maximum Altitude	2000m
Environmental Air	For use in Pollution Degree 2 Environment
Protection Level	Metal case, IP30
Agency Approvals	UL62368-1, CB IEC 62368-1:2014, CE, FCC
Hazardous Location	UL/cUL (Class I, Division 2, Groups A, B, C and D), ATEX (Zone 2 Ex nA nC IIC T4 Gc)
EMI	EN 55011:2016 Group 1 Class A
	EN 55032:2015+AC:2016 Class A
	EN 61000-6-4:2007+A1:2011
	EN 55024:2010+A1:2015
	EN 55035:2017+AC:2019
	CISPR 32:2015+C1:2016 Class A
	FCC Part 15 Subpart B Class A
EMS	EN 61000-4-2:2009 (ESD)
	EN 61000-4-3:2006+A1:2008+A2:2010 (RS)
	EN 61000-4-4:2012 (EFT)
	EN 61000-4-5:2014+A1:2017 (Surge)
	EN 61000-4-6:2014+AC:2015 (RFI)
	EN 61000-4-8:2010 (MFI)
	EN IEC 61000-6-2:2019

Dimensions:



Dimensions				
Part No.	Weight	Width (A)	Depth (B)	Height (C)
		mm [inches]		
EKI-1221-CE	0.47 kg [1.04 lb]	30 [1.18]	95 [3.74]	140 [5.51]
EKI-1222-CE	0.48 kg [1.06 lb]	30 [1.18]	95 [3.74]	140 [5.51]
EKI-1224-CE	0.56 kg [1.23 lb]	42 [1.65]	95 [3.74]	140 [5.51]

Installation – DIN Rail Mounting:

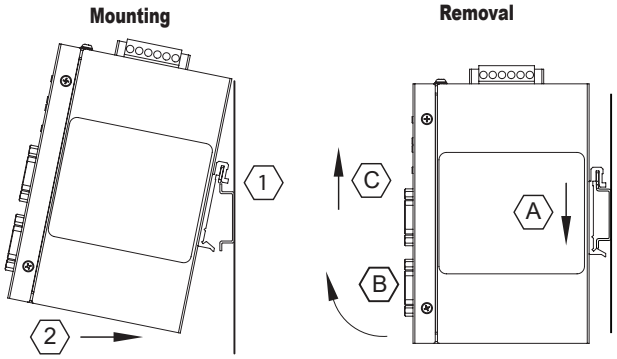
These devices are open-type and are meant to be installed in an enclosure which is only accessible with the use of a tool and suitable for the environment when installed in Class 1, Division 2 Hazardous Locations. The gateway may be used indoors only. The gateway can be snapped onto a standard 35 mm x 7.5 mm height DIN rail (Standard: CENELEC EN50022) and can be mounted either vertically or horizontally. The EKI-12xx-CE gateway does not have a minimum clearance requirement.

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. Push the unit down to free the bottom of the DIN rail.
B. Rotate the bottom of the unit away from the DIN rail.
C. Unhook top of unit from DIN rail.



WARNING: *THE FOLLOWING INFORMATION APPLIES WHEN OPERATING THIS DEVICE IN HAZARDOUS LOCATIONS: SUITABLE FOR USE IN CLASS I, DIVISION 2, GROUPS A, B, C AND D HAZARDOUS LOCATIONS, OR NONHAZARDOUS LOCATIONS ONLY.*

WARNING: *EXPLOSION HAZARD*

- *DO NOT DISCONNECT EQUIPMENT WHILE THE CIRCUIT IS LIVE OR UNLESS THE AREA IS KNOWN TO BE FREE OF IGNITABLE CONCENTRATIONS.*
- *SUBSTITUTION OF ANY COMPONENT MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2.*

Power Wiring:

A DC voltage in the range of 12 to 48 VDC needs to be applied between the V1+ terminal and the V1- 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 gateway can be powered redundantly with a second power supply.

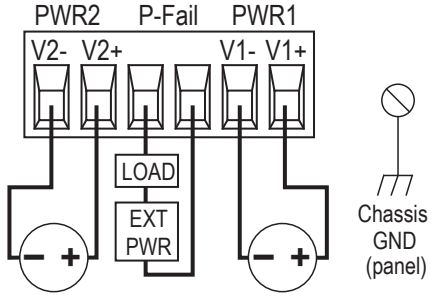
The P-fail relay contacts will open if PWR1 or PWR2 loses power. If a second power supply is not used, tie V2+ to V1+ and V2- to V1- for proper function of the power fail relay.

A recommended DC power supply is AutomationDirect.com part number PSL-24-010.

Required terminal screw torque is 7.0 lb-in [0.79 N·m].

Wire Size Range 12 –24 AWG Wire Strip Length 6.5–7.5 mm

Redundant DC Power

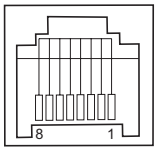


Optional Dual DC Supplies

*Fault Contact opens when in a faulted state

Communication Ports Wiring:

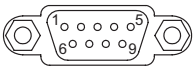
8 pin RJ45



Ethernet Port	
Pin	MDI Signal
1	Transmit Data + (TD+)
2	Transmit Data – (TD–)
3	Receive Data + (RD+)
6	Receive Data – (RD–)
4, 5, 7, 8	Unused

Note: + and – indicate level polarities.

D-sub 9-pin port



Serial Port			
Pin	RS-232	RS-422/485–4w	RS-485–2w
1	DCD	TX –	Data –
2	RX	—	—
3	TX	—	—
4	DTR	TX +	Data +
5	GND	GND	GND
6	DSR	—	—
7	RTS	RX +	—
8	CTS	—	—
9	RI	RX –	—

Reset to Factory Defaults:
Press recessed Default button on front of gateway housing and hold for 10 seconds to reset all settings to factory default.

NOTE: For additional product details, a user manual is available as a downloadable PDF file from the Online Documentation area of the AutomationDirect website.