

# Stride Modbus Gateway



- Industrial 1, 2, or 4 serial port, and 1 or 2 Ethernet port Modbus Gateways (Modbus RTU/ASCII <-> Modbus TCP)
- Automatic read function "Agent Mode"
- Ethernet ports each support up to 16 TCP devices, client or server
- Serial ports each support up to 128 slave devices or 1 master device
- DIP switch selectable termination resistor for RS-485 mode
- High Serial Isolation Voltage - 2kV
- UL61010 with Class 1 Div 2 HazLoc
- Metal housing with wide temperature rating (-40 to +75 deg C)

## Stride Modbus Gateway Models

Part Number	Price	RJ45 10/100	Serial D-sub 9-pin	Input Power (Max.)
<a href="#">SGW-MB1511-T</a>		1	1	1.8 W
<a href="#">SGW-MB1512-T</a>		1	2	
<a href="#">SGW-MB1524-T</a>		2	4	3.2 W

## Ethernet Interface

<b>Port Type</b>	Shielded RJ45
<b>Speed</b>	10/100 Mbps
<b>Protection</b>	Built-in 1.5 kV magnetic isolation
<b>Protocol Supported</b>	Modbus TCP/IP Client and Server
<b>Modbus TCP Devices Supported</b>	16 simultaneous Modbus TCP connections per Ethernet port
<b>Cable Type</b>	Autodetects Ethernet cable types (MDI/MDIX)
<b>Default IP address</b>	192.168.0.249; 192.168.1.249 (2 port model)

## Serial Interface

<b>Port</b>	D-sub 9-pin male port
<b>Interface Mode</b>	RS-232, RS-485 and RS-422
<b>Supported Baud Rates</b>	300bps – 460.8 kbps
<b>Parity</b>	Odd, Even or None
<b>Data Bits</b>	7 or 8 bits
<b>Stop Bits</b>	1 or 2
<b>Flow Control</b>	RTS or None
<b>Termination</b>	DIP-Switch to Enable/Disable 120Ω matching resistor for RS-485
<b>ESD Protection</b>	15kV for all signals
<b>Isolation Protection</b>	2kV
<b>Serial Devices Supported</b>	128 slaves or 1 master per port
<b>Protocols Supported</b>	Modbus RTU, Modbus ASCII

### Reset to Factory Defaults:

Press recessed Hardware Reset button on top of gateway housing and hold for 5 seconds to reset all settings to factory default.



**NOTE:** For additional product details, a user manual, [SGW-USER-M](#), is available as a downloadable PDF file from the Online Documentation area of the AutomationDirect website.

## Power Details

<b>Power Consumption</b>	See Input Power in <i>STRIDE</i> Modbus Gateway Models table
<b>Power Input</b>	Redundant input terminals
<b>Input Voltage</b>	12 / 24 / 48 VDC
<b>Appliance Class</b>	Class III, SELV power source
<b>Reverse Power Protection</b>	Yes
<b>Overload Protection</b>	Yes

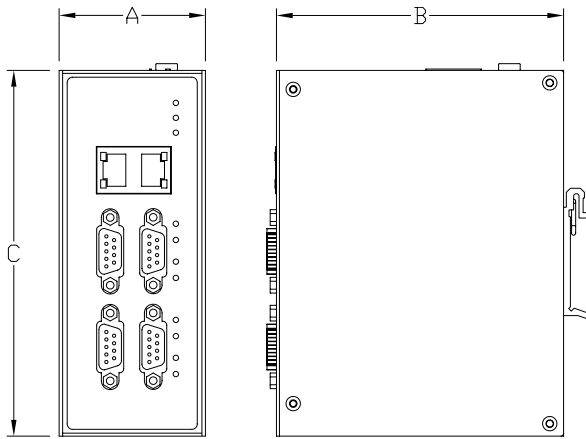
## Environmental

<b>Operating Temperature Range</b>	-40 to +75 °C [-40 to +167 °F]
<b>Storage Temperature Range</b>	-40 to +85 °C [-40 to +185 °F]
<b>Humidity</b>	5 to 95% RH (non-condensing)
<b>Maximum Altitude</b>	2000m
<b>Environmental Air</b>	For use in Pollution Degree 2 Environment
<b>Protection Level</b>	Metal case, IP40
<b>Agency Approvals</b>	UL61010-1, UL61010-2-201, Class I Div 2 12.12.01-2015; CSA C22.2 No. 213-16; CAN/CSA No. 61010-1-12; CAN/CSA C22.2 No. 61010-2-201:14, CE, FCC
<b>EMI</b>	EN 55032 Class A FCC Part 15 Subpart B Class A
<b>EMS</b>	IEC61000-4-2(ESD): ±6kV(contact),±8kV(air) IEC 61000-4-3(RS): 10V/m (80MHz–2GHz) IEC61000-4-4(EFT): Power Port:±2kV; Data Port:±1kV IEC61000-4-5(Surge): PowerPort: ±1kV/DM, ±2kV/CM; Data Port:±1kV IEC 61000-4-6 (CS): 10V(150KHz-80MHz)
<b>Mechanical Standards</b>	IEC60068-2-6(Vibration) IEC60068-2-27(Shock) IEC60068-2-32(Free Fall)

## LED Status Indicators

<b>PWR1 (green)</b>	LED ON indicates voltage applied to Power 1 terminals.
<b>PWR2 (green)</b>	LED ON indicates voltage applied to Power 2 terminals.
<b>RUN (green)</b>	LED ON indicates the gateway is booting. LED FLASHING indicates the gateway is functioning normally.
<b>RJ45 Ports</b>	Speed (yellow) LED ON indicates Ethernet speed is 100 Mbps. LED OFF indicates Ethernet speed is 10 Mbps Link/Activity (green) LED ON indicates valid link is established. LED FLASHING indicates data traffic.
<b>Serial Ports</b>	T, transmit (green) LED FLASHING indicates gateway is sending data through serial port. R, receive (green) LED FLASHING indicates gateway is receiving data through serial port.

## Dimensions:



Dimensions				
Part No.	Weight	Width (A)	Depth (B)	Height (C)
		mm [inches]		
<b>SGW-MB1511-T</b>	0.17 kg [0.36 lb]	30.0 [1.18]	68.0 [2.68]	115.0 [4.53]
<b>SGW-MB1512-T</b>	0.17 kg [0.37 lb]			
<b>SGW-MB1524-T</b>	0.32 kg [0.71 lb]	54.0 [2.13]	106 [4.17]	135.0 [5.32]

## Power Wiring:

The switch can be powered from the same DC source that is used to power your other devices. To maintain the UL listing, this must be an SELV power supply. A DC voltage in the range of 12 to 48 VDC needs to be applied between the P1+ terminal and the P1- 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 switch can be powered redundantly with a second power supply as shown below. A recommended DC power supply is AutomationDirect.com part number [PSL-24-010](#).

Terminal block connector is Degson 2EDGK-5.08-04P-14-1000AH or equivalent.

## Safety Standards:



RoHS Compliant

## Installation – DIN Rail Mounting:

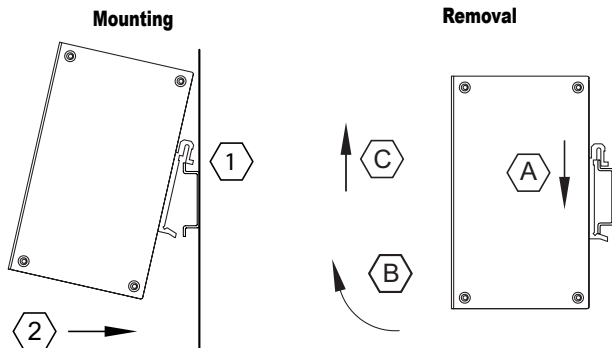
These devices are open-type and are meant to be installed in an enclosure which is only accessible with the use of a tool and suitable for the environment when installed in Class 1, Division 2 Hazardous Locations. The gateway may be used indoors only. The gateway can be snapped onto a standard 35 mm x 7.5 mm height DIN rail (Standard: CENELEC EN50022) and can be mounted either vertically or horizontally. Allow 20mm (0.79") clearance between a STRIDE gateway and other equipment on the DIN rail.

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.

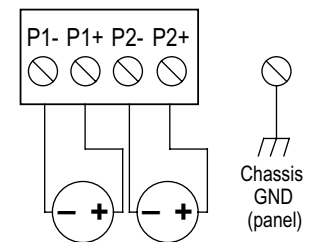
**WARNING:** EXPLOSION HAZARD

- 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.

## Redundant DC Power

Maximum terminal screw torque is 4.43 lb-in (0.5 N·m).

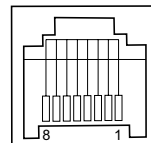
Ferrule required for stranded wire.  
Wire Size Range: 26 – 12 AWG  
Wire Strip Length: 7mm



Optional Dual DC Supplies

## Communication Ports Wiring:

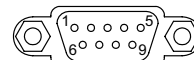
8 pin RJ45



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

Note: + and – indicate level polarities.

D-sub 9-pin port



Serial Port			
Pin	RS-232	RS-422/485-4w	RS-485-2w
1	–	RXD – (B)	–
2	RXD	RXD + (A)	–
3	TXD	TXD – (Z)	Data – (B)
4	RTS	TXD + (Y)	Data + (A)
5	GND	GND	GND
6, 7, 8, 9	Unused	Unused	Unused