SLM-MX Modbus TCP Collector

The SLM-MX is a full featured, high-performance Modbus TCP Collector for use with any Modbus TCP compatible PLC system.
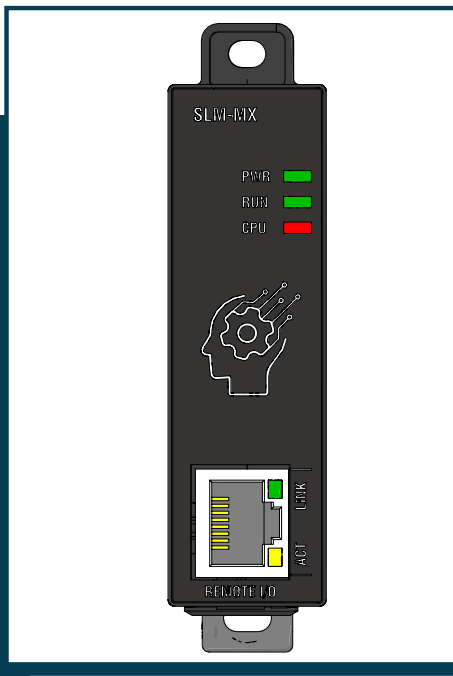

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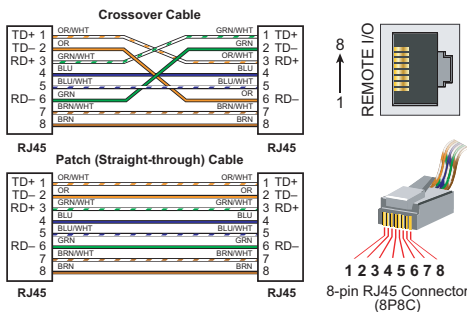|	
Communication- 1 Integrated Port	Remote I/O: (10/100Mbps Ethernet)
Max. Number of Ethernet Remote I/O Bases	4 - SLM CPU (with Remote I/O Ethernet Port)
Max. Number of I/O per CPU System	512 (4 slaves, 8 slots each, 16 point I/O)
Max I/O Modules per SLM-MX	8 Modules
External Power Required	24VDC±2% @ 5W plus 1.25 W per additional I/O module See page 7 for Power Supply Options
Protection Circuit	Edison S5061-R. Time Delay. 1A Fuse (8 I/O Modules)

MX Status Indicators

PWR	Green LED is backlit when power is on.
RUN	Green LED is backlit to indicate when CPU has valid project file with MX configured.
CPU	Red LED is backlit during power reset, power down, or watch-dog time-out.

Remote I/O Port Specifications

Description	Proprietary transformer isolated Ethernet Port built-in surge protection for connection to CPU Remote I/O Master port.
Transfer Rate	10/100Mbps
Port Status LEDs	Green LED is illuminated when network LINK is established. Yellow LED is backlit when port is active (ACT).
Cables	Auto crossover port allows use of a straight-through or cross-over cable.

Crossover Cable

RJ45			RJ45
TD+ 1	OR/WHT	GRN/WHT	1 TD+
TD− 2	OR	GRN	2 TD−
RD+ 3	GRN/WHT	OR/WHT	3 RD+
4	BLU	BLU	4
5	BLU/WHT	BLU/WHT	5
RD− 6	GRN	OR	6 RD−
7	BRN/WHT	BRN/WHT	7
8	BRN	BRN	8

Patch (Straight-through) Cable

RJ45			RJ45
TD+ 1	OR/WHT	OR/WHT	1 TD+
TD− 2	OR	OR	2 TD−
RD+ 3	GRN/WHT	GRN/WHT	3 RD+
4	BLU	BLU	4
5	BLU/WHT	BLU/WHT	5
RD− 6	GRN	GRN	6 RD−
7	BRN/WHT	BRN/WHT	7
8	BRN	BRN	8

REMOTE I/O
8 → 1

1 2 3 4 5 6 7 8
8-pin RJ45 Connector
(8P8C)

General Specifications

General Specifications

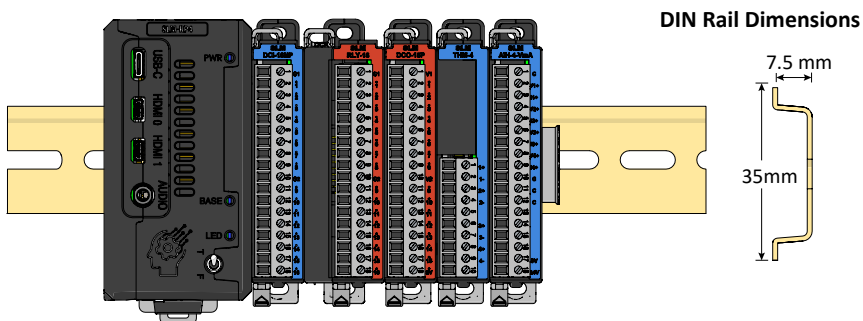|	
Operating Temperature	0° to 50°C (32° to 122°F)
Storage Temperature	-20° to 70°C (-4° to 158°F)
Humidity	5 to 95% (non-condensing)
Altitude	2,000 meters max
Pollution Degree	2
Environmental Air	No corrosive gases permitted
Vibration	IEC60068-2-6 (Test Fc)
Shock	IEC60068-2-27 (Test Ea)
Overvoltage Category	II
Heat Dissipation	1356mW
Enclosure Type	Open Equipment
Module Location	Any I/O position in a Synergy Logic Micro System
Weight	82g (2.9 oz)
Agency Approvals	UL 61010 and UL 61010-2-201 File E139594, Canada and USA CE (EN 61131-2 EMC, EN 61010-1 and EN 61010-2-201 Safety)*

*See CE Declaration of Conformance for details.

Removable Terminal Block Specifications

Part Number	Dinkle EC350V-03P
Number of Positions	3 Screw Terminals
Pitch	3.5 mm
Wire Range	28–16 AWG Solid Conductor 28–16 AWG Stranded Conductor
Screw Driver Width	1/8 in (3.175 mm) Maximum
Screw Size	M2
Screw Torque	1.7 lb·in (0.4 N·m)

Mounting Clearances

The Synergy Logic Micro System can be secured within an enclosure or cabinet using mounting rails. Use rails that conform to DIN EN standard 50022. The rails are approximately 35mm high, with a depth of 7.5 mm.
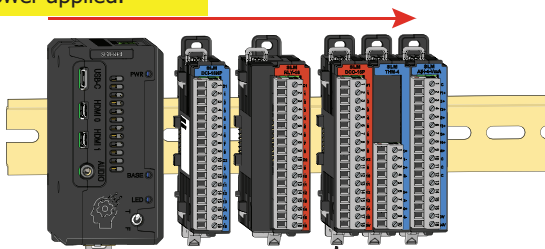
DIN Rail Dimensions

7.5 mm

35mm

• Provide a minimum clearance of 2 inches (50mm) on all sides of the assembled system to allow proper airflow.

• Allow extra clearance for door-mounted operator panels, push buttons, lights, and other items.

• Maintain a minimum of 3 inches (76mm) of vertical clearance between the module(s) and any wire duct.

• Ensure a minimum of 7.2 inches (183mm) of vertical distance from chassis to chassis in a multiple unit installation.
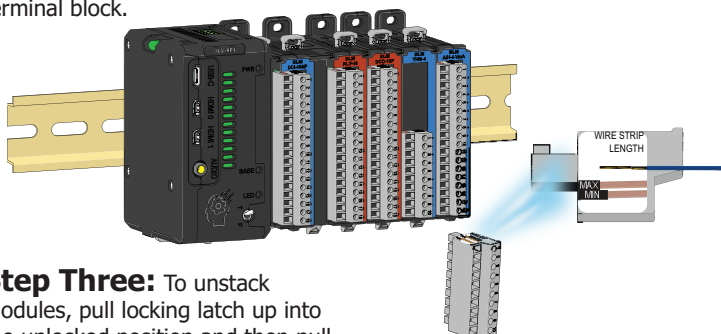
Installation

Step One: With latch in "locked" position, align connectors on the side of each module and stack by pressing together.

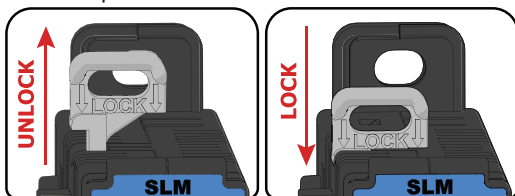Ensure all latches are secure after modules are connected.

Step Two: Attach field wiring using the removable terminal block.

WIRE STRIP LENGTH

MAX
MIN

Step Three: To unstack modules, pull locking latch up into the unlocked position and then pull modules apart.

UNLOCK

LOCK

SLM

LOCK

SLM

Installation

Mounting within an Enclosure:

Your selection of a proper enclosure is important to ensure the safe and proper operation of your Synergy Logic Micro System. Applications for the system vary and may require additional hardware considerations. The minimum considerations for enclosures include:

• Conformance to electrical standards
• Protection from the elements in an industrial environment
• Common ground reference
• Not exceeding the specified maximum ambient temperature
• Access to the equipment
• Security or restricted access
• Sufficient space for proper installation and maintenance of the equipment.

Mounting Position:

Mount the Synergy Logic Micro system horizontally, as shown in the cabinet illustration on the following page, to provide proper ventilation. Do NOT mount vertically, upside down, or on a flat horizontal surface.
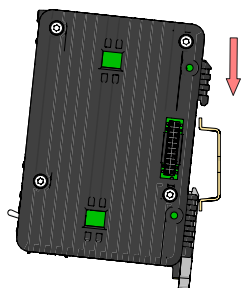
Temperature Considerations:

The Synergy Logic Micro System enclosure should be installed in an environment that falls within the specified equipment operating temperature range. If the environment temperature deviates above or below the specified operating temperature range, measures such as cooling or heating the enclosure should be taken to remain within the range specification.
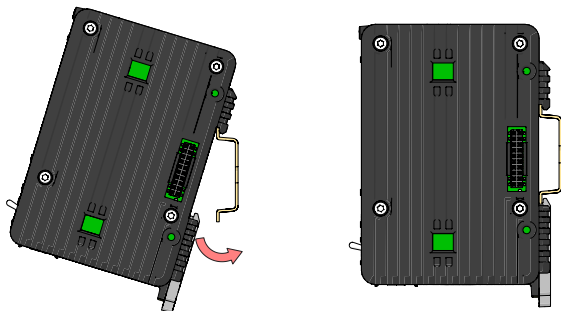
Synergy-Logic.com

Installation

Follow the steps below to mount Synergy Logic Micro System modules onto DIN rail.
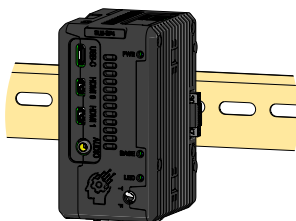
STEP 1   **STEP 2**

Insert DIN rail in mounting slots.

Rotate module ensuring clip snaps onto rail.

Module securely mounted on DIN rail.

Safety Precautions

Follow the manufacturer's guidelines for thermal management to prevent overheating.

WARNING: Thank you for choosing Synergy Logic equipment. Prior to installation or operation, carefully read this publication and any relevant materials. To mitigate potential safety risks, comply with local and national codes governing equipment installation and operation. Ensure adherence to the National Fire Code, National Electrical Code, and codes from the National Electrical Manufacturer's Association (NEMA) at a minimum. Local regulatory offices can provide additional guidance on codes and standards. Failure to comply may result in equipment damage or serious injury. Our products are not intended for High Risk Activities and do not come with a warranty for such applications. For warranty and safety details, refer to our Limited Warranty and Limitation of Liability statement which can be found at www.synergy-logic.com. For inquiries or additional information, contact us at support@synergy-logic.com. Synergy Logic reserves the right to modify products and publications without notice.

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To obtain warranty service, techincal support, product inquires and additional information, please email us at **support@synergy-logic.com**

NOTE: Do not return parts directly to Synergy Logic without first obtaining return authorization.

Unauthorized returns can result in unavoidable delays.