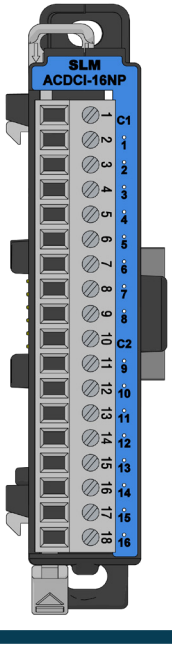
SLM-ACDCI-16NP AC/DC Input

The SLM-ACDCI-16NP AC/DC Input Module provides sixteen 24VAC or VDC sink/source inputs with two isolated commons For use with Synergy Logic Micro systems.



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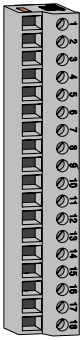
Revision: 1st Edition	8/25/2025

Technical Specifications

Input Specifications	
Inputs per Module	16 (sink/source)
Rated Voltage	24VAC/VDC
Operating Voltage Range	20.4–27.6 VAC/VDC, Max 30VAC/VDC
AC Frequency	47–63 Hz
Input Current	3.4 mA @ 24VAC/VDC
Maximum Input Current	10mA @ 30VAC/VDC
Minimum ON Current	2.5 mA
Maximum OFF Current	0.5 mA
ON Voltage Level	> 12VDC, > 9VAC
OFF Voltage Level	< 10.5 VDC, < 9VAC
OFF to ON Response	DC: 6ms > max AC: 10ms
ON to OFF Response	DC: 10ms > max AC: 20ms
Status Indicators	Logic Side (16 points)
Commons Per Module	2 (8 points/common) Isolated

Removable Terminal Block Specifications	
Part Number	Dinkle EC381F-S1672218P
Number of Positions	18 screw terminals
Pitch	3.5 mm
Wire Range	30–16 AWG (0.051–1.31 mm²) Solid / Stranded Conductor 3/64 in (1.2 mm) Insulation Max. 1/4 in (6–7 mm) Strip Length
Conductors	"USE COPPER CONDUCTORS, 75ºC" or equivalent.
Screw Driver Width	0.1 in (2.5 mm) Maximum*
Screw Size	M2
Screw Torque	2.5 lb·in (0.28 N·m)



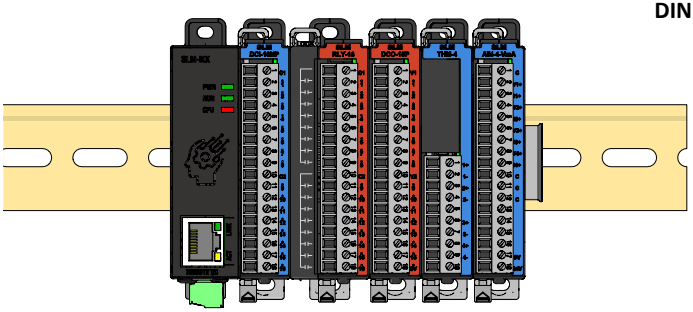
General Specifications

General Specifications	
Operating Temperature	0° to 60°C (32° to 140°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
Field to Logic Side Isolation	1800VAC applied for 1 second
Insulation Resisitance	>10MΩ @ 500VDC
Heat Dissipation	2000mW
Enclosure Type	Open Equipment
Module Location	Any I/O position in a Synergy Logic Micro System
Field Wiring	Removable Terminal Block (included)
Terminal Type	18-Position Removable Terminal Block
Weight	71g (2.5 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)*

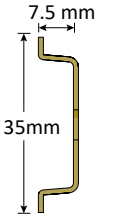
*See CE Declaration of Conformance for details.

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

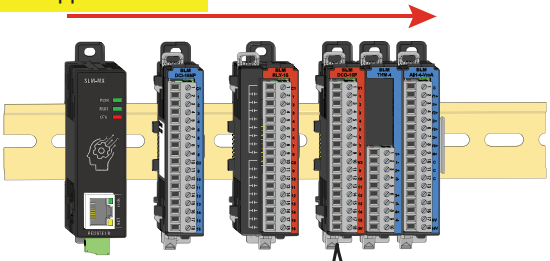


- Provide a minimum clearance of 2 inches (50mm) on all sides of the assembled system to allow proper airflow.
- Allow extra clearance for door-mounted operator panels, push buttons, lights, and other items.
- Maintain a minimum of 3 inches (76mm) of vertical clearance between the module(s) and any wire duct.
- Ensure a minimum of 7.2 inches (183mm) of vertical distance from chassis to chassis in a multiple unit installation.

Installation

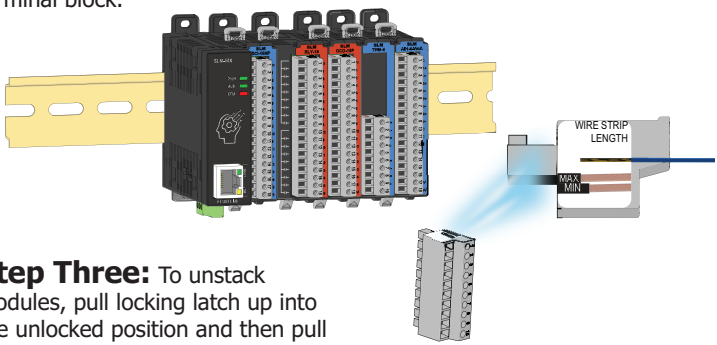
WARNING: Do not add or remove modules with field power applied.

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

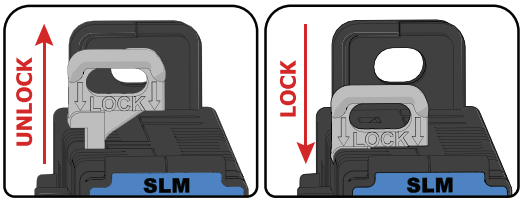


Ensure all latches are secure after modules are connected.

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



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



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.

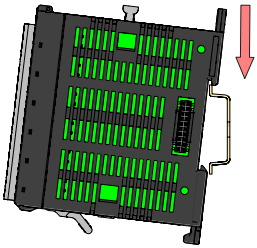
Temperature Considerations:

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.

Installation

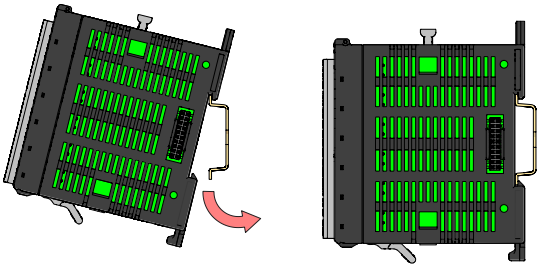
Follow the steps below to mount Synergy Logic Micro System modules onto DIN rail.

STEP 1

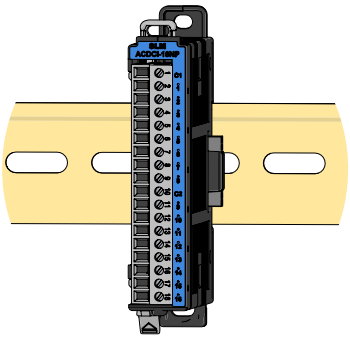


Insert DIN rail in mounting slots.

STEP 2



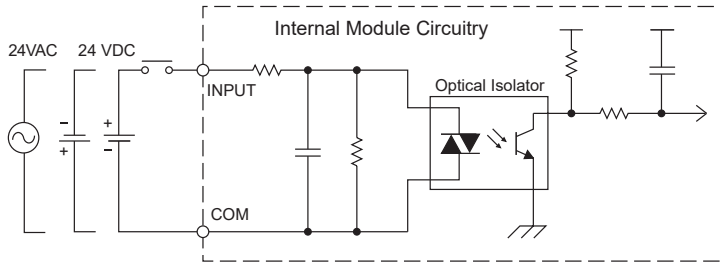
Rotate module ensuring clip snaps onto rail.

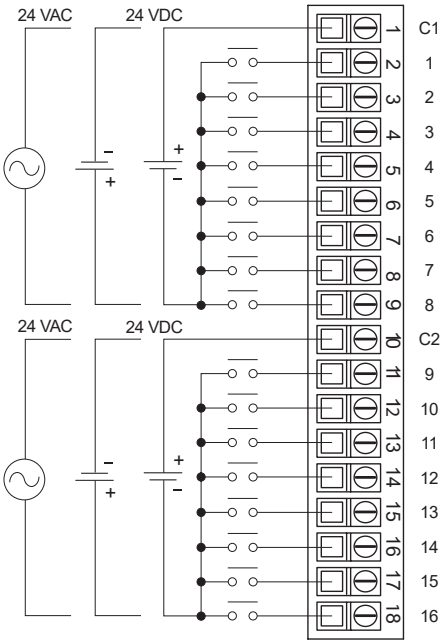


Module securely mounted on DIN rail.

Schematic & Wiring Diagram

Equivalent Input Circuit





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

Unauthorized returns can result in unavoidable delays.