

**BEFORE USE ....**

Thank you for choosing M-System. Before use, please check contents of the package you received as outlined below. If you have any problems or questions with the product, please contact M-System's Sales Office or representatives.

**■ PACKAGE INCLUDES:**

Signal conditioner (body + base socket) ..... (1)

**■ MODEL NO.**

Confirm Model No. marking on the product to be exactly what you ordered.

**■ INSTRUCTION MANUAL**

This manual describes necessary points of caution when you use this product, including installation, connection and basic maintenance procedures.

**POINTS OF CAUTION**

**■ CONFORMITY WITH EC DIRECTIVES**

• This equipment is suitable for use in a Pollution Degree 2 environment and in Installation Category II, with the maximum operating voltage of 300V.

Basic insulation is maintained between signal channel and switching command contact. Prior to installation, check that the insulation class of this unit satisfies the system requirements.

- Altitude up to 2000 meters
- The equipment must be mounted inside a panel.
- The equipment must be installed such that appropriate clearance and creepage distances are maintained to conform to CE requirements. Failure to observe these requirements may invalidate the CE conformance.

**■ POWER INPUT RATING & OPERATIONAL RANGE**

- Locate the power input rating marked on the product and confirm its operational range as indicated below:  
 85 – 264V AC rating: 85 – 264V, 47 – 66 Hz, approx. 3 – 5VA  
 100 – 240V AC rating: 85 – 264V, 47 – 66 Hz, approx. 3 – 5VA  
 24V DC rating: 24V ±10%, approx. 2W  
 11 – 27V DC rating: 11 – 27V, approx. 2W  
 110V DC rating: 85 – 150V, approx. 2W

**■ GENERAL PRECAUTIONS**

- Before you remove the unit from its base socket or mount it, turn off the power supply for safety.

**■ ENVIRONMENT**

- Indoor use
- When heavy dust or metal particles are present in the air, install the unit inside proper housing with sufficient ventilation.
- Do not install the unit where it is subjected to continuous vibration. Do not subject the unit to physical impact.
- Environmental temperature must be within -5 to +55°C (23 to 131°F) with relative humidity within 30 to 90% RH in order to ensure adequate life span and operation.
- Be sure that the ventilation slits are not covered with cables, etc.

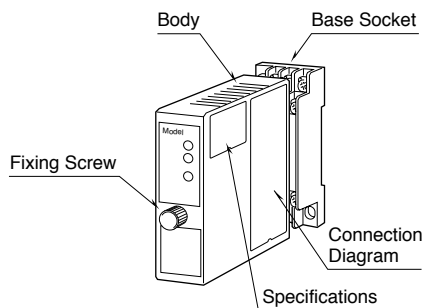
**■ WIRING**

- Do not install cables (power supply, signal line and switching command contact) close to noise sources (relay drive cable, high frequency line, etc.).
- Do not bind these cables together with those in which noises are present. Do not install them in the same duct.

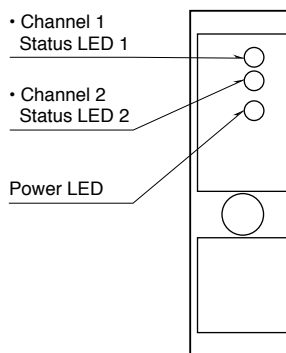
**■ AND ....**

- The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

**COMPONENT IDENTIFICATION**



**■ FRONT PANEL CONFIGURATION**

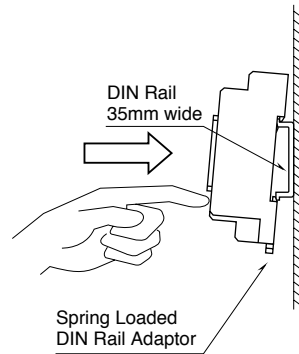


## INSTALLATION

Loosen the fixing screw at the front of the unit in order to separate the body from the base socket.

### ■ DIN RAIL MOUNTING

Set the base socket so that its DIN rail adaptor is at the bottom. Position the upper hook at the rear side of base socket on the DIN rail and push in the lower. When removing the socket, push down the DIN rail adaptor utilizing a minus screwdriver and pull.



### ■ WALL MOUNTING

Refer to "EXTERNAL DIMENSIONS."

## SWITCHING OPERATIONS

### ■ INTERLOCKING SWITCHING CONTROL (single-pole contact)

Single contact is used to switch from Signal Channel 1 (A1-B1) to Signal Channel 2 (A2-B1) and vice versa.

	CHANNEL 1 (A1)	CHANNEL 2 (A2)
Terminal 3 – 9 OFF (open)	OFF	ON
Terminal 3 – 9 ON (closed)	ON	OFF

Status LED turn on when the respective channels are alive.

#### • Switching Status

	Current Signal (no receiving resistor)	Current Signal (receiving resistor 50Ω) Voltage Signal
Power : OFF Switching command : OFF (open)		
Power : ON Switching command : OFF (open)		
Power : ON Switching command : ON (short)		

\*1. Resistor is provided only for the input code 2: Current signal (receiving resistor 50Ω).

	Transition (ON to OFF, OFF to ON) Status	
	Current Signal (no receiving resistor)	Current Signal (receiving resistor 50Ω) Voltage Signal
Power : ON Switching command : OFF to ON or Power : ON Switching command : ON to OFF	<p>When the switching command contact is switched from OFF to ON or from ON to OFF, the signal channel is switched only after all photo MOS relays turn on (closed).</p>	<p>When the switching command contact is switched from OFF to ON or from ON to OFF, the signal channel is switched only after all photo MOS relays turn off (open).</p>

\*1. Resistor is provided only for the input code 2: Current signal (receiving resistor 50Ω).

### ■ INDEPENDENT SWITCHING CONTROL (double-pole contact)

Double contacts are used to independently switch Signal Channel 1 (A1-B1) and Signal Channel 2 (A2-B1).

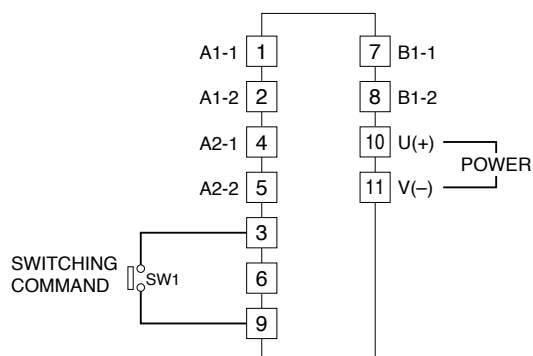
	CHANNEL 1 (A1)	CHANNEL 2 (A2)
Terminal 3 – 9 OFF (open)	OFF	----
Terminal 3 – 9 ON (closed)	ON	----
Terminal 6 – 9 OFF (open)	----	OFF
Terminal 6 – 9 ON (closed)	----	ON

Status LED turn on when the respective channels are alive.

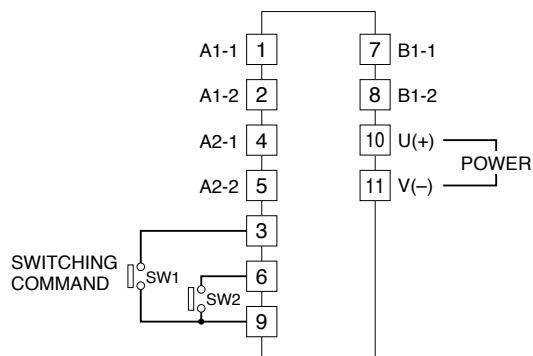
## TERMINAL CONNECTIONS

Connect the unit as in the diagram below or refer to the connection diagram on the side of the unit.

### ■ INTERLOCKING SWITCHING CONTROL (single-pole contact)



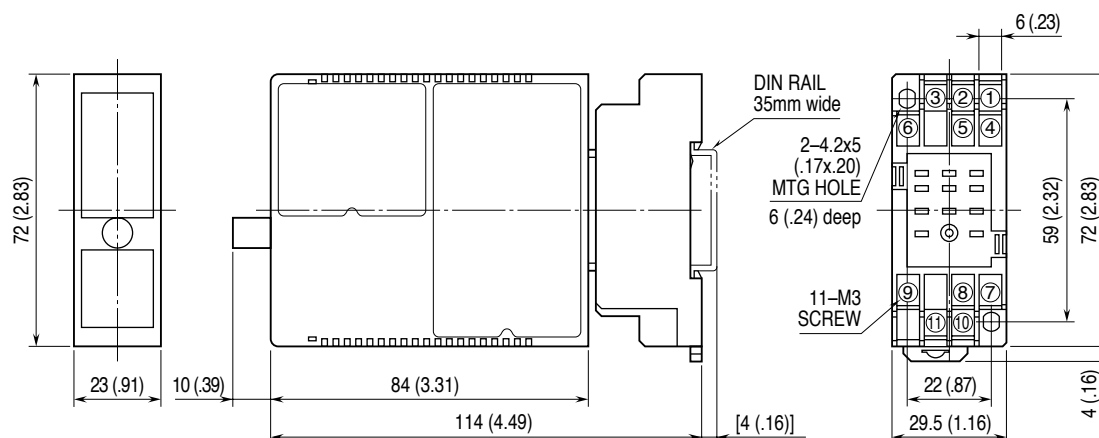
### ■ INDEPENDENT SWITCHING CONTROL (double-pole contact)



## CHECKING

- 1) Terminal wiring: Check that all cables are correctly connected according to the connection diagram.
- 2) Power input voltage: Check voltage across the terminal 10 – 11 with a multimeter.
- 3) Switching command contact: Confirm adequate operations of the contact signal.

## EXTERNAL DIMENSIONS unit: mm (inch)



• When mounting, no extra space is needed between units.

### M-SYSTEM WARRANTY

M-System warrants such new M-System product which it manufactures to be free from defects in materials and workmanship during the 36-month period following the date that such product was originally purchased if such product has been used under normal operating conditions and properly maintained, M-System's sole liability, and purchaser's exclusive remedies, under this warranty are, at M-System's option, the repair, replacement or refund of the purchase price of any M-System product which is defective under the terms of this warranty. To submit a claim under this warranty, the purchaser must return, at its expense, the defective M-System product to the below address together with a copy of its original sales invoice.

THIS IS THE ONLY WARRANTY APPLICABLE TO M-SYSTEM PRODUCT AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. M-SYSTEM SHALL HAVE NO LIABILITY FOR CONSEQUENTIAL, INCIDENTAL OR SPECIAL DAMAGES OF ANY KIND WHATSOEVER.

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