

**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:**

Clamp-on pulse sensor.....(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**

**■ POWER INPUT RATING & OPERATIONAL RANGE**

- Locate the power input rating marked on the product and confirm its operational range as indicated below:  
12V DC rating: 12V ±10%, max. 5mA

**■ GENERAL PRECAUTIONS**

- Before you remove the module or mount it, turn off the power supply and input signal for safety.

**■ ENVIRONMENT**

- Indoor use.
- When heavy dust or metal particles are present in the air, install the module inside proper housing with sufficient ventilation.
- Do not install the module where it is subjected to continuous vibration. Do not subject the unit to physical impact.
- Environmental temperature must be within 0 to 55°C (32 to 131°F) with relative humidity within 80% RH in order to ensure adequate life span and operation.

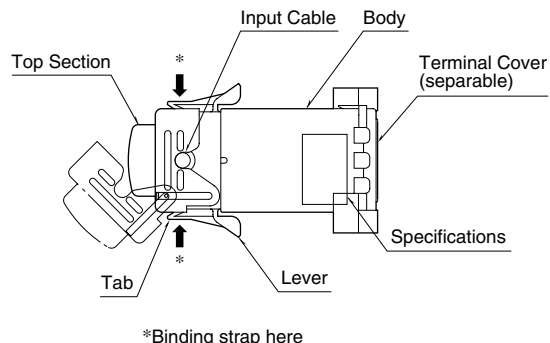
**■ WIRING**

- Do not install cables 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 module 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.

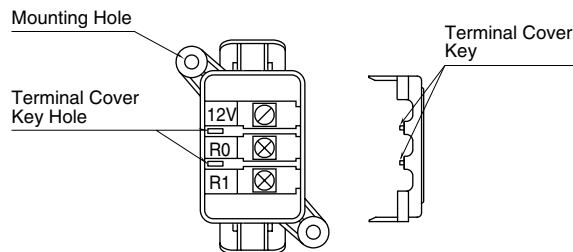
**COMPONENT IDENTIFICATION**



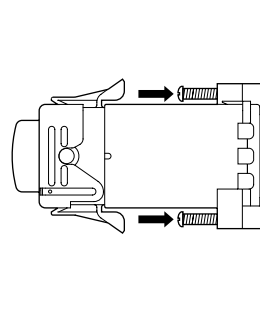
**INSTALLATION**

**■ MOUNTING THE MODULE**

- 1) Remove the terminal cover and connect wires according to the connection diagram. Be aware of the wire insertion direction (See 'Inserting Wires').
- 2) Put the terminal cover back so that its keys meet the key holes. Be aware of the cover direction.



- 3) Tighten screws using the mounting holes to fix the module on a wall.



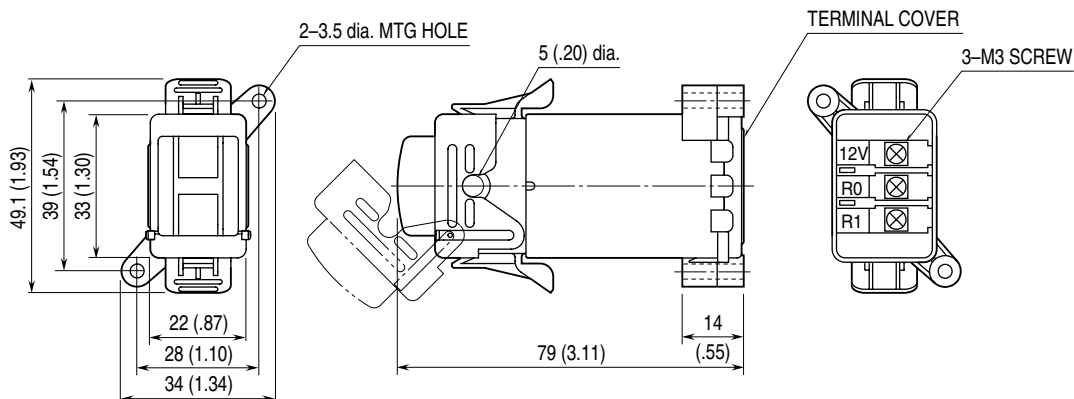
**■ CONNECTING THE INPUT CABLE**

- 1) Squeeze the levers on both sides to detach the tabs and pull out the top section.
- 2) Place the input cable to the position indicated on the above drawing.
- 3) Put back the top section and bind over the tabs/levers with a binding strap.

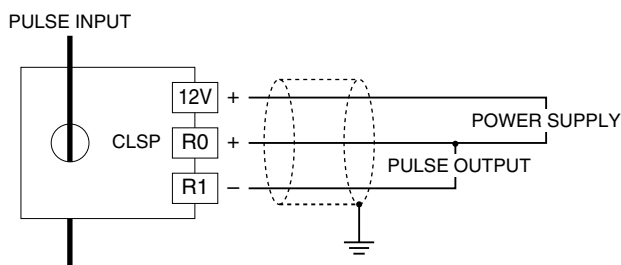
## TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

### EXTERNAL DIMENSIONS unit: mm (inch)



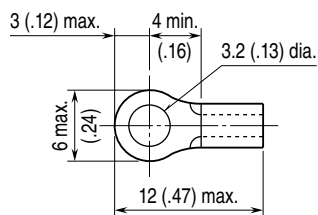
### CONNECTION DIAGRAM



## WIRING INSTRUCTIONS

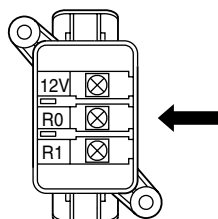
### SOLDERLESS TERMINAL unit: mm (inch)

Refer to the drawing below for recommended ring tongue terminal size. Spade tongue type is also applicable. Solderless terminals with insulation sleeve do not fit. Applicable wire size: 0.3 – 0.75 mm<sup>2</sup>



### INSERTING WIRES

Insert the output and power supply wires from the direction as shown below and tighten firmly (torque 0.5 N·m).



## 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 12V – R0 with a multimeter.
- 3) Input: Check the input signal.
- 4) Output: Check the output signal.

## LIGHTNING SURGE PROTECTION

M-System offers a series of lightning surge protector for protection against induced lightning surges. Please contact M-System to choose appropriate models.