

<b>CLAMP-ON PULSE SENSOR</b>	MODEL	<b>CLSP</b>
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**BEFORE USE ....**

Thank you for choosing us. 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 our 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.

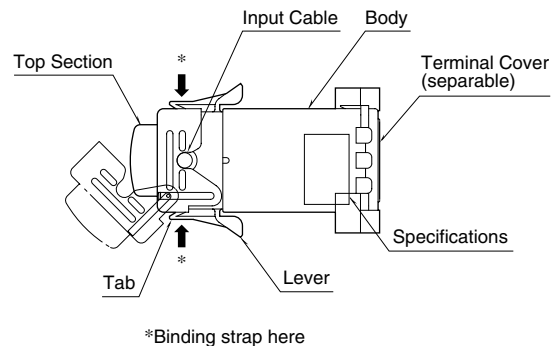
**■ WIRING**

- 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.

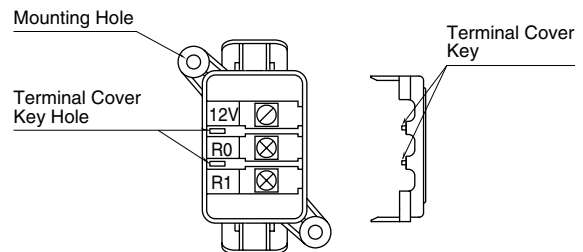
**COMPONENT IDENTIFICATION**



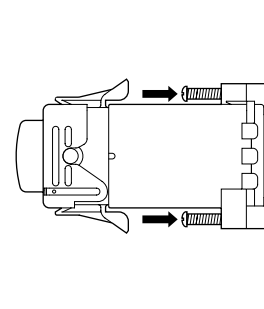
**INSTALLATION**

**■ 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.



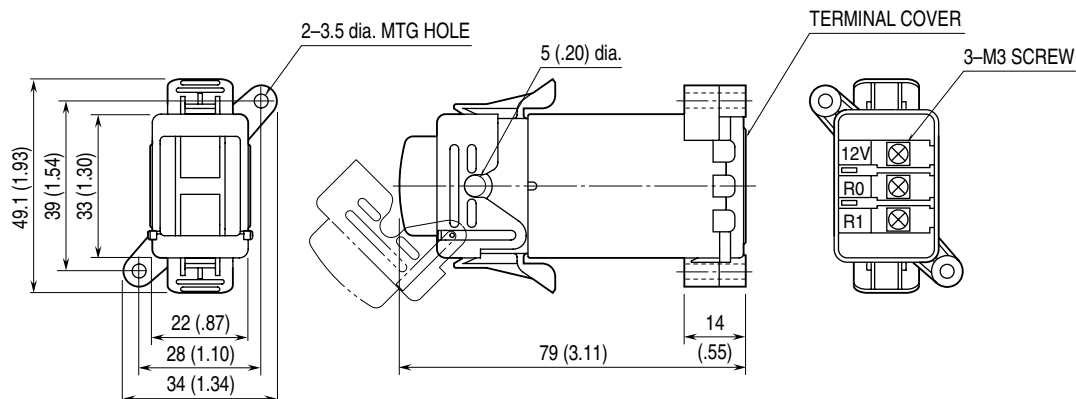
**■ CONNECTING THE INPUT CABLE**

- 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.

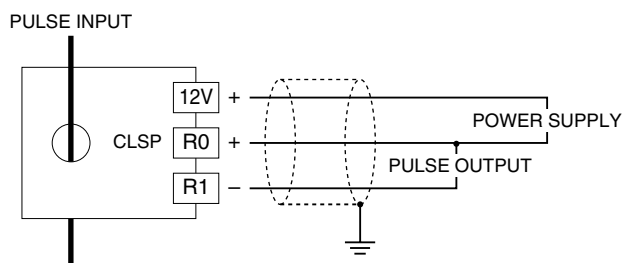
## TERMINAL CONNECTIONS

Connect the unit as in the diagram below.

### EXTERNAL DIMENSIONS unit: mm (inch)



### CONNECTION DIAGRAM

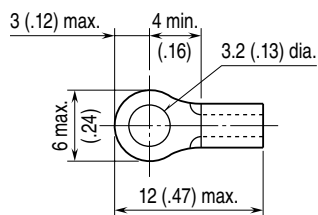


## WIRING INSTRUCTIONS

### SOLDERLESS TERMINAL unit: mm (inch)

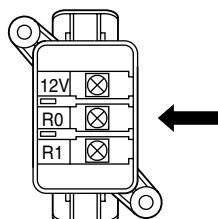
Refer to the drawing below for recommended ring tongue terminal size. Spade tongue type is also applicable. Solderless terminals with insulation sleeve do not fit.

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

We offer a series of lightning surge protector for protection against induced lightning surges. Please contact us to choose appropriate models.