

<b>THERMOCOUPLE ALARM</b>	MODEL <b>18AT</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:**

Signal conditioner (body + CJC 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:  
24V DC rating: 24V ±10%, approx. 80mA

**GENERAL PRECAUTIONS**

- Before you remove the unit 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 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.

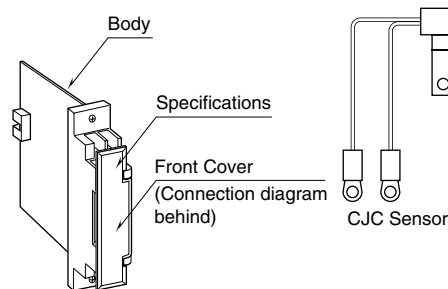
**WIRING**

- 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 ....**

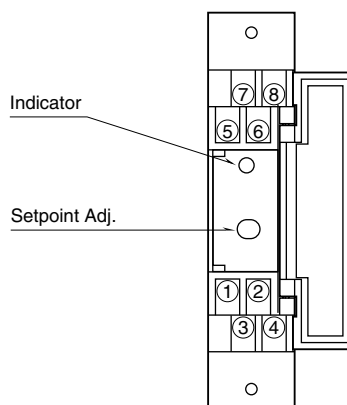
- The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

**COMPONENT IDENTIFICATION**

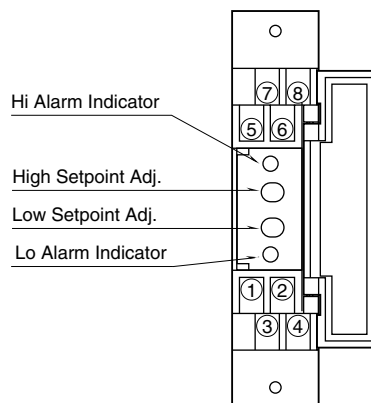


**FRONT VIEW (with cover open)**

**SINGLE ALARM**



**DUAL ALARM**



**Single Alarm Trip**

Simulate an input for the desired setpoint, then turn the top mounted screw driver adjustment slowly clockwise until the output relay trips.

**Hi/Lo Alarm Trip**

**Lo Setpoint:** Simulate an input for the desired setpoint, then turn the screw driver adjustment slowly counterclockwise until the output relay trips.

**Hi Setpoint:** Simulate an input for the desired setpoint, then turn the screw driver adjustment slowly clockwise until the output relay trips.

# INSTALLATION

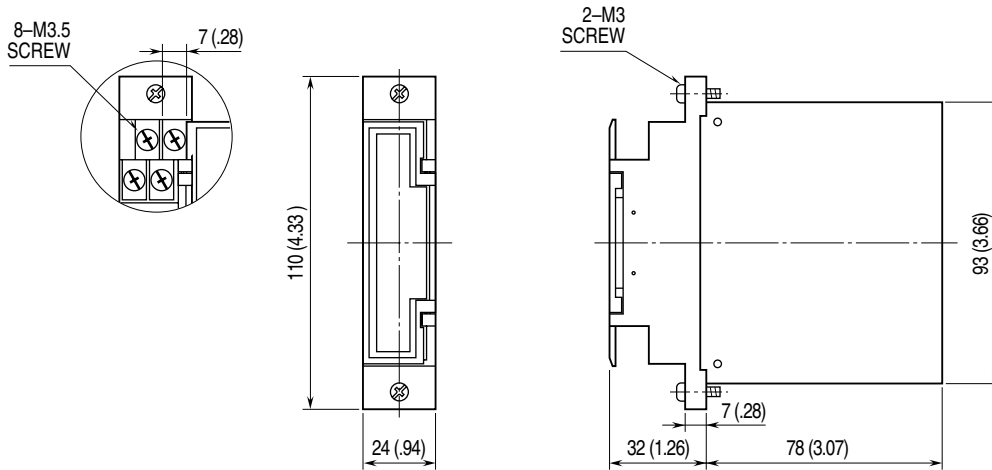
Use Standard Rack (model: 18BXx or 18KBXx).

## TERMINAL CONNECTIONS

Connect the unit as in the diagram below or refer to the connection diagram behind the front cover.

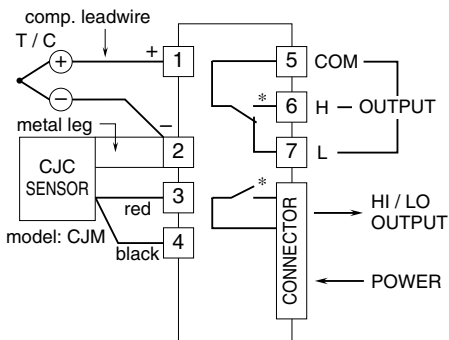
Attach the CJC sensor together with input wiring to the input terminals. The CJC sensor is not interchangeable. Check that its serial number is identical to that of the unit.

### EXTERNAL DIMENSIONS unit: mm (inch)

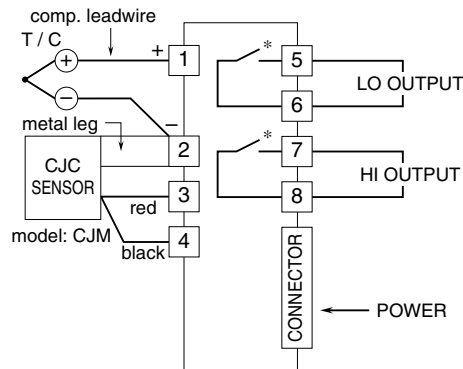


### CONNECTION DIAGRAM

#### • SINGLE ALARM

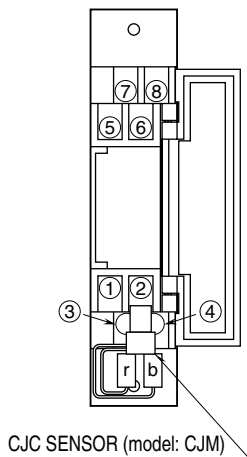


#### • DUAL ALARM



\*Relay status is determined by output codes.

### TERMINAL ASSIGNMENTS



## WIRING INSTRUCTIONS

### ■ SCREW TERMINAL

Torque: 0.8 N·m

## CHECKING

- 1) Terminal wiring: Check that all cables are correctly connected according to the connection diagram.
- 2) Power input voltage: Check voltage supplied to the rack (model: 18BXx or 18KBXx). For the DC power source, be sure that the ripple level is within 10% p-p.
- 3) Input: Check that the input signal is within 0 – 100% of the full-scale.

If the thermocouple or its extension wires are broken, the output relay turns ON across HI – COM terminals (upscale burnout as standard) due to burnout function. Check leadwires in such a case.

- 4) Alarm operations: Check the alarm operations referring to the figure below.
- 5) Output load: Check that the output load.  
Front terminals: 30V DC @ 1A or 120V AC @ 1A max.  
Rear connector: 30V DC @ 0.2A or 120V AC @ 0.2A max.  
For use with inductive load, external protection is recommended.

## ALARM RELAY OPERATIONS

### • Single Alarm

#### Front terminals

	5 – 6	5 – 7
Energized	ON	OFF
De-energized (or power OFF)	OFF	ON

#### Rear connector

ALARM OUTPUT CODE	POWER ON		POWER OFF
	IN < SET	IN > SET	
1	OFF	ON	OFF
2	OFF	ON	ON
3	ON	OFF	OFF
4	ON	OFF	ON

### • Dual Alarm (front terminals)

ALARM OUTPUT CODE	POWER ON				POWER OFF	
	IN < SET		IN > SET		5 – 6	7 – 8
	5 – 6	7 – 8	5 – 6	7 – 8		
5	ON	OFF	OFF	ON	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF

Shades indicates that the relay is energized.

## MAINTENANCE

Regular calibration procedure is explained below:

### ■ CALIBRATION

Warm up the unit for at least 10 minutes.

#### • Hi Setpoint

Increase the input signal from a value lower than the setpoint and check that the trip point remains within the accuracy described in the data sheet.

#### • Lo Setpoint

Decrease the input signal from a value higher than the setpoint and check that the trip point remains within the accuracy described in the data sheet.

When the trip points are shifted, please contact our sales office or representatives.

## LIGHTNING SURGE PROTECTION

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