

# Analogue Temperature Monitor

EPAK-TMR-PT100-S 7760054303



## Safety instructions

### DANGER



For safe installation and safe operation the following must be observed:  
• The device may only be installed by qualified personnel familiar with the national and international laws, directives and standards that apply to this region.  
• Until the device is installed, do not connect hazardous voltages to the device.  
• In applications where hazardous voltage is connected to in-/outputs of the device, sufficient spacing or isolation from wires, terminals and enclosure to surroundings (incl. neighbouring devices), must be ensured to maintain protection against electric shock.

### WARNING



Prior to installation, commissioning and maintenance of the device, the related safety regulations, technical specifications and operating instructions must be observed.  
• Avoid direct sunlight, dust, high temperatures, mechanical vibrations and shock as well as rain and heavy moisture.  
• All devices can be used for Overvoltage Category II and Pollution Degree 2. The device is designed to be safe at least under an altitude up to 2000 m.  
• The device is provided with field wiring terminals and shall be supplied from a power supply having double or reinforced insulation. A power switch shall be easily accessible and close to the device. The power switch shall be marked as the disconnecting unit for the device.  
• Year of manufacture can be taken from the first two digits in the serial number.  
• When disconnected, the device may be cleaned with a cloth moistened with distilled water.

### CAUTION



Appropriate safety measures against electrostatic discharge (ESD) are be considered when handling the devices.

## Introduction

The module monitors PT100 sensor signal. The monitoring range is -200 ~850°C. WI supplies the configuration service for the customer. Alarm mode can be over range, under range or window range. The power supply, input and output are galvanically isolated between each other.

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## Specification

Channel: 1

Input:

Input signal:PT100 sensor  
Measure range: -200~850°C  
Wiring type:2/3/4-conductor(configure)

Output:

Contacts of relay:1 set of individual SPDT  
Max Switching voltage: 250VAC/30VDC  
Continuous current: 3A @ 250VAC/30VDC  
Mechanical endurance: 20x10<sup>6</sup>  
Alarm mode:Under,Over,or Window(configure)  
Alarm setting range: -200~850°C  
Hysteresis: 5°C (configure)  
Delay time: 0~10s (power on, Alarm, return)(configure)  
Measurement accuracy: 0.2% F.S. or < 2.5°C  
Step response time: ≤ 200ms  
Temperature coefficient: < 150ppm/K

Power supply:

Supply voltage:18~30VDC  
Current consumption: <60mA @ 24VDC with full load  
Power protection: Inverse protect

Insulation Coordination:

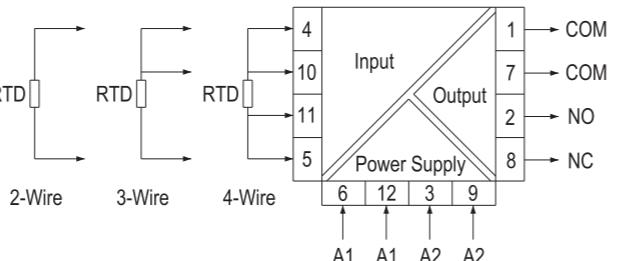
Standards:EN50178  
EMC standards: IEC61000-6-2,IEC61000-6-4  
Rated voltage: 300VAC  
Impulse withstand voltage: 4000V(1.2/50us)  
Isolation voltage:2.2kVAC, 1min, 50Hz  
Overvoltage category: II  
Pollution degree:2

General Data:

Configuration: Pre-configure before delivery  
Operating temperature: -20 ~ +60°C  
Storage temperature: -40 ~ +85°C  
Humidity: 0 ~ 85%, Tu=40°C, no condensation  
Indicator:  
LED Green: Power on; Flash, delay time counting  
LED Red: Alarm; Flash, delay time counting  
LED Yellow: Input circuit open or short

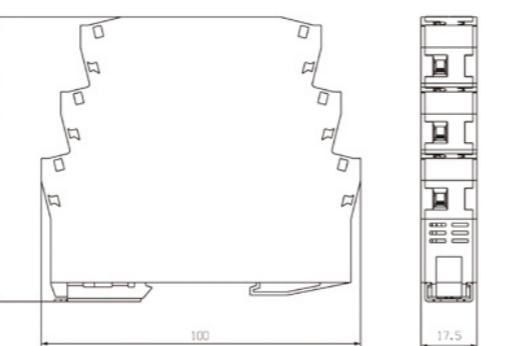
Approval: CE

## Wiring



## Dimensions

HeightxLengthxWidth : 100 x 89 x 17.5(mm)

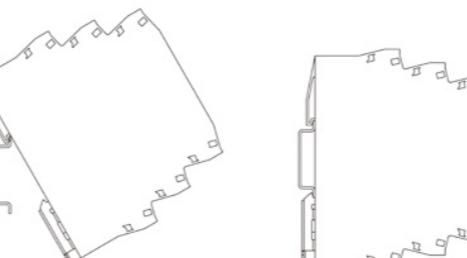


## Front cover and terminal definition



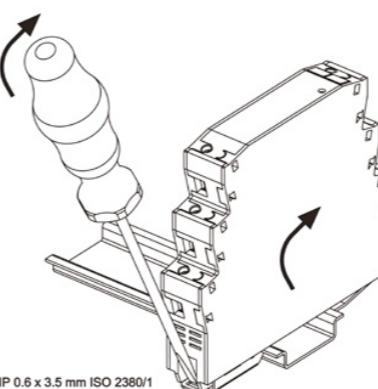
## Installation

The product is designed to be mounted onto a TS 35 DIN rail. It clips onto the rail via a spring-loaded mounting foot and can be removed via a spring release on the edge of the product near the mounting rail.



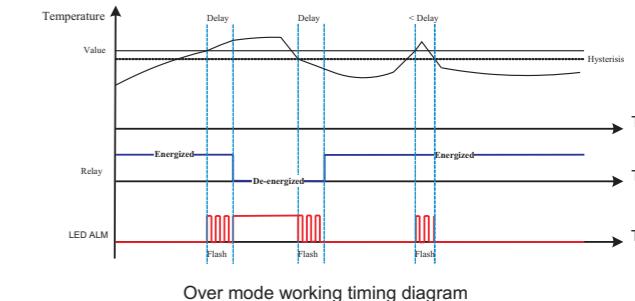
## Uninstallation

Please refer to the following picture when try to uninstall the isolator from the Din rail. Insert the screw driver into the hold of the house feet and turn the screw driver to take off the isolator.



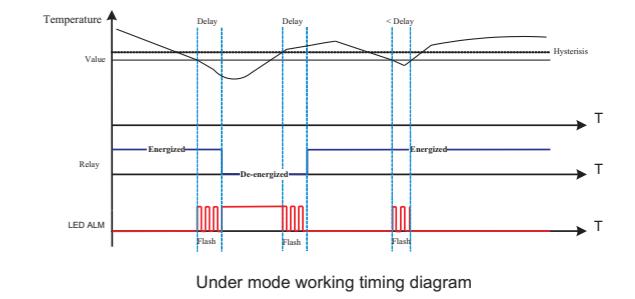
## Over Temperature alarm

The coil of relay is de-energized and stays in alarm status while the monitored temperature is greater than the setting alarm temperature value and lasting time exceeds the tripping on delay time; The coil of relay is energized and stays in normal status while the monitored temperature is less than the setting alarm temperature with the subtraction of hysteresis and lasting time exceeds the tripping off delay time.



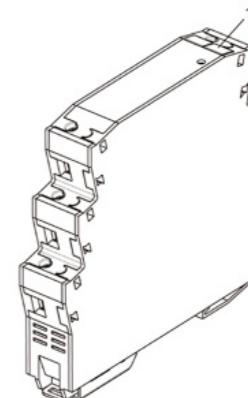
## Under Temperature alarm

The coil of relay is de-energized and stays in alarm status while the monitored temperature is less than the setting alarm temperature value and lasting time exceeds the tripping on delay time; The coil of relay is energized and stays in normal status while the monitored temperature is greater than the setting alarm temperature with the addition of hysteresis and lasting time exceeds the tripping off delay time.



## Marker

A device marker is located below the upper set of terminals for customer identification.



## Maintenance

- Before powering the isolator, make sure the models type is correct according to the design and the application environmental conditions.
- Please choose the power supply with short circuit protection function.
- After the electronic products have been powered for more than fifteen minutes, the temperature of them should be stable.
- It is strictly prohibited to test the insulation capability between any two terminals of the product by a mega-ohmmeter. All of the connecting wires of the isolator must be disconnected, before testing the insulation of the system, otherwise internal components will be destroyed.
- Each product has been tested strictly and the quality is controlled rigidly. If you have any questions regarding this product, contact the nearest distributor or our company technical support hotline directly for assistance.
- In 12 months from delivery date, if the product works improperly in the process of normal usage, we will repair or replace it without charge.