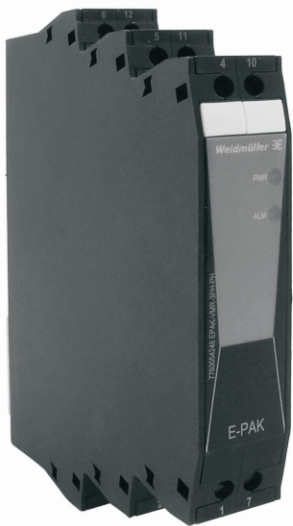


Analogue Temperature Monitor

EPAK-TMR-PTC 7760054304



Safety instructions

	DANGER
	For safe installation and safe operation the following must be observed: <ul style="list-style-type: none">• 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
	<ul style="list-style-type: none">• 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 should 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
	<ul style="list-style-type: none">• Appropriate safety measures against electrostatic discharge (ESD) are be considered when handling the devices.

Introduction

The module is used to control motors equipped with PTC temperature sensors. The PTC temperature sensors are incorporated in the motor windings to measure the motor heating. The number of possible PTC sensors per measuring circuit is limited by the sum of the individual PTC sensor resistances: $R_G=R_1+R_2+R_3+R_N \leq 1.5k\Omega$. Under normal operating conditions the resistance is below the response threshold. If only one of the PTC resistors heats up excessively, the output relay de-energizes. The output relay energizes automatically after cooling down.

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Germany

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Specification

Channel: 1
Input:
Input signal:PTC sensor
Max total resistance of sensors connected in series (cold state): $\leq 1.5k\Omega$
Temperature threshold (relay de-energizes): $3.6k\Omega\pm 5\%$
Temperature hysteresis (relay energizes): $1.6k\Omega\pm 5\%$

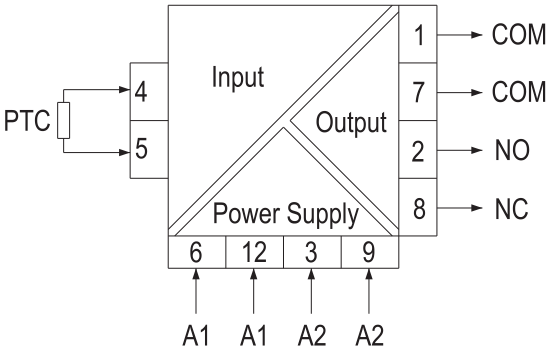
Output:
Contacts of relay:1 set of individual SPDT
Max Switching voltage: 250VAC/30VDC
Continuous current: 3A @ 250VAC/30VDC
Mechanical endurance :20x10⁶
Alarm mode:Over temperature
Step response time: $\leq 200ms$
Temperature coefficient: < 350ppm/K

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:
Operating temperature: -20 ~ +60°C
Storage temperature: -40 ~ +85°C
Humidity: 0 ~ 85%, Tu=40°C, no condensation
Indicator:
LED Green: Power on
LED Red: Alarm; Flash

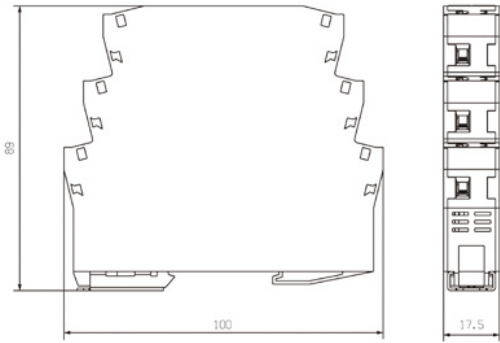
Approval: CE

Wiring

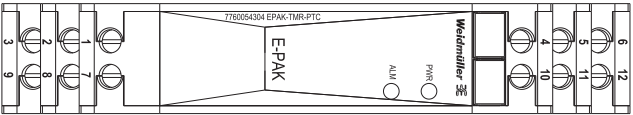


Dimensions

HeightxLengthxWidth : 100 x 89 x 17.5(mm)

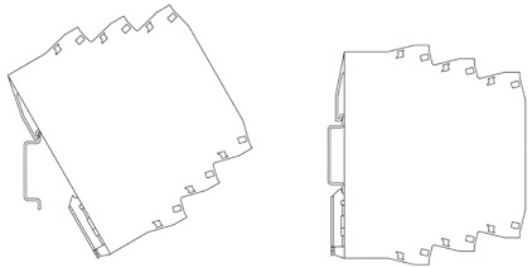


Front cover and terminal definition



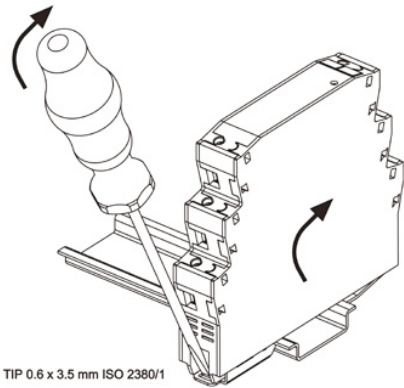
Installation

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.



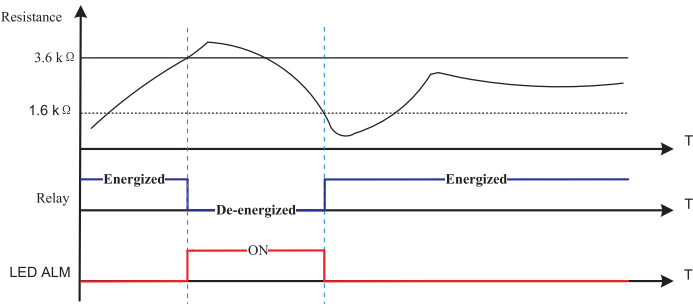
Uninstallation

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.



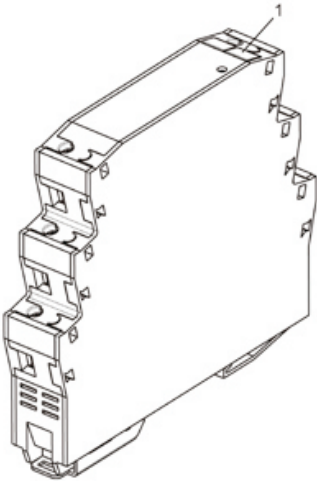
Over Temperature alarm

The relay energizes while the module is power on. If the monitored temperature is higher than the threshold value, the output relay de-energizes. After cooling down, the output relay energizes automatically.



Marker

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



Maintenance

- (1)Before powering the isolator, make sure the models type is correct according to the design and the application environmental conditions.
- (2)Please choose the power supply with short circuit protection function.
- (3)After the electronic products have been powered for more than fifteen minutes, the temperature of them should be stable.
- (4)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.
- (5)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.
- (6)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.