

## Data sheet

Page 1/5

**TMR-E12 without error memory, 24 V AC/DC, 2 changeover contacts**

P/N  
1103151322

EAN 4250184118664

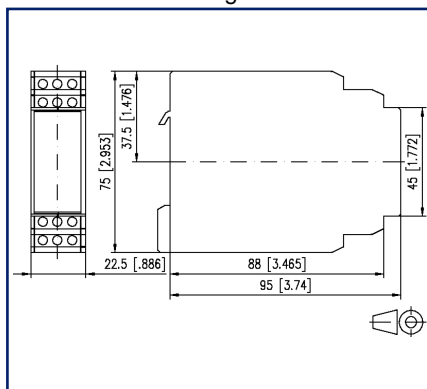
2024/10/25

Version: H

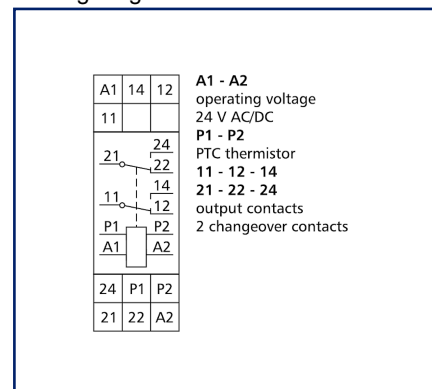
## Illustrations



Dimensional drawing



Wiring diagram



See enlarged drawings at the end of document

## Product specification

The thermistor relay is used as protection relay for motors against thermal overload (inadmissible heating). This heating might be caused by mechanical overload on the shaft or when operating the motor with inadmissible voltages. A PTC thermistor is used as sensor. It should be mounted to the part of the motor that heats most in case of overload (e.g. integrated in motor winding). The device can also be used for motors with integrated thermo switch.

- Variant:
- 24 V AC/DC
- 2 changeover contacts (DPST)
- Not intended for marketing in North America

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### Technical Data

Supply	
Operating voltage	24 V AC/DC -10% ... +10%
Frequency range	50 ... 60 Hz
Inputs	
Thermistor voltage	12 V
Thermistor current	1 mA
Switch-on resistance	1.8 kOhm
Switch-off resistor	3.0 kOhm +/- 5 %
Outputs	
Contacts	2 changeover contacts
Contact material	AgSnO <sub>2</sub>
Switching voltage (max.)	250 V
Continuous Current	4 A
Pick-up delay	100 ms
Switching frequency	1200 switching cycles/h
Mechanical life	3x10 <sup>7</sup> switching cycles
Electrical life	1x10 <sup>5</sup> switching cycles
Indicator	green and red LED
Insulation coil - contact set	
Nominal voltage of the power supply system	230 / 400 V AC
Overvoltage category	III   II
Degree of pollution	2   2
Rated test voltage	4 kV   2.5 kV
Type of insulation	basic insulation   reinforced insulation
Housing	
Dimensions	
Dimension (W x H x D)	22.5 mm x 75 mm x 95 mm
Dimension (W x H x D)	0.886 in. x 2.953 in. x 3.74 in.
Weight	150 g
Mounting style	Standard rail TH35
Mounting position	any
Apposition	without distance
Connection type	Screw type terminal blocks

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**Technical Data**
**Terminal blocks**

Wire cross section solid	0.2 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12
Wire cross section multi	0.25 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12
Wire cross section with wire ferrule	0.25 mm <sup>2</sup> - 2.5 mm <sup>2</sup> / AWG 22-12
Screw torque (max.)	0.5 Nm
Stripping length (min.)	8 mm

**Material**

Material - Housing	Polyamid 6.6 V0
Color	gray
Material - Terminal block	Polyamid 6.6 V0
Material - Covers	Polyamid 6.6 V0

**Protection category according to IEC 60529**

Protection category - housing (acc. to IEC 60529)	IP40
Protection category - terminal blocks (acc. to IEC 60529)	IP20

**Climatic Data**
**Operating**

Temperature - Operating °C	0 °C - 55 °C
Temperature - Operating °F	32 °F - 131 °F
Relative humidity	max. 85 % non-condensing

**Storage**

Temperature - Storage °C	-20 °C - 70 °C
Temperature - Storage °F	-4 °F - 158 °F

**Classifications**

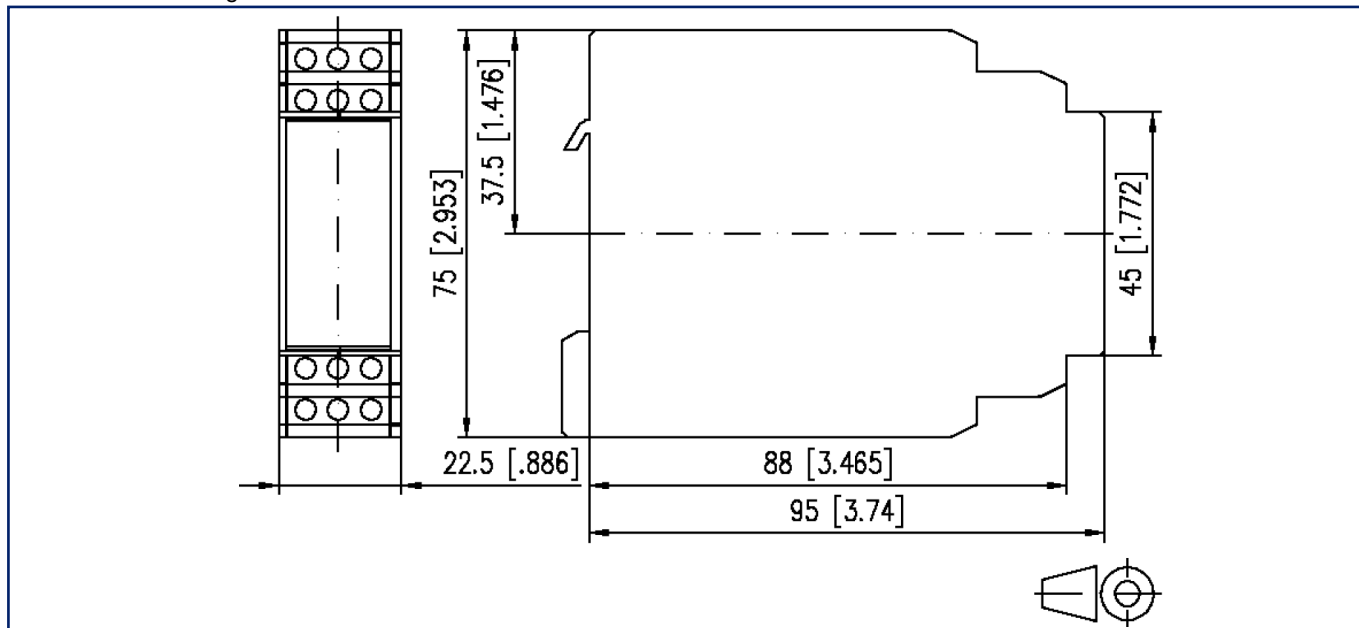
ETIM 7.0	EC001446
ETIM 8.0	EC001446
ETIM 9.0	EC001446

**Application note**

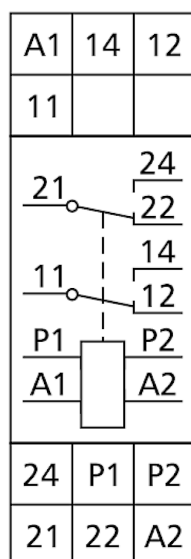
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### Illustrations

Dimensional drawing



Wiring diagram



**A1 - A2**

operating voltage

24 V AC/DC

**P1 - P2**

PTC thermistor

**11 - 12 - 14**

**21 - 22 - 24**

output contacts

2 changeover contacts

## Illustrations

Function diagram

