

Data sheet

TMR-E12 with error memory, 230 V AC, 2 changeover contacts

Page 1/6

P/N
1103160522

EAN 4250184121299

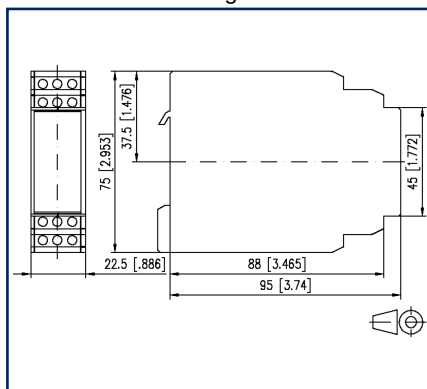
2026/09/23

Version: K

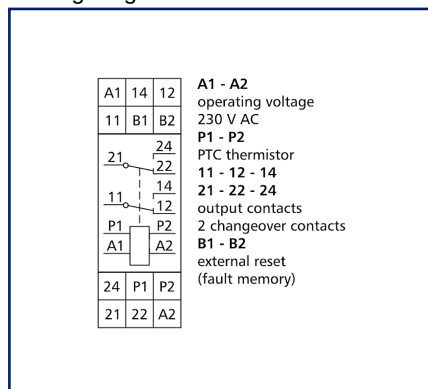
Illustrations



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. Integrated fault memory with reset key at the front.

- Variant:
- 230 V AC
- 2 changeover contacts (DPST)



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Technical Data

Supply

Operating voltage	230 V AC -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 ₂
Switching voltage (max.)	250 V
Continuous Current	4 A
Pick-up delay	10 ms
Switching frequency	1200 switching cycles/h
Mechanical life	3x10 ⁷ switching cycles
Electrical life	1x10 ⁵ 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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Terminal blocks

Wire cross section solid	0.2 mm ² - 2.5 mm ² / AWG 22-12
Wire cross section multi	0.25 mm ² - 2.5 mm ² / AWG 22-12
Wire cross section with wire ferrule	0.25 mm ² - 2.5 mm ² / 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
ETIM 10.0	EC001446

Data sheet

Page 4/6

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Application note

This product is a standard product of METZ CONNECT. METZ CONNECT is not aware of the specific intended use of the goods by the Customer or any customers of the Customer. The Customer guarantees that it has fully and sufficiently tested the use of the goods and any product modifications, product changes or product enhancements with regard to the specific intended use in accordance with the state of the art or in any other way.



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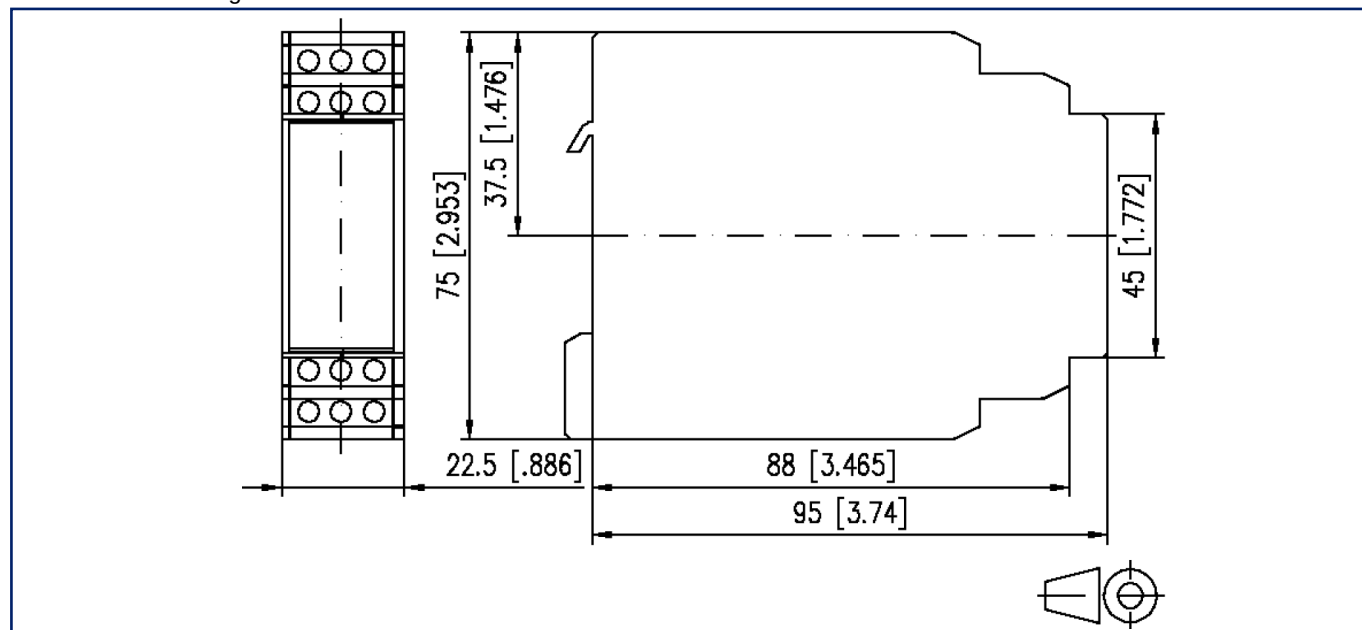
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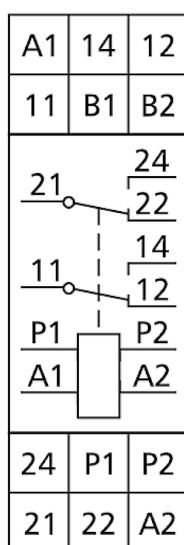
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Illustrations

Dimensional drawing



Wiring diagram



A1 - A2

operating voltage

230 V AC

P1 - P2

PTC thermistor

11 - 12 - 14

21 - 22 - 24

output contacts

2 changeover contacts

B1 - B2

external reset

(fault memory)



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Function diagram

