G2TF02

Manufacturer data sheet: V1.082

Monitoring relay - motor temperature monitoring

Status: Available Data sheet created: 01.07.2025

Item Number: 2390100 - **Serie:** Gamma - **EAN:** 9008662002364



- Monitoring relays GAMMA series
- Motor temperature monitoring (PTC)
- Galvanic isolation to the sensor circuit
- Fault memory
- Test and reset button
- External reset button connectable
- Supply voltage selectable via power module TR2/SNT2
- 2 changeover contacts
- width 22,5mm
- Industrial design

Description

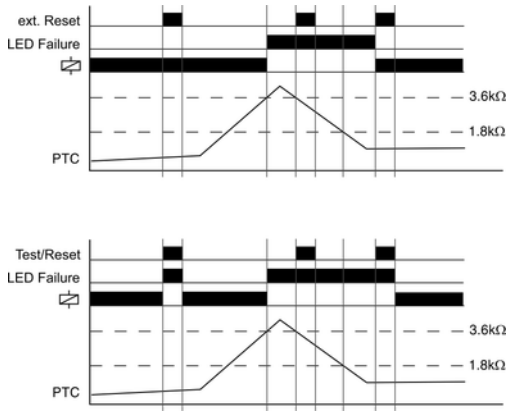
Temperature monitoring of the motor winding (max. 6 PTC) with fault latch, for temperature probes in accordance with DIN 44081 Test function with integrated test/reset key.

General information

Short description	Motor temperature monitoring, 2 changeover contacts
Item Number	2390100
EAN	9008662002364
Main category	Monitoring Relays
Series	Gamma
Type	G2TF02
Design	Industrial design
Supply	12-400V AC
Dimensions	22.5 x 90 x 108 mm

Functions and measurands

Amount of functions 1



Temperature monitoring of the motor winding with fault latch (TEMP)
If the PTC sum resistance is less than 3.6 k (normal temperature of the motor) when the supply voltage U is applied (green LED illuminated), the output relay switches into on-position. can be tested in the event of a fault. With an external reset button, the test function is not effective.If the total resistance rises above 3.6 k (at least one of the PTCs has reached the nominal switch-off temperature), the output relay drops out (red LED lights up). The output relay R switches back on or the error is cleared (red LED not illuminated) when, after the PTCs have cooled down, the total resistance has fallen below 1.8 k again and either a reset button (internal or external) is pressed or the voltage supply is switched off and applied again.

Indicators

Supply/time lapse 1	Green LED U ON: Supply voltage applied
Error / monitoring function	Red LED ON/OFF: Display error for corresponding threshold

Mechanical design

Housing material	made of self-extinguishing plastic
Housing - protection degree	IP40
Mounting	top hat rail TH 35 7,5-15 according to IEC 60715:2017 / EN 60715:2017
Terminals/connections	Touch-proof clamping yoke terminals according to DGUV 3 (Screwdriver PZ1 required)
Terminals - protection degree	IP20
Mounting position	any
Stripping length	7 mm
Max. Tightening Torque	1 Nm
Terminal capacity	• 1 x 0.5 to 2.5mm² with/without ferrule • 1 x 4mm² without ferrule • 2 x 0.5 to 1.5mm² with/without ferrules • 2 x 2.5mm² flexible without ferrules

Supply circuit

Terminals/connections	A1-A2 (galvanically separated)
Rated consumption d.c.	1,5 W / 2 VA
Supply voltage a.c.	12 ... 400 V
Supply voltage tolerance a.c.	According to power supply unit specification
Rated consumption a.c.	1,5 W / 2 VA
Rated frequency power module	According to power supply unit specification
Duty cycle	100%
Recovery time	500 ms
Drop-out voltage	>30% the supply voltage
Overvoltage category	III (IEC 60664-1)
Rated surge voltage	4 kV
Rated impulse withstand voltage	400 V a.c.

Output curcuit

Type	Relay
Contact 1	1 change over contact
Terminals 1	11-12-14
Contacts 2	1 change over contact
Terminals/connections 2	21-22-24
Rated voltage	250 V a.c.
conditional short-circuit current	1 kA
Fuse Protection	5 A quick
Mechanical life	15 x 10^6 Switching cycles
Electrical life	100 x 10^3 Switching cycles (1000 VA)
Utilization categorie	AC 15
Switching frequency	max. 60/min at 100 VA resistive load
Switching frequency 2	max. 6/min at 1000 VA resistive load (IEC 60947-5-1)
Rated surge voltage	4 kV
Overvoltage category	III (IEC 60664-1)

Interface

Control input

Terminals/connections	R
Function	Connection of an external reset
Loadable	No
Maximum line length	10 m (twisted)
Reset	potential-free normally open contact, terminal R-T2

Measuring circuit

Measurand	Temperature

Accuracy

Base accuracy	±10 % (from full scale)
Repetition accuracy	≤1 %
Voltage influence	≤2.2 %
Temperature influence	≤0.1 % / °C

Measuring circuit - temperature

Measuring input	Terminals T1-T2
Initial resistance	<1.5 kΩ
Response value (relay in off-position)	≥3.6 kΩ
Release value (relay in on-position)	≤1.8 kΩ
Disconnection (short circuit thermistor)	no
Measuring voltage T1-T2	≤2.5 V d.c. at R ≤4.0 kΩ (according to DINVDE 0660 part 302)
Overvoltage category	III (IEC 60664-1)
Rated surge voltage	4 kV

Ambient conditions and general specifications

Ambient temperature IEC	-25 ... +55°C (IEC 60068-1)
Ambient temperature UL	-25 ... +40°C (UL 508)
Storage temperature	-25 ... +70 °C
Transport temperature	-25 ... +70 °C
Relative humidity	15% ... 85% (IEC 60721-3-3 class 3K3)
Vibration resistance	10 ... 55 Hz 0.35 mm (IEC 60068-2-6)
Shock resistance	15 g 11 ms (IEC 60068-2-27)
Pollution degree	3 (IEC 60664-1)
Installation altitude	Up to 2000 m above sea level

Logistics

Minimum Quantity	1
Tariff Number	85364900
EAN	9008662002364
Country of Origin	AT
Product Weight (g)	136

Available declarations / conformities

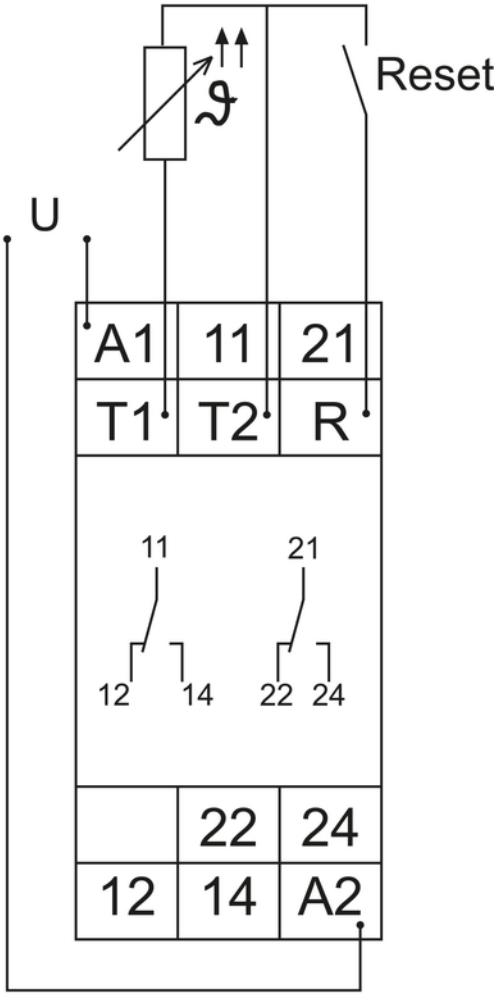
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UL	Open document
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TSCA	Open document
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CMRT	Open document

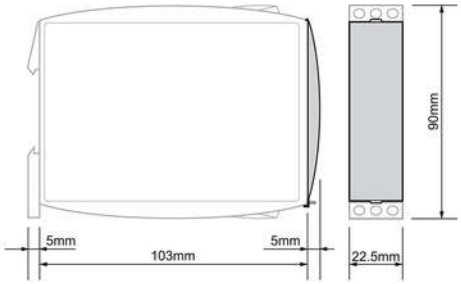
CAD Files

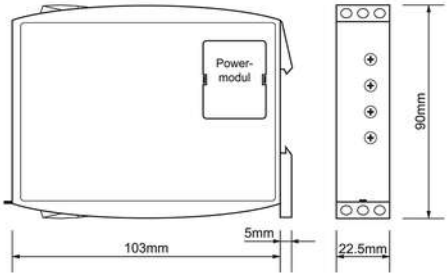
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Media & drawings













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