# G2TF01 230VAC

Manufacturer data sheet: V1.088

## Monitoring relay - motor temperature monitoring

Status: Available Data sheet created: 01.07.2025

**Item Number:** 2390102 - **Serie:** Gamma - **EAN:** 9008662002388



- 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 230V AC
- 1 changeover contact
- width 22,5mm
- Industrial design

## Description

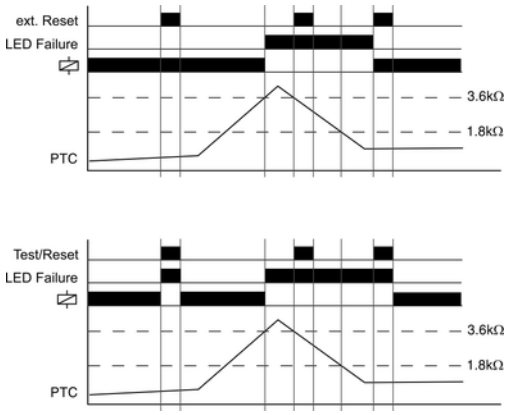
Temperature monitoring of the motor winding (max. 6 PTC) with fault latch, for temperature probes in accordance with DIN 44081 Test function with integrated test/reset key.

## General information

| | |
|---|---|
| **Short description** | Motor temperature monitoring, 1 changeover contact, 230V AC |
| **Item Number** | 2390102 |
| **EAN** | 9008662002388 |
| **Main category** | Monitoring Relays |
| **Series** | Gamma |
| **Type** | G2TF01 230VAC |
| **Design** | Industrial design |
| **Supply** | 230V AC |
| **Dimensions** | 22.5 x 18 x 90 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<br>• 1 x 4mm² without ferrule<br>• 2 x 0.5 to 1.5mm² with/without ferrules<br>• 2 x 2.5mm² flexible without ferrules |

## Supply circuit

| | |
|---|---|
| **Terminals/connections** | A1-A2 (galvanically separated) |
| **Supply voltage a.c.** | selectable via power supply |
| **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 |
| **Rated voltage** | 250 V a.c. |
| **conditional short-circuit current** | 1 kA |
| **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) |

## Control input

| | |
|---|---|
| **Function** | external reset key |
| **Loadable** | no |
| **Maximum line length** | R-T2: max. 10m (twisted pair) |
| **Reset** | potential free normally open contact, terminals R-T2 |

## Measuring circuit

| | |
|---|---|
| **Measurand** | Temperature |

## Accuracy

| | |
|---|---|
| **Base accuracy** | ±10 % (from full scale) |
| **Repetition accuracy** | ≤1 % |
| **Voltage influence** | ≤2.2 % / V |
| **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 (according to 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** | 9008662002388 |
| **Country of Origin** | AT |
| **Product Weight (g)** | 179 |

## Available declarations / conformities

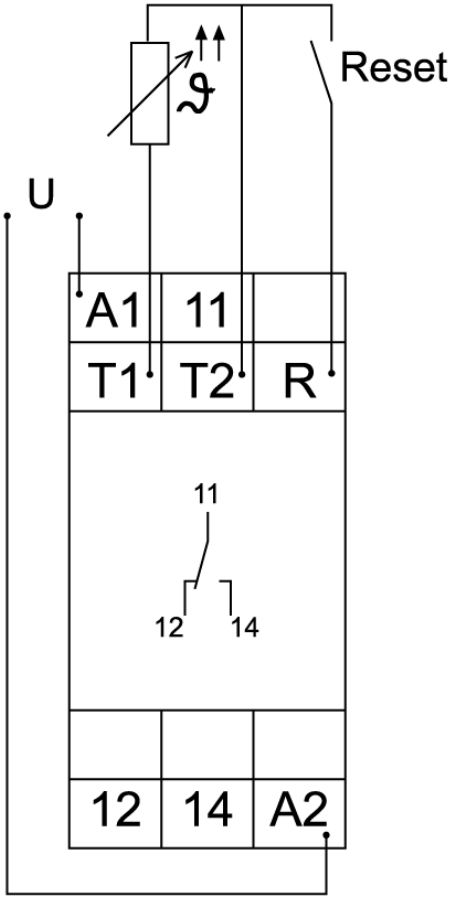
| | |
|---|---|
| **EAC** | ✓ |
| **CE** | ✓ |
| **UL** | Open document |
| **c(UL)** | Open document |
| **REACH** | Open document |
| **WEEE** | Open document |
| **TSCA** | Open document |
| **RoHs** | Open document |
| **CMRT** | Open document |

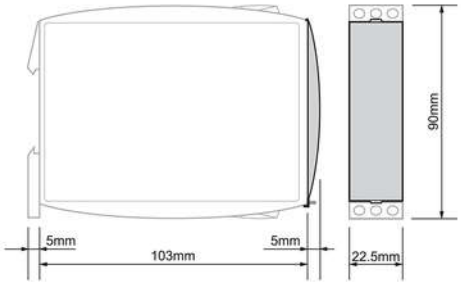
## CAD Files

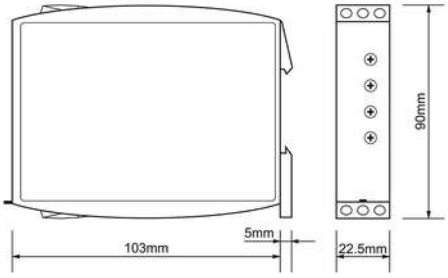
| | |
|---|---|
| **STEP_G2_en.STEP** | Download file |

## Media & drawings












**Tele Haase Steuergeräte Ges.m.b.H**
Vorarlberger Allee 38
1230 Vienna
Austria

CALL US +43 / 1 / 614 74 - 0
ONLINE SUPPORT support@tele-haase.at

Changes and errors excepted