



Humidity Temperature Sensor TFG120 Indoor version with Polyga® measuring element

- For semi-industrial and industrial use up to 100 % rh.
- High accuracy in the high humidity range
- Long term stability
- Robust, resistant to high humidity
- Energy saving: the TFG120 with resistance output does not require its own power supply

POLYGA® transmitters demonstrate excellent measuring properties and accuracy in high humidity. They can be adjusted and cleaned in water. Their outstanding durability, reliability and robustness make them the classic choice for applications with extended high humidity.

Technical Data

Humidity

| | | |
|------------------------------|---------------------------|---------------------------|
| Measuring range | 0..100%rh | |
| Measuring accuracy | >40%rh | ±2.5%rh |
| | <40%rh | acc. to tolerance diagram |
| Working range | 35...100%rh | |
| Medium temp. coefficient | -0.1%/K at 20°C and 50%rh | |
| Half-life period at v=2m/sec | 1.2min | |

Temperature

| | |
|--------------------|-------------------------|
| Measuring element | Pt100 ref. DIN EN 60751 |
| Working range | -10...+60°C |
| Measuring accuracy | ±0.5°C |

Electrical data

| | |
|----------------------|---|
| Connecting terminals | for conductor cross sections 0.5mm ² |
| Cable connection | via patress |

Electromagnetic compatibility

According to EN 61326-1 and EN 61326-2-3

General data

| | |
|---------------------------------|--------------------------------------|
| Measuring medium | air, pressureless, non-aggressive |
| Adjustment | at average air pressure 430m NN |
| permissible air speed | 15m/sec |
| Permissible ambient temperature | 0...50°C |
| Fixing | slots in housing base |
| Housing | impact resistant plastic, light grey |
| Protective system | IP20 |
| Weight | approx. 0.2 kg |

Electrical data for passive sensors

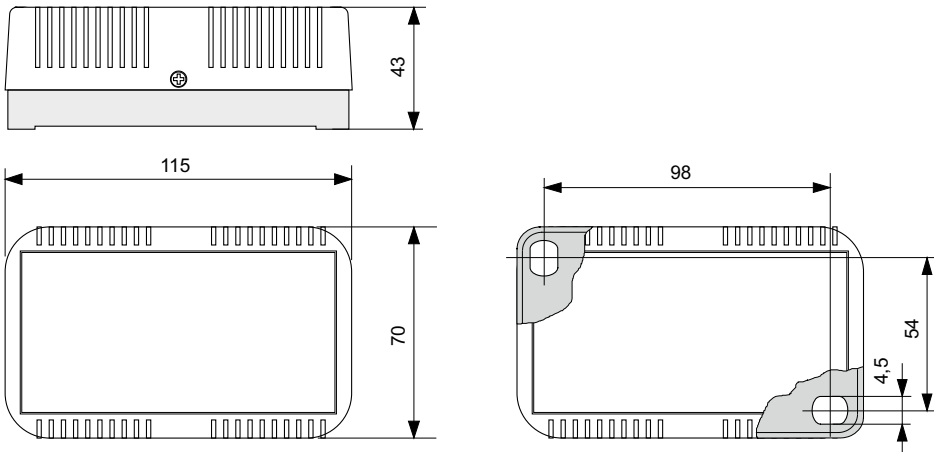
| | |
|------------------------------------|-----------------------------|
| Permissible load of signal outputs | |
| Humidity output | 250 mW |
| Temperature output (Pt100) | 1 mA at air speeds of 1 m/s |

Type survey passive sensors

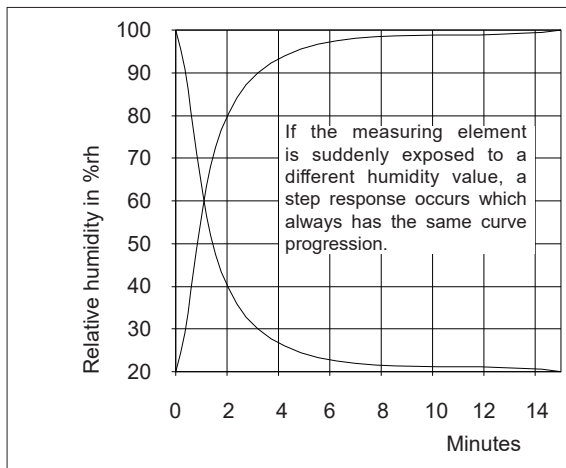
| Type | Order no. | Measuring range | | Outputs | |
|--------|-----------|-----------------|-------------|------------------------|-------------|
| | | Humidity | Temperature | Humidity | Temperature |
| FG120 | 45010300 | 0 ... 100 % rh | - | 0 ... 1000 Ω linear | - |
| FG120 | 45010400 | 0 ... 100 % rh | - | 100 ... 138,5 Ω linear | - |
| FG120 | 45010100 | 0 ... 100 % rh | - | 0 ... 100 Ω linear | - |
| FG120 | 45010200 | 0 ... 100 % rh | - | 0 ... 200 Ω linear | - |
| TFG120 | 45700350 | 0 ... 100 % rh | Pt100 | 0 ... 1000 Ω linear | Pt100 |
| TFG120 | 45700450 | 0 ... 100 % rh | Pt100 | 100 ... 138,5 Ω linear | Pt100 |
| TFG120 | 45700150 | 0 ... 100 % rh | Pt100 | 0 ... 100 Ω linear | Pt100 |
| TFG120 | 45700250 | 0 ... 100 % rh | Pt100 | 0 ... 200 Ω linear | Pt100 |

Further resistance ranges on request.

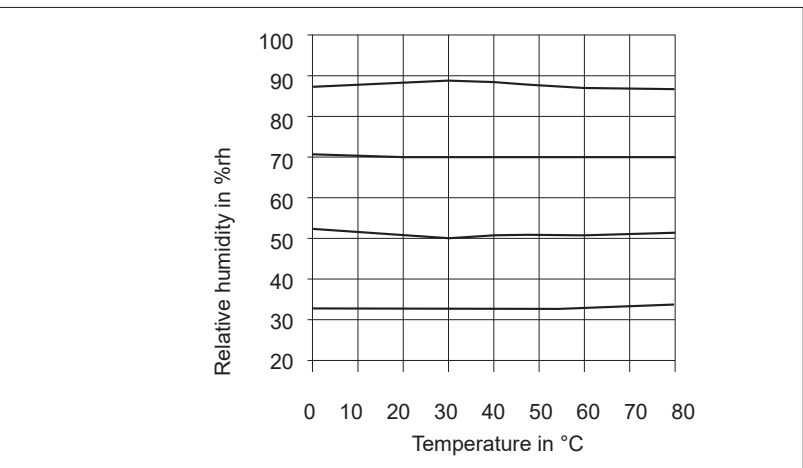
Dimensions diagram



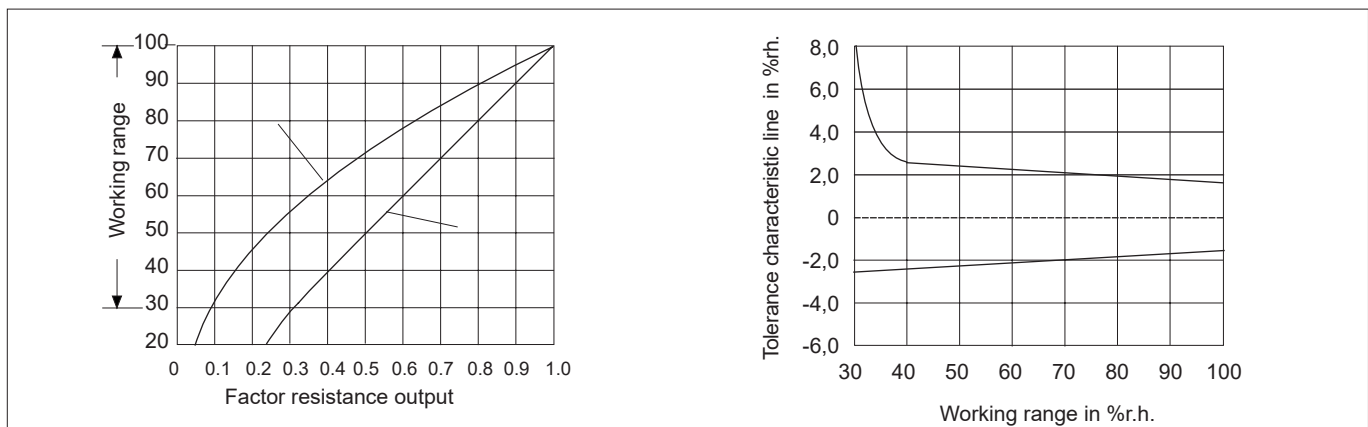
Half-life period



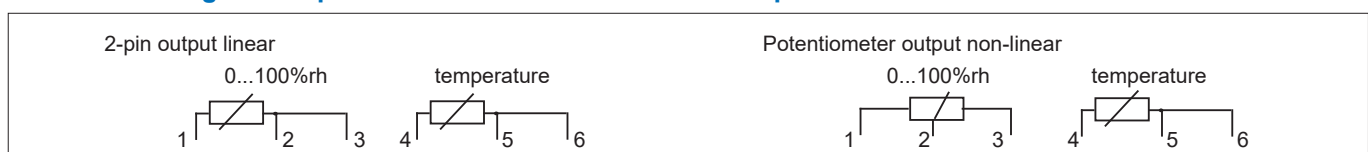
Thermal behaviour



Humidity and tolerance diagram



Connection diagram for passive sensors with resistance output



Mounting instructions

| | |
|------------|--|
| Position | Mount the room sensor on a vertical wall at a height of approx. 1.5 m. Ensure that the housing is not subject to tension even if the wall is uneven. |
| | Any mounting position can be chosen. The ventilation slots should preferably be at right angles to the wind direction. |
| | Do not install the sensors in a wall or recess. |
| | Protect the sensors against dripping and splashing water. |
| Connection | Ensure that no air flow can enter the inside of the housing via the flush mounted cable entry. Do not use silicone sealant to seal the cable entry. |

User instructions

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|-----------------------|--|
| Maintenance | The measuring element is maintenance-free in pure ambient air. A special process ensures that Galltec sensors have good long-term stability. Regeneration is not necessary, but is also not harmful. |
| | Warning: Contact with the inner parts nullifies the warranty. |
| Cleaning | The water-resistant property of the Polyga® measuring elements allows cleaning to be carried out with water: 1. Remove the cover. Clean the cord shaped measuring element using a soft brush and clean water. Do not use a detergent as it cannot be dispersed. <i>It is important that no water can reach the other components, especially terminals, circuit boards and potentiometers.</i> 2. Air drying. <i>Do not use warm or hot air (hair dryer).</i> |
| Damaging influences | Aggressive media containing solvent can cause measuring errors depending on the type and concentration. Deposits which eventually form a water-repellent film over the measuring element are harmful (such as resin aerosols, lacquer aerosols, smoke deposits etc.). |
| Further Informationen | <ul style="list-style-type: none">› Humidity measuring technology: Sensors with Polyga® measuring element› Humidity measuring technology: Definitions and terms available at www.galltec-mela.de or from the manufacturer |

This information is based on current knowledge and is intended to provide details of our products and their possible applications. It does not, therefore, act as a guarantee of specific properties of the products described or of their suitability for a particular application. It is our experience that the equipment may be used across a broad spectrum of applications under the most varied conditions and loads. We cannot appraise every individual case. Purchasers and/or users are responsible for checking the equipment for suitability for any particular application. Any existing industrial rights of protection must be observed. The quality of our products is guaranteed under our General Conditions of Sale. Data sheet FG120_e. Issue: November 2020. Subject to modifications