



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 0.5mm²
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

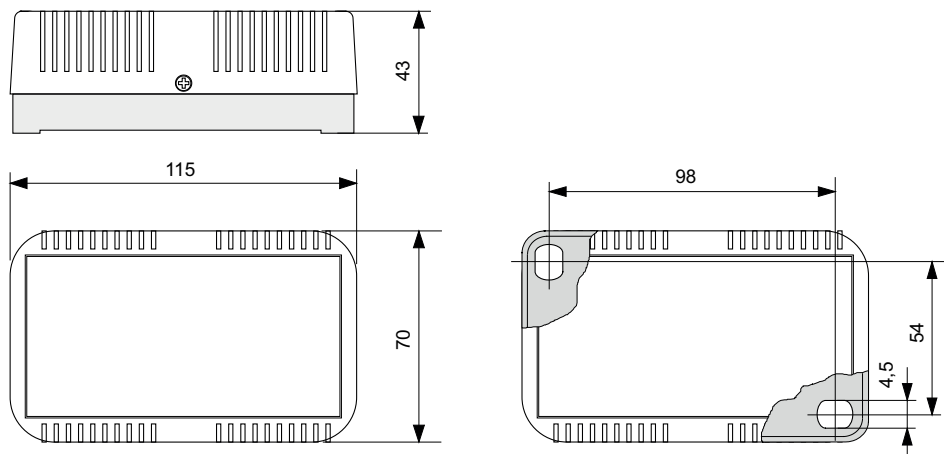
Permissible load of signal outputs	
Humidity output	250 mW
Temperature output (Pt100)	1 mA at air speeds of 1 m/s

Type survey passive sensors

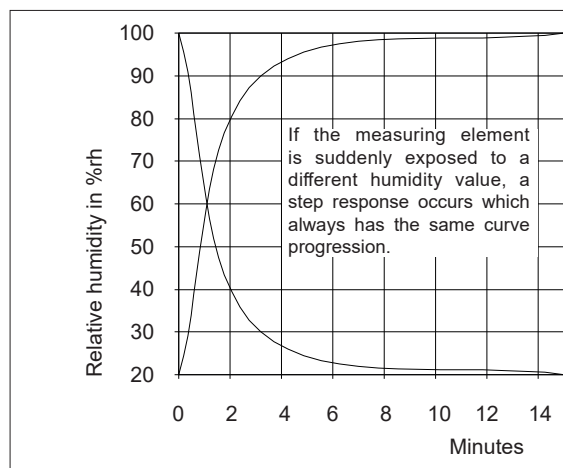
Type	Order no.	Measuring range		Outputs	
		Humidity	Temperature	Humidity	Temperature
FG120	45010300	0 ... 100 % rh	-	0 ... 1000 Ω linear	-
FG120	45010400	0 ... 100 % rh	-	100 ... 138,5 Ω linear	-
FG120	45010100	0 ... 100 % rh	-	0 ... 100 Ω linear	-
FG120	45010200	0 ... 100 % rh	-	0 ... 200 Ω linear	-
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.

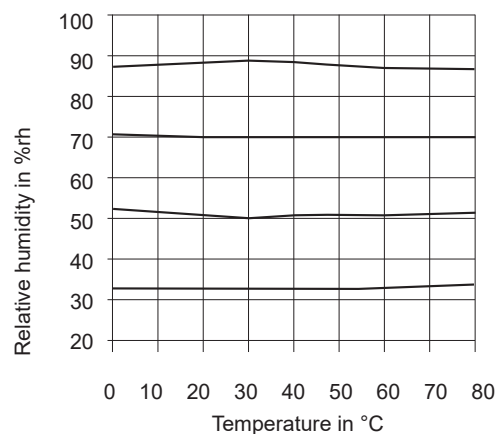
Dimensions diagram



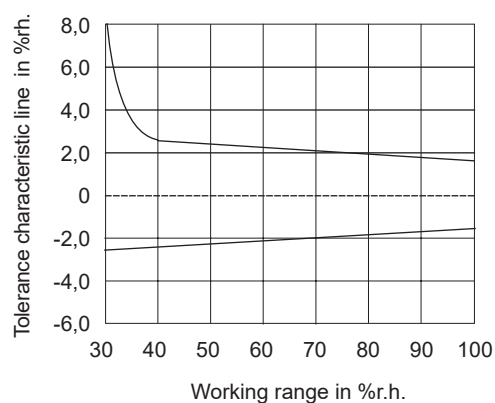
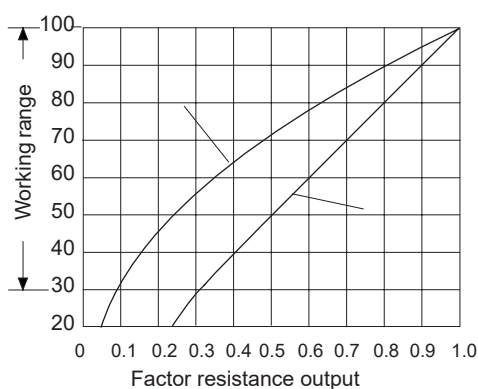
Half-life period



Thermal behaviour

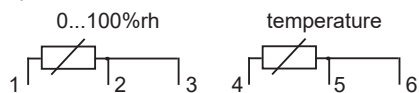


Humidity and tolerance diagram



Connection diagram for passive sensors with resistance output

2-pin output linear



Potentiometer output non-linear



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

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.
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: September 2021. Subject to modifications