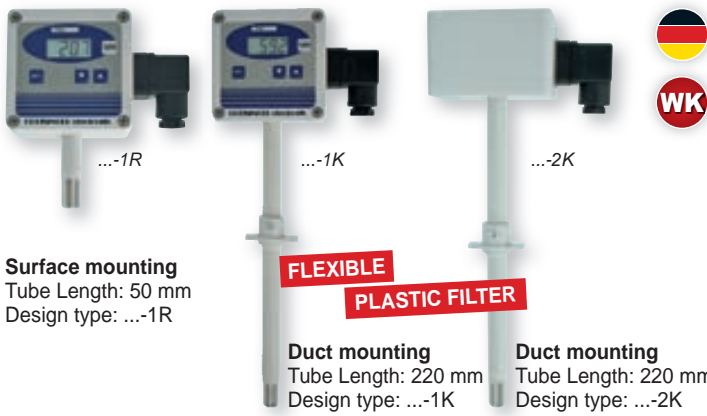


Humidity and humidity/temperature transducer GRHU ... MP and GHTU ... MP



Surface mounting
Tube Length: 50 mm
Design type: ...-1R

**FLEXIBLE
PLASTIC FILTER**

Duct mounting
Tube Length: 220 mm
Design type: ...-1K

Duct mounting
Tube Length: 220 mm
Design type: ...-2K

HIGHLIGHTS:

- on-site display for humidity and temperature
- output ranges freely scaleable
- adjustment by operator possible
- output signals for humidity and temperature are electrically isolated
- available output signals: 4-20 mA, 0-1 V or 0-10 V

Humidity transducer:

GRHU - 1R - MP (FL = 50 mm)

GRHU - 1K - MP (FL = 220 mm)

GRHU - 2K - MP (FL = 220 mm)

GRHU - SHUT - MP

GRHU - KABEL - MP

Humidity / temperature transducer:

GHTU - 1R - MP (FL = 50 mm)

GHTU - 1K - MP (FL = 220 mm)

GHTU - 2K - MP (FL = 220 mm)

GHTU - SHUT - MP

GHTU - KABEL - MP

General:

The newest generation of humidity/temperature transducer offers even greater possibilities to compensate the special sensor characteristics due to the newest microprocessor technology. Regarding precision, temperature stability and functionality a new dimension is entered. The transducer can be used for almost all applications due to the different types (e.g. wall or channel mount, with separated probe or with heat absorption hat) and the wide temperature range (electronic: -25 °C ... +50 °C; sensor: -40 ... +120 °C).

Option:

- **HO:**
High-humidity sensor (for humidity measuring < 20 % RH and > 80 % RH)
Note: Upon ordering the range of application can be stated, for this the device will be optimised free of charge (e.g. 10-40 % or 60-90 %).
- **UNI:**
selectable humidity display unit
- **LACK:**
Encapsulated PC board
(for outdoor application, i.e. applications where condensation is possible)
- **FL300, FL400, FL500:**
(Extra long sensor tube - 300, 400 or 500 mm - no interim lengths possible)
- **AV01:**
output signal 0-1 V (note: please refer to connection)
- **AV01G:**
electrically isolated voltage output (GHTU)
output signal 0-1 V (note: please refer to connection)
- **AV10:**
output signal 0-10 V (note: please refer to connection)
- **AV10G:**
electrically isolated voltage output (GHTU)
output signal 0-10 V (note: please refer to connection)

Accessories and spare parts:

Spare protection cap
with stainless steel gauze (105 µm mesh size) -
for standard and high humidity use

Bronze filter
(not for use in high humidity)

Order code:

GHTU-2K-MP / AV10, FL300: GHTU-2K-MP, 0-10V, FL = 300 mm
GRHU-MP / KABEL, HO: GRHU-MP, with separated sensor tube and high humidity sensor

Specification:	
Measuring ranges:	
Humidity:	0.0 ... 100.0 % RH (temperature compensated)
Temperature:	-40.0 ... 120.0 °C or -40.0 ... 248 °F
Recommended humidity range:	20.0 ... 80.0 % RH (standard) 5.0 ... 95.0 % RH (with option high humidity)
Display options:	with option UNI an alternative display unit can be shown instead of the humidity measuring value. The unit selection will be done via the interface or at the keyboard.
Wet bulb temperature	-27.0 ... 60.0 °C
Dewpoint temperature	-40.0 ... 60.0 °C
Enthalpy	-25.0 ... 999.9 kJ/kg
Atmospheric humidity	0.0 ... 640.0 g/kg
Absolute humidity	0.0 ... 200.0 g/m ³
Accuracy: (at 25 °C and in recommended range)	
Display:	humidity: ±2.5 % RH temperature: ±0.4 % of measuring value ±0.2 °C
Additional output signal:	each ±0.2 % FS
Temperature compensation:	automatically
Output signal:	GRHU 1 x 4-20 mA (2-wire), freely scaleable GHTU 2 x 4-20 mA (2-wire), freely scaleable Option: 0-1 V, 0-10 V (other output signals upon request)
Connection:	4 - 20 mA (2-wire), note for GHTU: output signals are electrically isolated from each other
for option AV01, AV10:	0 - 1 (10) Volt (3-wire), note for GHTU: output signals are electrically isolated from each other
for option AV01G, AV10G:	0 - 1 (10) Volt (3- or 4-wire), note for GHTU: output signals are electrically isolated from each other
Auxiliary energy:	12 ... 30 VDC or 18 ... 30 VDC (for output: 0-10V)
Reverse voltage protection:	50 V, permanently
Perm. impedance (at 4-20 mA):	$R_x [\Omega] \leq (U_V [V] - 12V) / 0.02 A$
Permissible load (at 0-1(10)V):	$R_L [\Omega] > 3000 \Omega$
Display:	approx. 10 mm high, 4-digit LCD-display, alternating humidity and temperature display
Working temperature:	-25 ... 50 °C (electronics)
Sensor head and tube:	-40 ... 100 °C - for short time up to 120 °C
Storage temperature:	-25 ... 70 °C
Relative humidity (electronic):	0 ... 95 % RH (non-condensing); If there is a risk of condensation due to temperature changes, please use our encapsulated or lacquered types (optionally available).
Housing:	ABS (IP65)
Sensor tube:	tube 14 mm Ø, with screw-type protection cap
Sensor length:	50 mm (...1R) or 220 mm (...1K, ...2K) option: 300 mm, 400 mm, 500 mm
Design type Kabel:	with separated sensor tube, sensor head (Ø14x 68 mm) connected to device via 1 m teflon cable. Inclusive option high-humidity sensor
Design type Shut:	heat absorption hat / weather protection shield Application: The heat absorption hat is especially designed for measurements in the open air. The measuring results that can be achieved will not be influenced by either sun or rain. Design: Heat absorption hat made of plastic, Ø 110 mm, approx. 140 mm high. Additionally equipped with a stainless steel base for wall mounting, with 3 fixing holes for screws with a max. shaft Ø of 5 mm. Large projection approx. 160 mm.
Electric connection:	elbow-type plug acc. to EN 175301-803/A (IP65)
Mounting:	4 housing holes for wall mounting or by means of plastic tube clamps for duct mounting
Functions:	min-/max-value memory, offset and slope adjustable, output signal scaleable

