2-wire RH/T Transmitter RHT

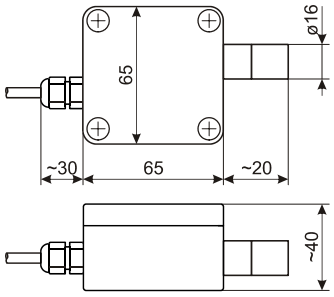
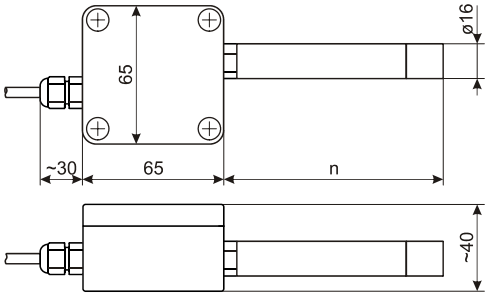
- **Low cost**
- **Temperature compensation system**
- **Two 2-wire transmitters for RH and temperature**
- **Optional built-in Pt temperature sensor**
- **Optional stainless steel sintered filter**
- **IP65 protection**

Using thin-film sensor with capacitance changing proportionally to medium relative humidity, RHT measures RH of air and non-aggressive gases and converts it into standard 4...20mA 2-wire signal. A built-in temperature drift compensation system guarantees good stability of measurement and an additional temperature sensor or second 2-wire transmitter may be built-in for measurement of both medium relative humidity and temperature. The RH transmitter is factory calibrated and does not need custom adjustment, while the temperature transmitter can be additionally calibrated on-site. The device is available in 3 variants with different mounting and temperature ranges. All this, in addition to the high protection class, the small size, and the low price, make RHT a convenient solution for many RH measurement applications.

Technical specifications

Input	
Humidity	capacitive sensor, 0...100 %RH
Temperature (option)	Pt100...1000 (w=1.385), -20...90 °C
RH adjustment	not needed (factory set)
Temperature ZERO adjustment	± 20%
Temperature SPAN adjustment	± 20%
Output	
RH current output	4...20 mA, 2-wire
- input range correspondence	0...100 %RH
Temperature current output (option)	4...20 mA, 2-wire
Linearity proportional to	measured value
RH output limit	100% RH for condensation
Power supply	
Supply voltage	8...36 VDC
Admissible variations	1 Vp-p at 50 Hz
Maximum line load	800 Ω at 24V/20mA

Accuracy	
RH measurement error	≤ 2.5% from span
Temperature measurement error	≤ 0.5% from span
Non-linearity	within measurement error
Temperature drift for RH	0.05% from span for 1 °C
Temperature drift for temperature	0.01% from span for 1 °C
Operating conditions	
Ambient temperature	-10...60 °C
Ambient humidity	0...98 %RH, non-condensing
Design and materials	
Case material	ABS plastic
Sensor protection	plastic cap with stainless steel mesh
Sintered filter (option)	stainless steel, 75 µm
Wiring	screw terminals inside housing
Protection class	IP65 (NEMA 4, 4x)

Variant	A	B	D
Specifications			
Stem material	POM (polyacetal)	PVC	stainless steel [1]
Medium temperature	-10...60 °C	-10...70 °C	-20...90 °C [2]
Stem length ('n')	-	100...500 mm	100...300 mm
Weight	max. 150 g	up to 200 g	up to 300 g
Mounting	wall	in-hole (PVC flange DN16 [3]) or free	in-hole (SS flange DN16 [3]) or free

[1] With sintered filter only
[2] Please check the RH/T working zone in the SH datasheet!
[3] Ordered separately (see 'Accessories')

Ordering code RHT✱ - G6 - #1.#2

Code	Feature or option	Code values
✱	Variant	**A** - for wall mounting, **B** - for in-hole mounting, **D** - high-temperature
G6	Stem length 'n' [mm] [4]	**100...500** (step 10 mm)
#1	Built-in temperature sensor / transmitter	**X** - none, **D** - Pt100, **F** - Pt500, **G** - Pt1000, **TT** - 2-wire transmitter
#2	Sintered filter	**X** - none, **S** - sintered filter mounted

[4] Do not code for variant 'A'