

RHT175

Senzor relatívnej vlhkosti a teploty

Nová generácia snímača relatívnej vlhkosti a teploty RHT175 vyvinutá a vyrobená spoločnosťou MicroStep-MIS poskytuje spoľahlivé a presné meranie relatívnej vlhkosti a teploty



Accuracy typical 1 %RH



Long-term stability
< 1 %RH/year



Humidity sensor
0 to 100 %RH



Digital and analog
interface

Relative humidity measurement

Measurement range	0 to 100 %RH
Accuracy (@ 25 °C)	±1 %RH
Short term hysteresis	< 0.6 %RH
Accuracy over temperature range	$1 + t - 25 * (0.008 + 0.00052 * RH)$
Typical long-term stability	±1.0* % per year
Calibration traceability	MBW calibration
Response time at +25 °C in still air with a sintered filter	63 % to < 40 s
Sensor type	capacitive
Upgrade to ISO 17025 accredited calibration	optional

* Dependent on operating environment

Temperature measurement

Measurement range	-65 °C to +70 °C
Accuracy	±0.2 (-40 to +60) °C

General

Operating temperature range	-65 °C to +70 °C
Storage temperature range	-65 °C to +70 °C
Cable coating	PUR
Housing material	±1 %RH
Housing classification	IP65 (except sensors)

Sensor protection	HDPE sintered filter 10 m
EMC compliance	tested and conforms to IEC 61326:2002
Connector	M12 5-pin male (optional)
Power consumption (1 measurement per 10 s, analog output ON)	2 mW
Sensor type	capacitive
Power consumption (1 measurement per 10 s, analog output OFF)	1.2 mW

Relative humidity measurement

Settling time at power-up	< 3 s
Communication standard	<ul style="list-style-type: none"> • SDI-12 V1.3 • analog out (0 V to 1 V) • RS-485 (optional) • 3.3 V UART (optional) • second analog out (0 V to 1 V) (optional)
Output resolution	0.05 %RH, 0.01 °C
Measurement period	from 1 s
Supply voltage	5 to 30 VDC

Optional PT100 Temperature Probe (cable version only)

Accuracy classes according to DIN EN60751	<ul style="list-style-type: none"> • PT100 1/5 (-20 °C to 70 °C) • PT100 1/3 F0.1 (class B) (-65 °C to +70 °C) optional
Operating temperature range	-65 °C to +70 °C
Recommended current	1 mA max.
Resolution	depends on data logger
Measurement period	depends on data logger

Optional continuous heating

Heating power	≤ 250 mW (adjustable)
Output value	Dew point [°C]

Factory calibration

Relative humidity [%RH]	Expanded uncertainty U [%RH]
10	0.60
30	0.60
50	1.0
70	1.0
95	1.2