

EGH 130: Room transducer for relative humidity and temperature

How energy efficiency is improved

Accurate recording of room temperature and relative humidity for energy-efficient control of HVAC systems and monitoring of energy consumption.

Areas of application

Measurement of relative humidity and temperature in residential and business premises.

Features

- Humidity measurement using fast, capacitive sensors
- Active measured value acquisition
- Cable inlet at rear
- Suitable for wall mounting

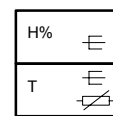
Technical description

- Housing made of pure white fire-retardant thermoplastic (RAL 9010)
- Conversion of values acquired into standard signal 0...10 V
- Screw terminals for wires up to 1,5 mm²



T08601

Type	Humidity: Range %rh	Humidity: Output for 0...100 %rh	Temperature: Range °C	Temperature: Output ¹⁾ for 0...50 °C	Weight kg
EGH 130 F001	5...95	0...10 V	0...50	0...10 V	0.1
Power supply 24 V \pm 5%	\pm 20%		Permissible ambient temp.	0...50°C	
Power consumption	approx. 0,8 VA		Ambient humidity	5...95 %rh	
Output signal	0...10 V, load > 5 k Ω		Degree of protection	IP 30 (EN 60529)	
Resistance curve	DIN 43760 (Ni1000)		Protection class	III (IEC 60730)	
Temperature effect	-0,15 %rh/K		Wiring diagram	A07597	
Time constant in air (0.2 m/s)			Dimension drawing	M07634	
Humidity	approx. 18 s		Fitting instructions	MV 505572	
Temperature	approx. 12 min		Declaration on materials	MD 34.005	



Y07596

Accessories

- 0303124 000*** Recessed junction box
0313347 001* Intermediate cover plate for 76 × 76 mm

*) Dimension drawing or wiring diagram are available under the same number

1) The output can be changed to Ni1000 (by cutting 2 wire bridges)

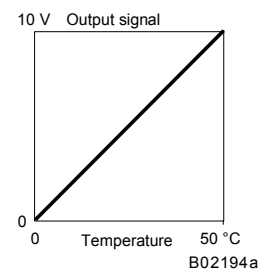
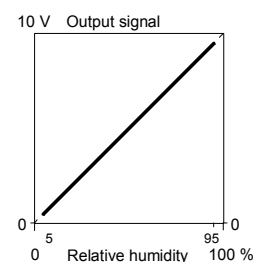
Operation

Measurement of humidity:

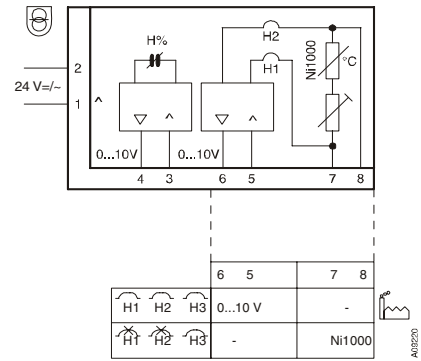
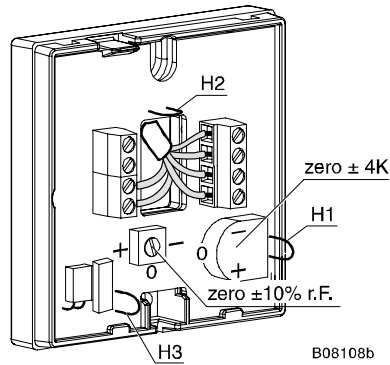
The relative humidity is measured with a fast capacitive sensor and converted via a measuring amplifier into the standard signal of 0...10 V. For controllers requiring an Ni1000 temperature sensor, outputs 7 and 8 can be used (cut bridges H1 and H2).

Additional technical data

Humidity		Temperature (Ni1000)	
Error at 55 %rh, 23°C	\pm 3,5 %rh	Error at 20°C	\pm 0,25 K (1/2 DIN)
Hysteresis (mean)	< 3 %rh	Self-heating (sensor)	0,14 K/mW
Reproduceability Δ 30 %rh	< \pm 2 %rh	Complies with:-	
		EMC directive 2004/108/EC	EN 61000-6-1/ EN 61000-6-3



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Measured temperature output

The measured temperature can be adjusted by ± 4K using the zero ± 4K adjuster.

Passive measured temperature output

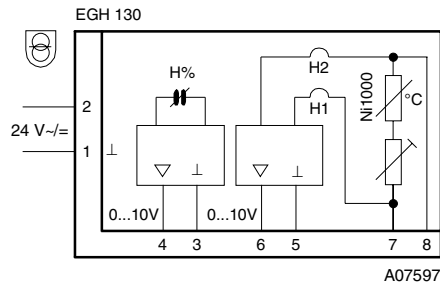
The zero ± 4K adjuster can be set between approximately 0-4°. The total resistance resulting at terminals 7 and 8 therefore equals (zero ± 4K adjuster + Ni1000).

User information

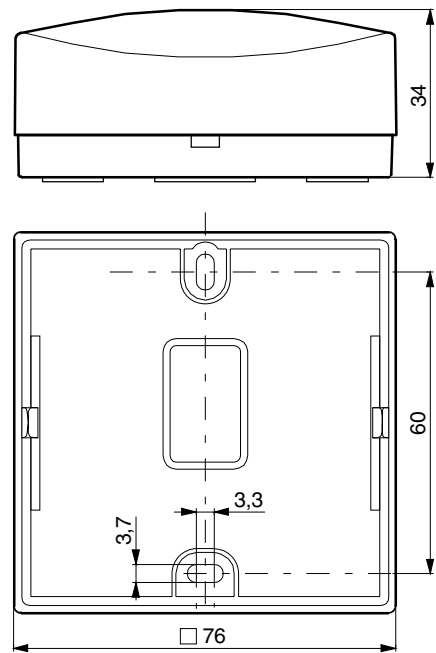
In general, humidity sensors age more quickly if they are used in very contaminated air or aggressive gases. The sensor can drift prematurely under these conditions. The drift can be adjusted by 10% using the H10% rh adjuster if accurate measurement is needed.

If the product is used in very contaminated air, a re-calibration or, if necessary, a complete exchange of the complete sensor is not covered by the warranty.

Wiring diagram

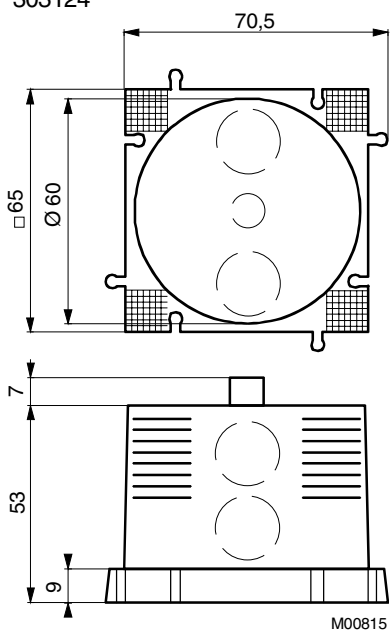


Dimension drawing



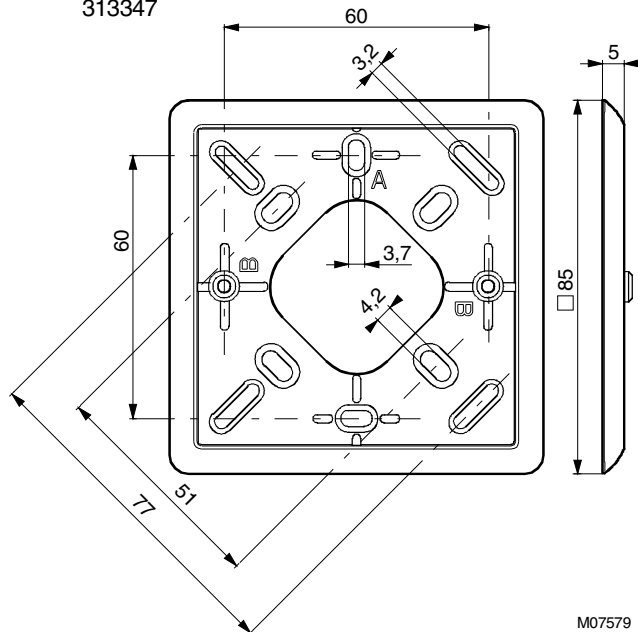
Accessories

303124



M00815

313347



M07579