

Duct hygrostats and humidity sensors ($\pm 2.0\%$), including mounting flange, electronic, one-step, with switching outputs

Electronic hygrostat and humidity sensor **HYGRASREG® KH-40** with one switching output, adjustable switching threshold and display for displaying ACTUAL humidity (accuracy class $\pm 2.0\%$ r.H.) and for setting the target humidity. It is suitable for controlling and monitoring the relative air humidity, e.g.

in ventilation and air conditioning ducts, laboratories, production rooms, climatic exposure test cabinets, swimming pools, greenhouses etc., for controlling humidifying and dehumidifying facilities. The measuring transducers are designed for exact detection of humidity. The KH-40 uses a digital, long-term stable sensor as a measuring element for measuring humidity. It is used in dust-free, unpolluted, non-aggressive air.

TECHNICAL DATA

Power supply:	24 V AC ($\pm 20\%$) 15...36 V DC
Power consumption:	< 1.1 VA / 24 V DC < 2.2 VA / 24 V AC
Sensors:	digital humidity sensor , small hysteresis, high long-term stability
Sensor protection:	plastic sinter filter, $\varnothing$ 16 mm, L = 35 mm, exchangeable (optional metal sinter filter, $\varnothing$ 16 mm, L = 32 mm)
Setting range:	5...95 % r.H.
Output:	potential-free changeover contact (24 V), 1 A ohmic load
Deviation, humidity:	typically $\pm 2.0\%$ (20...80 % r.H.) at +25 °C, otherwise $\pm 3.0\%$
Ambient temperature:	storage -35...+85 °C; operation -30...+75 °C, non-precipitating
Long-term stability:	$\pm 1\%$ per year
Enclosure:	plastic, UV-stabilised, material polyamide, 30 % glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016), enclosure cover for display is transparent!
Enclosure dimensions:	72 x 64 x 43.3 mm (Tyr 1 with display)
Electrical connection:	0.14 - 1.5 mm ² , via terminal screws
Cable gland:	M 16 x 1.5, including strain relief, exchangeable, max. inner diameter 10.4 mm
Protective tube:	PLEUROFORM™ , material polyamide (PA6), with torsion protection, $\varnothing$ 20 mm, NL = 235 mm, $v_{\max} = 30$ m/s (air) (on request, optional stainless steel , $\varnothing$ 16 mm)
Prozessanschluss:	by mounting flange, plastic (included in the scope of delivery)
Protection class:	III (according to EN 60 730)
Protection type:	IP 65 (according to EN 60 529) enclosure only!
Standards:	CE conformity, electromagnetic compatibility according to EN 61 326, EMC directive 2014 / 30 / EU
Display:	two-line display with illumination , cutout approx. 36 x 15 mm (W x H), for displaying actual humidit and for setting the target humidity
Displaying:	The 1st line of the display shows the relative humidity . The 2nd line shows on the left side the information regarding the switching status of the relay (as a circuit), as well as the switching value readout in % r.H. on the right side (adjustable using the set potentiometer). ○ Circuit, empty = relay in idle state ● Circuit, full = relay energised

FUNCTION

The relay output is triggered (contact 13-11 closed) if the humidity switchpoint is not reached and opens (contact 12-11 closed) in the event of a fault (power failure, condensation)

LED short pulses =
relay active → switchpoint not reached

LED long pulses =
relay inactive → switchpoint exceeded

SF-K

plastic sinter filter
(standard)



SF-M

metal sinter filter
(optional)



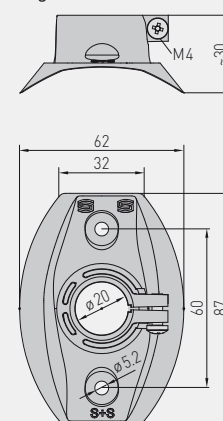
MFT-20-K

Mounting flange,
plastic



Dimensional
drawing

MFT-20-K



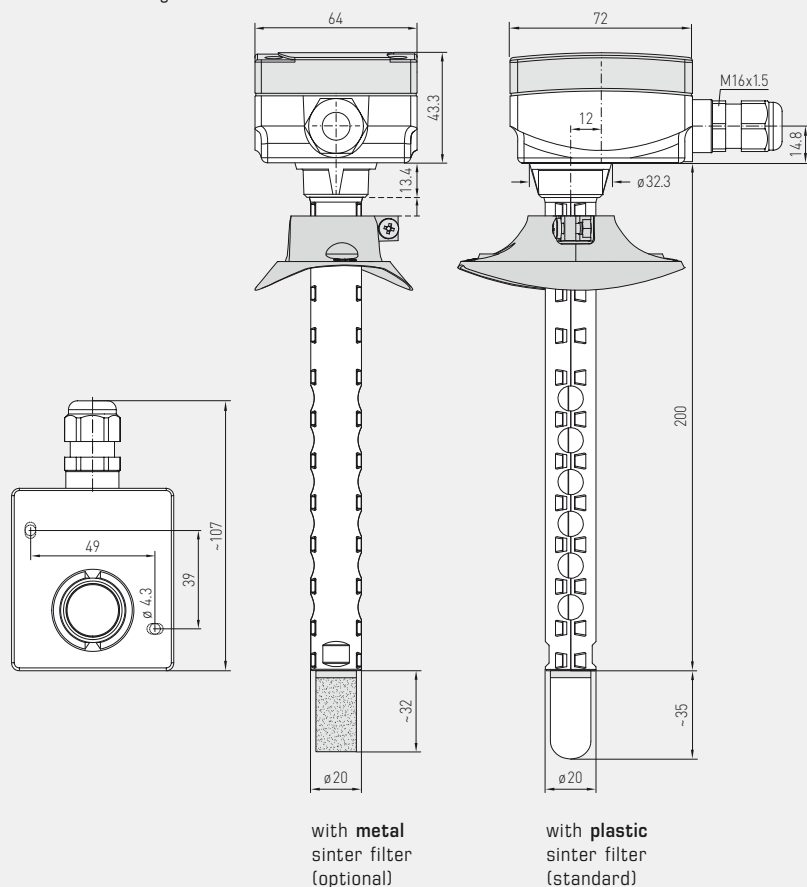
Display
standard

KH-40



Dimensional drawing

KH-40

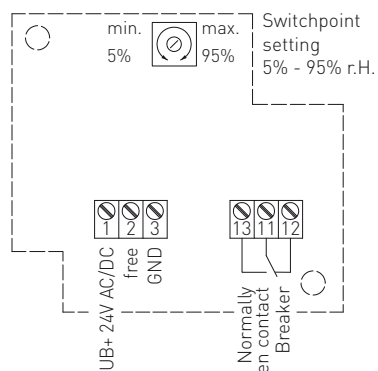


KH-40
with display and
plastic sinter filter
(standard)



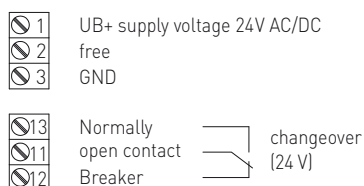
Schematic diagram

KH-40



Connecting diagram

KH-40



HYGRASREG® KH-40 – Duct hygrostats and humidity sensors ($\pm 2.0\%$), *Premium*

Type / WG01	Setting Range Humidity	Output	Steps	Display	Item No.
KH-40-U					
KH-40W TYR-1 DISPLAY	5...95% r. H.	1 x Changeover contact	one-step	■	1202-3065-0221-000
Accessories					
SF-M	Metal sinter filter, Ø 16 mm, L = 32 mm, exchangeable stainless steel V4A (1.4404)				7000-0050-2200-100