

JUMO GmbH & Co. KG
Delivery address: Mackenrodtstraße 14,
36039 Fulda, Germany
Postal address: 36035 Fulda, Germany
Phone: +49 661 6003-0
Fax: +49 661 6003-607
e-mail: mail@jumo.net
Internet: www.jumo.net

JUMO Instrument Co. Ltd.
JUMO House
Temple Bank, Riverway
Harlow, Essex CM 20 2TT, UK
Phone: +44 1279 635533
Fax: +44 1279 635262
e-mail: sales@jumo.co.uk
Internet: www.jumo.co.uk

JUMO Process Control, Inc.
8 Technology Boulevard
Canastota, NY 13031, USA
Phone: 315-697-JUMO
1-800-554-JUMO
Fax: 315-697-5867
e-mail: info@jumo.us
Internet: www.jumo.us



Hygrostats (capacitive) for HVAC applications

- for on-off control of relative humidity
- for domestic and office buildings
- for the control of ventilating systems
- in wall and duct versions
- output relay with changeover contact

Hygrostats are mainly used for simple control tasks in HVAC applications. An integral output relay with changeover contact removes the need for connecting cost-intensive electronics.

Based on high-quality capacitive humidity sensors, the principal features of these hygrostats are their excellent long-term stability, minimum hysteresis and high chemical resistance. In addition, they meet the ever increasing requirements concerning functionality, freedom from maintenance and reproducibility of the switching values.

The large setting range from 10 to 95 % rH is particularly advantageous. The switching differential can be set between 3 % and 15 % rH, via a second potentiometer. An externally accessible pushbutton is available as an option, and can be used to interrupt the humidity control for 24 hours under certain operating conditions. This operating state is displayed on an LED. After this time, the hygrostat will be in operation again.

The instruments, which are housed in attractive cases, are available from stock both as duct and as wall-mounting version.



Technical data

Humidity sensor	capacitive, with condensation
Measuring range for humidity	10 – 95 % rH
Setting range, switching point	10 – 95 % rH
Setting accuracy, switching point	± 5 % rH
Setting range, hysteresis	3 – 15 % rH
Setting accuracy, hysteresis	± 2 % rH
Output	relay with changeover contact
Switch rating	5A 30V DC or 5A 48V AC
Supply	24V DC/AC ± 15 %
Electromagnetic compatibility	to EN 50 081-1/EN 50 081-2 and EN 50 082-1/EN 50 082-2
Case	PC plastic
Protection	IP65, IP40 with 24-hour switch-off option
Ambient temperature	- 5 to +50 °C
Storage temperature	-30 to +60 °C
Weight	approx. 150g for wall version approx. 250g for duct version

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Accessories

Dust filter

Membrane filter

(standard) for low-level contamination in the HVAC area
 (indoor application)

Sintered bronze filter

for mechanical loads and very dusty atmospheres

Sintered stainless steel filter

extremely effective with mechanical and thermal loads, as well as with corrosive media

Mesh filter

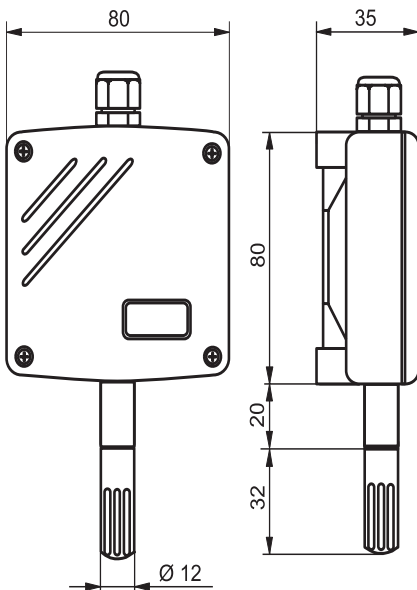
for high humidity, risk of condensation or rapidly changing humidity cycles

Checks for humidity sensors

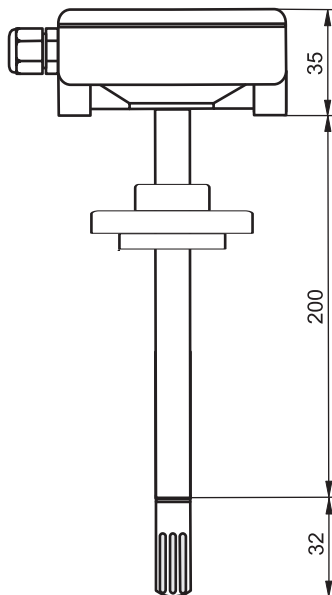
Humidity sensor checks can be carried out, to check the accuracy of humidity transducers. The checking procedure is described in detail in DIN 50 008, IEC Publication 260, ISO/R 483-1966.

The underlying principle is that a certain climate forms in the air above an aqueous, saturated salt solution. Sensor check sets with values of 33 %, 53 % and 76 % rH are available from stock.

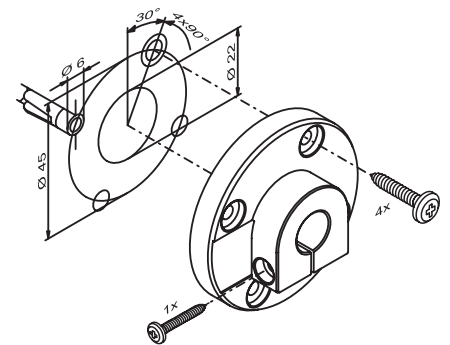
Dimensions



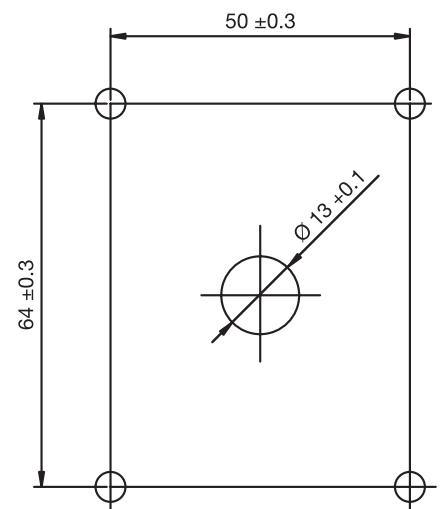
Wall-mounting version
 Type 907022/20



Duct version
 Type 907022/30



Mounting flange
 for duct version



Drilling template
 Wall/duct version

Connection diagram

Changeover contact



Relay output
 5 A 48 VAC or
 5 A 30 VDC

Supply
 24 VDC/AC ±15 %



Wall/duct version
 Type 907022/20, Type 907022/30

Dimensions in mm.

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Order details: Hygrostats (capacitive) for HVAC applications

		(1) Basic version	
		907022/20	Hygrostat, wall-mounting version
		907022/30	Hygrostat, duct version
		(2) Probe length	
X		20	20 mm
X	X	200	200 mm
		(3) Extra codes	
X	X	000	no extra code (standard)
X	X	825	switch-off with LED display

Order code **(1)** **(2)** **(3)**
 Order example 907022/20 - 20 - 000

Stock versions

(1)		(2)		(3)	Sales No.
907022/20	-	20	-	000	90/00389124
907022/30	-	200	-	000	90/00389125

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Order details: Accessories

(1) Basic version	
907022/90	Filter
907022/93	Check sets for humidity sensors
(2) Filter	
X	801 Membrane filter (standard)
X	802 Sintered bronze filter
X	803 Sintered stainless steel filter
X	804 Metal mesh filter
(2) Humidity sensor checks	
X	820 33% rH magnesium chloride
X	821 53% rH magnesium nitrate
X	822 76% rH sodium chloride

Order code -
 Order example 907022/90 - 801

Stock versions

(1)	-	(2)	Sales No.
907022/90	-	801	90/00388181
907022/90	-	802	90/00388182
907022/90	-	803	90/00388183
907022/90	-	804	90/00389114
907022/93	-	820	90/00332758
907022/93	-	821	90/00332759
907022/93	-	822	90/00332760