

HBC: Humidistats for duct mounting

How energy efficiency is improved

Enables switching of equipment as required for humidity regulation.

Areas of application

Monitoring and controlling relative air humidity by controlling fans, drying units and air humidifiers. For incorporation into ventilation duct or wall mounting.

Features

- Temperature-compensated humidity sensor
- Variable relative humidity as setpoint based on printed scale in % rh
- Housing lid made of thermoplastic, lead-sealable
- Housing and sensor tube made of thermoplastic reinforced with glass fibre
- HBC 112 offers the option of 3-point control or min./max. monitoring
- Fitting bracket with seal for duct and wall mounting

Technical description

- With single-pole change-over contacts and fixed switching difference X_{Sd}
- Underside of housing with 30 mm \varnothing sensor tube made of thermoplastic reinforced with glass fibre
- HBC 112 for 3-point control or min. and max. monitoring and internally adjustable switching range X_{Sh}
- Screw terminals for wires of up to 1.5 mm²
- Cable inlet for Pg 11
- Switching capacity: up to 5 A

Type	Setpoint range	Switching diff.	Switching range	Number of switches	Weight kg
	X_S % rh	X_{Sd} % rh	X_{Sh} % rh		
HBC 111 F001	15...95	4	–	1	0.33
HBC 112 F001	15...95	4	6...25	2	0.35
Contact rating:	maximum minimum	5 (3) A, 250 V~ 100 mA, 24 V compensated	Permissible ambient temp. without dew formation		0...70 °C –25...70 °C
Temperature influence		–1.5% rh/a	Degree of protection		IP 30 (EN 60529)
Long-term stability		$\pm 5\%$ rh	Protection class		II (IEC 60730)
Setting accuracy		55% rh, 23 °C	Wiring diagram	HBC 111 HBC 112	A01500 A04334 M04347
Humidity calibration at			Dimension drawing		MV 505321 BA 505435
Time constant ($v = 0.2$ m/s)		approx. 3 min	Fittings instructions		
Permissible air speed		10 m/s	Operating instructions		

Accessories

- 0303538 001** Set for increasing the degree of protection to IP 55 (housing cover incl. transparent cap for setpoint knob; seal; one Pg 11 cable screw fitting; one Pg 11 plug)
- 0370560 011** One Pg 11 cable screw fitting

Operation

HBC 111 (one micro-switch)

When the relative humidity rises above the setpoint X_S , the contacts switch over from 1-2 to 1-3.

The contacts revert to their original position when the humidity has fallen by the amount of the fixed switching difference (X_{Sd}).

HBC 112 (two micro-switches)

When the relative humidity rises, the first switch switches over from 1-2 to 1-3. When the setpoint X_S has been reached, the second switch switches over from 1-5 to 1-6.

When the relative humidity falls by the switching range X_{Sh} , the first switch changes back to 1-2. The switching range X_{Sh} can be set internally with a screwdriver.

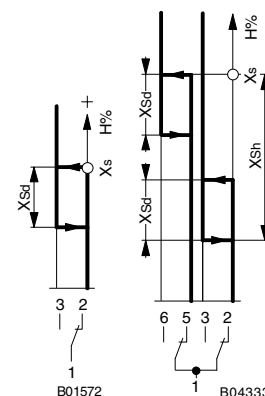
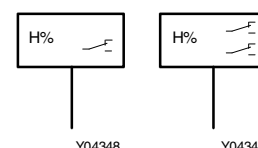
Rapid changes in humidity also cause the switching point to be temporarily shifted.

Engineering and installation notes

Fitting position: sensor tube can be anywhere between horizontal and vertical (facing downwards). The sealing set (accessory 0303538) increases the degree of protection to IP 55.



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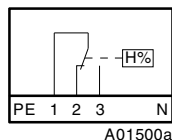


Additional technical data

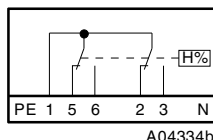
CE conformity as per	
EMC Directive 2006/95/EC	EN 60730-1/ EN 60730-2-13
EMC Directive 2004/108/EC	EN 61000-6-1/ EN 61000-6-2
	EN 61000-6-3/ EN 61000-6-4

Wiring diagrams

HBC 111



HBC 112



Dimension drawings

