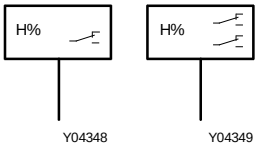
HBC: Humidistats for duct mounting

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

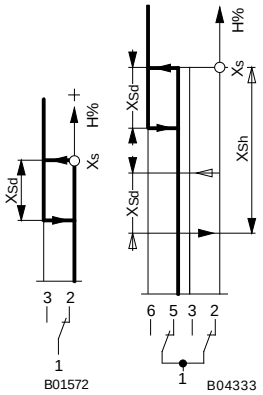
Technical description
- With single-pole change-over contacts and fixed switching difference X_{Sd}
- Underside of housing with 30 mm ø sensor tube made of thermoplastic reinforced with glass fibre
- HBC 112 for 3-point control or min. and max. monitoring and internally adjustable switching range X_{Sh}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



Type	Setpoint range X_S % rh	Switching diff. X_{Sd} % rh	Switching range X_{Sh} % rh	Number of switches	Weight kg
HBC 111 F001	15...95	4	–	1	0.33
HBC 112 F001	15...95	4	6...25	2	0.35

Contact rating:	maximum	5 (3) A, 250 V~
	minimum	100 mA, 24 V
Temperature influence		compensated
Long-term stability		–1.5% rh/a
Setting accuracy		± 5% rh
Humidity calibration at		55% rh, 23 °C
Time constant (v = 0.2 m/s)		approx. 3 min
Permissible air speed		10 m/s

Permissible ambient temp.		0...70 °C
without dew formation		–25...70 °C
Degree of protection		IP 30 (EN 60529)
Protection class		II (IEC 60730)
Wiring diagram	HBC 111	A01500
	HBC 112	A04334
Dimension drawing		M04347
Fittings instructions		MV 505321
Operating instructions		BA 505435



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.

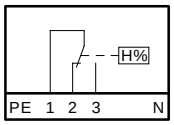
Engineering and installation notes
Fitting position: sensor tube can be anywhere between horizontal and vertical (facing downwards). The sealing set (accessory 0303538) increases the degree of protection to IP 55.

Additional technical data

CE conformity as per	
Low-Voltage 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



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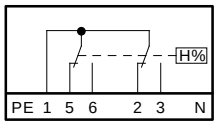
HBC 112



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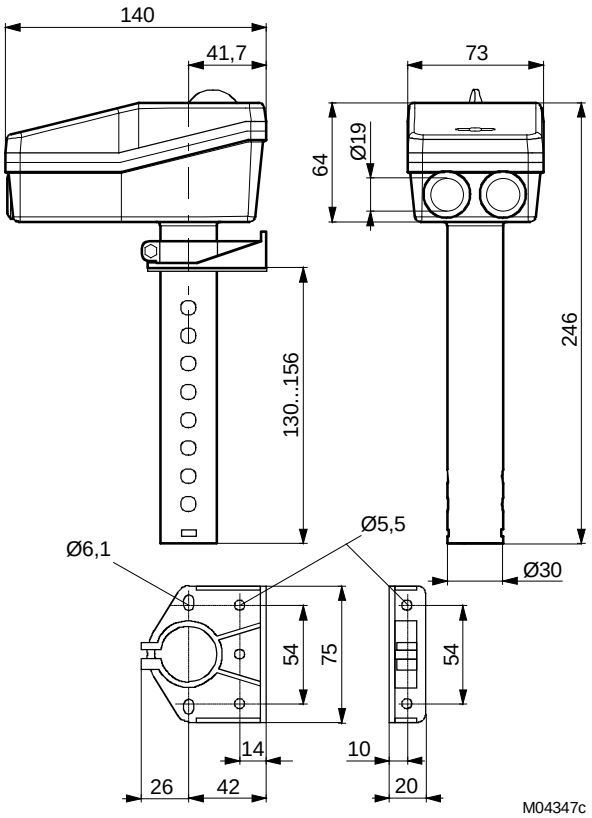
Dimension drawings



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