HMH/HPH

Humidistat, 1, 2 step or proportional, for duct or wall mounting

HMH / HPH is a series of electromechanical humidistats for control of humidifying and/or dehumidifying in HVAC systems.

- One or two steps
- Change-over contact, 250 V AC 10 A
- Proportional output 148 or 1000 Ohms.
- Excellent accuracy and reliability
- For duct or wall mounting
- Protection class IP54

Construction

The humidistat utilises human hair as its sensor medium. The hair stretches as the humidity increases and shrinks as the humidity decreases. These changes are then transmitted to a micro switch (or, optionally, to two switches). In case of the HPH, the changes are transmitted to a pin on a potentiometer.

The setpoint switch affects the position of the micro switches in relation to the hair element. The setpoint can be set at between 10 and 100% RH.

As the contacts are of the change-over type, the humidistat can control both humidification and dehumidification. This tried and tested construction, employing only a few movable parts, offers a high degree of reliability and accuracy.

2 step humidistat

This model has two micro switches. The step differential between them can be set by means of an adjustment screw.

As the contacts are of the change-over type, the humidistat can control both humidification and dehumidification.

Proportional humidistat

HPH148 and HPH1000 are humidistats with proportional resistance output.

Depending on the setpoint chosen and the current humidity, these give output signals of 0 to 148 Ohms and 0 to 1000 Ohms for control of installations intended for this type of signal.

Mounting

HMH/HMH2/HPH can be mounted in a ventilation duct or on a wall. The humidistat comes supplied with a flange which makes it suitable for both positions.

Calibration

The humidistats are calibrated at the factory before delivery to the customer, but should be precision-calibrated after installation to ensure optimal results. After this, annual checks and re-calibration are recommended.

Maintenance

The hair element should be dusted off with a soft brush once a year. Do not rinse the hair element in water as this changes the calibration point.

For further information concerning maintenance, see instructions supplied on delivery.

Typical applications

Can be used to control a humidifier or a dehumidifier or for on/off controlling of a fan. Can also be used to alarm when the humidity exceeds or falls below a pre-set level.

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Models

HMH	1 step, change-over contact
HMH2	2 step, change-over contacts
HPH148	Proportional, 0-148 Ohm
HPH1000	Proportional, 0-1000 Ohm

Technical data

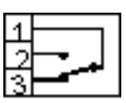
Relay contact data	10 A, 250 VAC resistive at 25°C ambient 8 A, 250 VAC resistive at 60°C ambient Not suitable for DC circuits
Material	Housing: Extruded aluminum (brown) Plastic components: Self-extinguishing Macrolon (white).
Ambient temperature	Sensor -20...70°C Housing -20...60°C
Mounting	Via universal bracket, for both wall or duct mounting
Cable gland	PG11
Weight	0.6 kg
Form of protection	IP54
CE	**Low Voltage Directive (LVD) standards:** This product conforms to the requirements of the European Low Voltage Directive (LVD) 2006/95/EC through product standards EN 60730-1 and EN 60730-2-13. **EMC emissions & immunity standards:** This product conforms to the requirements of the EMC Directive 2004/108/EC through product standards EN 61000-6-3. **RoHS:** This product conforms with the Directive 2011/65/EU of the European Parliament and of the Council.
Setpoint	10...100%RH
Hysteresis	3%RH at 45%RH
Step differential (HMH2)	0...25%RH at 45%RH
Proportional band (HPH148, HPH1000)	7%RH

Spare parts and accessories

1608	Hair element, length182 mm
1609	Micro switch
375	Protection tube. Used when humidistat is placed in ducts where air flow exceeds 10 m/s

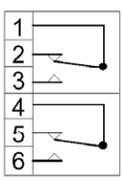
Wiring and dimensions

HMH



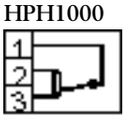
The contact between terminals 1 and 2 closes when the humidity exceeds the setpoint value.

HMH2

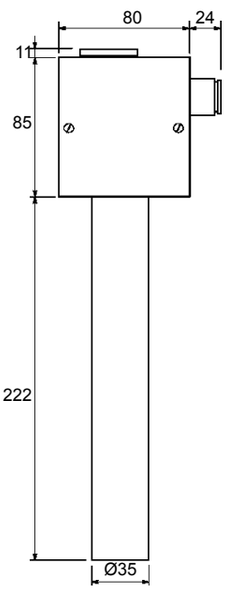


On the HMH2, the contact betweeen terminals 1 and 3 closes when the humidity exceeds the setpoint value. When humidity continues to rise and exceeds the setpoint value for step 2, the contact will close mellan terminals 4 and 6.

HPH148
HPH1000



As the humidity increases, resistance between terminals 1 and 3 will increase as resistance between terminals 1 and 2 will decrease.



in mm

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