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Product info sheet
Room humidistat

with Polyga® measuring element
with adjusting knob inside the housing

HGMini
HGMini-i



Type Survey

Type	Order no.	Type of contact
HGMini	42042017	changeover contact: 1 x max. 5 A
HGMini-i	42042018	changeover contact: 1 x max. 5 A with internal scale
HGMini	42047017	changeover contact (gold plated): 1 x max. 100 mA
HGMini-i	42047018	changeover contact (gold plated): 1 x max. 100 mA with internal scale
HGMini	4204701700000110	changeover contact (gold plated, IP67): 1 x max. 100 mA
HGMini 10A	42043017	changeover contact: 1 x max. 10 A
HGMini-i 10A	42043018	changeover contact: 1 x max. 10 A with internal scale

Technical Data

measuring element .....Polyga®-measuring element, water resistant
control range ..... 40 ... 90 % RH
lifetime ..... > 6.000 breaking cycles

microswitch with silver contact
max. breaking capacity
ohmic load, dehumidifying..... 5 A 250 V AC
ohmic load, humidifying ..... 2 A 250 V AC
inductive load (power factor > 0,8) ..... 1 A 250 V AC
min. switching current ..... 100 mA[1)]

microswitch with silver contact up to 10 A
max. breaking capacity
ohmic load, dehumidifying..... 10 A 250 V AC
ohmic load, humidifying ..... 3 A 250 V AC
inductive load (power factor > 0,8) ....1,5 A 250 V AC
min. switching current ..... 100 mA[1)]

microswitch with gold contact
max. breaking capacity ..... 100 mA 250 V AC
min. switching current .....1 mA[1)]

[1)] not relevant when switching high resistance loads (>10 kOhm) e.g. logic levels

Please consider the notes on voltage.

influence of temperature
ref. to 23 °C ..... ≤ ± 0.2 % RH/K
typ. response time t_{50} at v = 2 m/s ..... 1.2 min
allowable ambient temperature ..... 0 ... 60 °C
air-speed ..... 0.2 ... 8 m/s
installation altitude ..... ≤ 4.000 m above sea level
fixing .....slots in housing base
mounting position ..... slots right-angled to wind direction
contacting ..... connecting terminals
action 1.C.L
rated impulse voltage ..... 4 kV
ball indentation test for temperature ..... 92 °C
housing.....solid plastic, light grey
protective system IP20
degree of pollution 2
dimensions..... 85x55x36 mm
weight ..... approx. 60 g

Description of the humidistat

The humidity measuring element which is manufactured by Galltec under the name Polyga®, consists of several plastic fabric bands each with 90 individual fibres with a diameter of 3 µm each.The fibres are provided with hygroscopic characteristics by a special process. The measuring element adsorbs and desorbs moisture. The effect, swelling predominantly in longitudinal direction, is transmitted via a lever system to a microswitch with a small switching distance. The measuring element responds to the change in air humidity. It is possible to adjust the lever system by setting the adjustment knob so that the microswitch is actuated when the set air humidity is reached.

Application

The humidistat type **HG Mini** is used as an on-off controller to control the relative air humidity. It can be used to control air humidifiers and dehumidifiers in offices and computer rooms. Other areas of use are storage of foodstuffs and luxury foods, cooling rooms for fruit and vegetables, greenhouses for gardening use, the textile industry, the paper and printing industry, the film industry and hospitals.

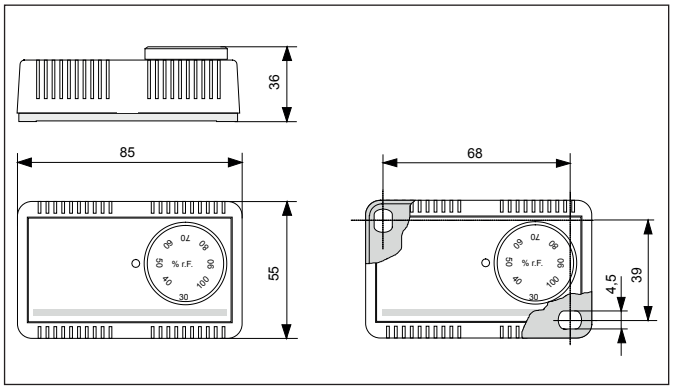
The room humidistat **HG Mini-i** is designed so that the adjusting knob and the scale are inside the housing. This makes unauthorized manipulation by third parties more difficult.

applied directives / standards
low-voltage directive 2014/35/EU
EMC directive 2014/30/EU
DIN EN 60730-1
DIN EN 60730-2-13

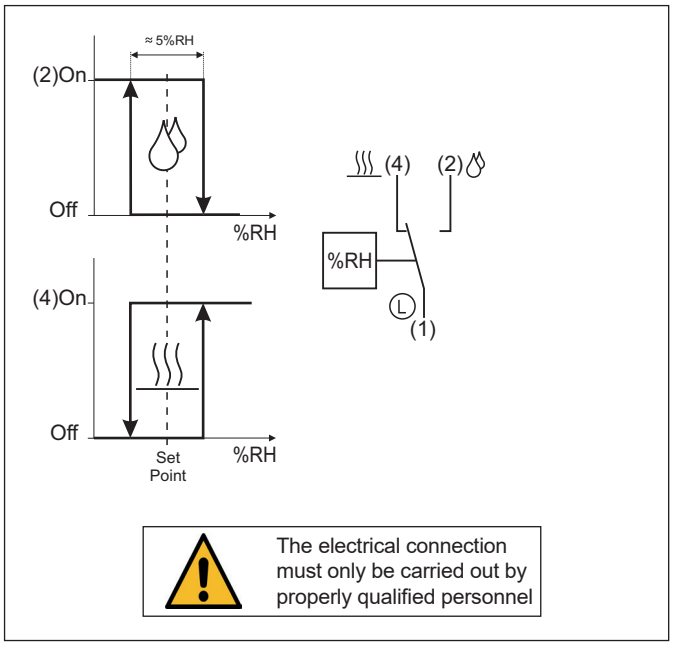
Notes on voltage
The measurement location of the humidity controller should be selected such that there is no build-up of condensate on or in the device. There is a risk of voltage arcing in the event of water condensation on the microswitch or connecting terminals which might destroy the controller. Particularly operating with a voltage higher than 48 V may endanger people. The humidity controller should be used up to a maximum of 95 % RH.

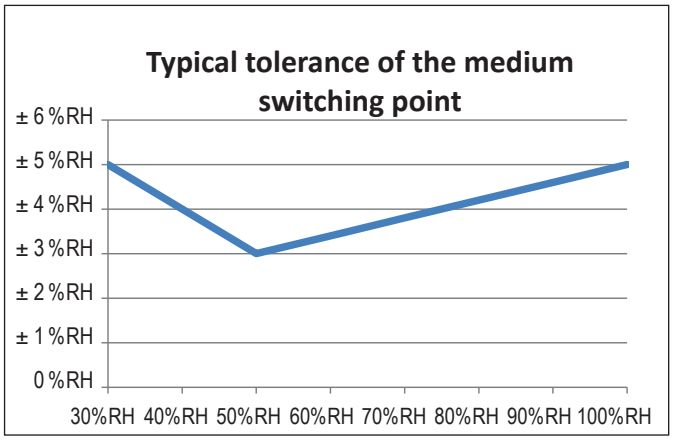
This information is based on current knowledge and is intended to provide details of our products and their possible applications. It does not, therefore, act as a guarantee of specific properties of the products described or of their suitability for a particular application. It is our experience that the equipment may be used across a broad spectrum of applications under the most varied conditions and loads. We cannot appraise every individual case. Purchasers and/or users are responsible for checking the equipment for suitability for any particular application. Any existing industrial rights of protection must be observed. The perfect quality of our products is guaranteed under our General Conditions of Sale. Issue: September 2025 hgmini. Subject to modifications.

Dimensions diagram



Connection diagram





1-point-adjustment at 48 %RH/23 °C
Long-term drift: ≤ ± 1 %RH p.a.

Typical switching differential with typical tolerance

Setpoint value humidity	Switching differential	Tolerance
50 %RH	5 %RH	± 1,5 %RH
60 %RH	4 %RH	± 1,5 %RH
70 %RH	4 %RH	± 1,5 %RH
80 %RH	3 %RH	± 1 %RH
90 %RH	3 %RH	± 1 %RH

Mounting

has to be carried out by properly qualified personnel

- The humidistat must not come into direct contact with water, e.g. splashed water when cleaning the climatic chamber etc.
- The mounting location should be chosen so that a representative measurement of the air humidity can be guaranteed, i.e. the humidity readings at the mounting location should correspond to those in the room as far as possible.
- The humidistat should be exposed to the flow of air.
- When mounting the humidistat on a patress, avoid external air getting onto the humidity measuring element of the humidistat by sealing it appropriately.

The fan shaped measuring element is accomodated inside the housing and must be protected against coarse dust, dirt and water. The humidistats are designed for pressureless systems. The installation location must be selected so that condensed water cannot enter the inside of the housing. The installation position preferably with ventilation slots at right-angles to wind direction.

Cleaning instruction

1. Disconnect the device from the power supply

2. Remove the cover. Clean the cord shaped measuring element using a soft brush and clean water. Do not use a detergent as it cannot be dispersed.

It is important that no water is allowed to get onto the other components, particularly microswitches, terminals or printed circuit boards.

3. Air drying. Do not use warm or hot air (hair dryer).

Maintenance

The measuring element is maintenance-free in pure ambient air. Aggressive media containing solvent can cause measuring errors depending on the type and concentration. Deposits which eventually form a water-repellent film over the measuring element are harmful (such as resin aerosols, lacquer aerosols, smoke deposits etc.).

Physical influence of temperature on the relative air humidity

at a temperature fluctuation of ± 1 K referred to various room temperatures.

	10 °C	20 °C	30 °C	50 °C
10 %RH	± 0,7 %RH	± 0,6 %RH	± 0,6 %RH	± 0,5 %RH
50 %RH	± 3,5 %RH	± 3,2 %RH	± 3,0 %RH	± 2,6 %RH
90 %RH	± 6,3 %RH	± 5,7 %RH	± 5,4 %RH	± 4,6 %RH

It is thus of extreme importance that the temperature is constant for measurements of the relative air humidity. The air must be homogenous.

Contact with the inner parts of the humidistat nullifies the warranty.