

# Hygrostat

Instruction for use 1.0509.60.000 / 1.0509.70.000



## General description

Hygrostats control and limit the humidity of air in channels, chambers and industrial rooms. The humidity measuring element will change its length in case of increasing or decreasing air humidity and initiates a micro switch to open or close a circuit.

**Model 1.0509.60.000** controls a humidifier or a dehumidifier respectively.

**Model 1.0509.70.000** controls a humidifier and a dehumidifiers or two dehumidifiers respectively.

## Mode of Operation

The humidity measurement is effected by means of a maintenance-free measuring element of synthetic fibre, which changes its length depending on the humidity. This change in length is transmitted to a micro switch via switch lever. The switching point is set from the front side on a scale through a selector switch.

At the Hygrostat (for use in ducts) with two switches 1.0509.70.000 the intervals of both switches are set via selector screw. The switching point of the second switch is 5 to 25 % below that one of the first switch.

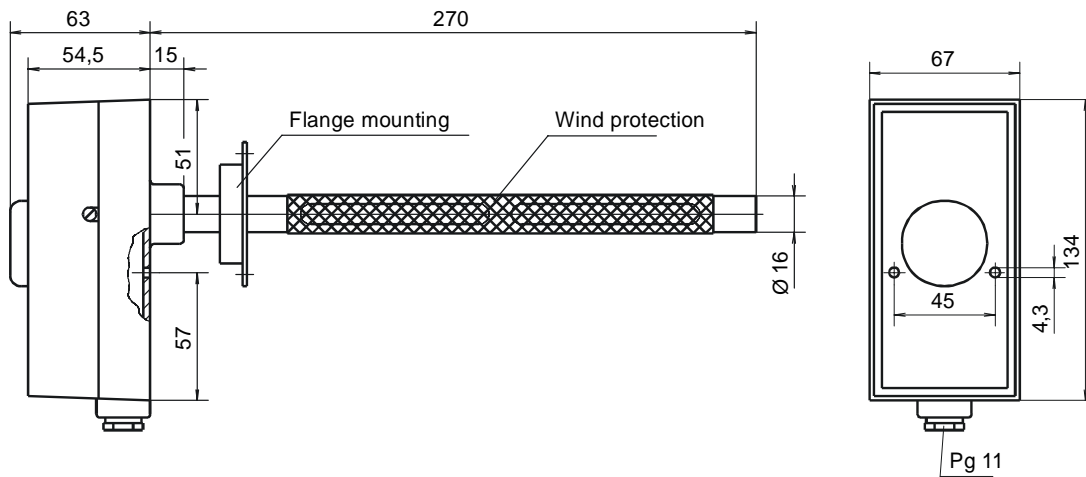
## Models

Order-no.	Type of contact	Control function
1.0509.60.000	one-pole change over	two point controlling
1.0509.70.000	double-pole change over	three point controlling

## Technical data

Control range	30...90 % rel. humidity
Switch difference	$\pm 3$ % rel. humidity
Switch differential	5 ... 25 % rel. humidity
Measuring element	Synthetic, maintenance free
Stem	$\varnothing$ 16 mm
Stem length	270 mm
Ambient temperature	0 ... 70°C
Contact rating , max.	250 V AC ; 10 A ; 1000 VA max. 24 V in humidity rooms !!!
Weight	0,6 kg

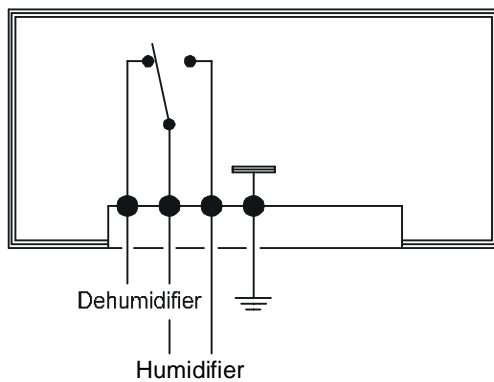
## Dimensions



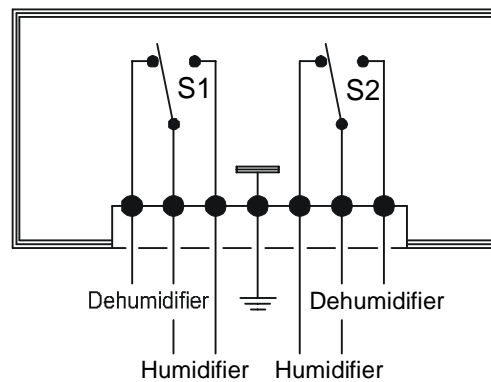
Mounting flange and wind shield are not included in the standard extent of delivery.

## Connection Diagram

1.0509.60.000



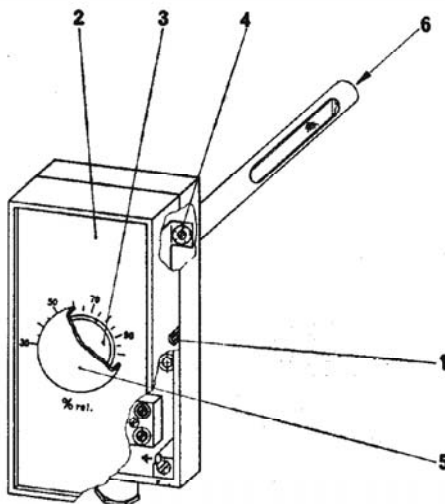
1.0509.70.000



**Attention:** By use with controllers and / or warning systems it is recommended for safety reason to install on additional control or alarm systems..

## Mounting

1. Loosen the two screws (1) and remove the housing (2).
2. Fasten the instrument horizontally with the enclosed screws and plugs.
3. Clamp the cable (flexible max. 1,5 mm<sup>2</sup>) according to the chosen diagram of connection; check the connection by turning the rotary knob (3).
4. With model no. 1.0509.70.000 please set the required switching difference (4) before using.
5. Press the antidim cap (5) out of the housing (2). Fasten the housing again by means of the screws (1).
6. The black line of the rotary knob (3) has to be adjusted on the scale division to the desired air humidity.
7. Press the antidim cap (5) again into the housing (2).
8. The Hygostat is now ready for use and controls automatically the adjusted air humidity.



In case of airflow of more than 3 m/s in the measuring room it is advisable to use an additional wind shield which is to be put over the opening of the immersion tube in order to protect the measuring element.

A mounting flange to be delivered separately is used where the immersion tube does not project with full length into the measuring room. Please take care that the tube openings remain complete in the airflow.

## Maintenance

The instrument has been adjusted to a humidity between 30 and 95% with a tolerance of about  $\pm 3\%$ . The spring control which is audible when the rotary knob (3) is turned to the left corresponds to the adjustment setting. If you compare this to the measured value of an aspiration-Psychrometer at the same location and you notice that the measured value is different, you can reset the Hygostat by means of the setting screw (6) marked in red at the immersion stem. (Please note: maximum re-setting 3 rotations to the right and left). We recommend employment of a wind protection device in wind velocities exceeding 5 m/s. An additional mounting flange (moveable with the flange plate) can be supplied at extra charge.



## **ADOLF THIES GmbH & Co. KG**

Hauptstraße 76      37083 Göttingen Germany  
P.O. Box 3536 + 3541      37025 Göttingen  
Phone ++551 79001-0      Fax ++551 79001-65  
[www.thiesclima.com](http://www.thiesclima.com)      [info@thiesclima.com](mailto:info@thiesclima.com)



- Alterations reserved -