

Product info sheet

Condensation detector to prevent the building of condensed water

FAS 250VAC

Order no. 42081012



Description of the detector

The hygrostat module on PCB with Polyga® measuring element is arranged on a base plate so that the measuring element is in an immediate proximity to the base plate. Protected by the housing, relative humidity near to dew point can form inside. The base plate is adjacent to the cooling pipe and transfers the cold to the measuring element. The set point can be set inside and has to be adapted to the local conditions. The microswitch of the hygro module switches a changeover contact potential-free. The FAS 250VAC does not require a supply voltage resp. auxiliary energy.

Adjusting the switching point

It is important to adjust the correct switching point for the equipment. A set point value that is too high can cause dew to form as the conditions at the measuring point are not constant. The measuring point of the humidity controller should be selected such that there is no build-up of condensate on or in the device. Tests have shown that good results are achieved at a switching point of 80%rh. The set point can be adapted to the equipment. Open the covering cap for that purpose and finely adjust the set point.

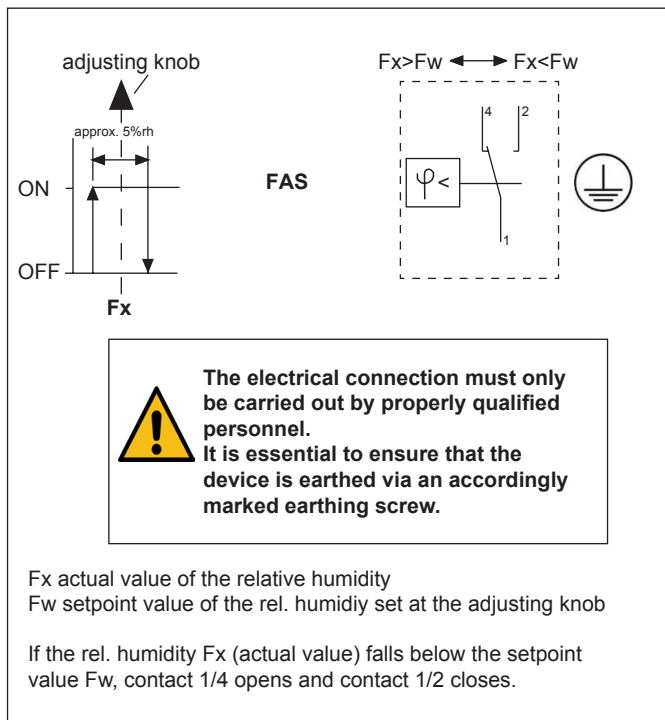
Notes on voltage

The measurement location of the humidity controller should be selected such that there is no build-up of condensate on or in the device. This applies particularly for operation with a voltage higher than 48V. If the voltage is higher, there is a risk of voltage arcing in the event of water condensation on the microswitch or connecting terminals which might destroy the controller.

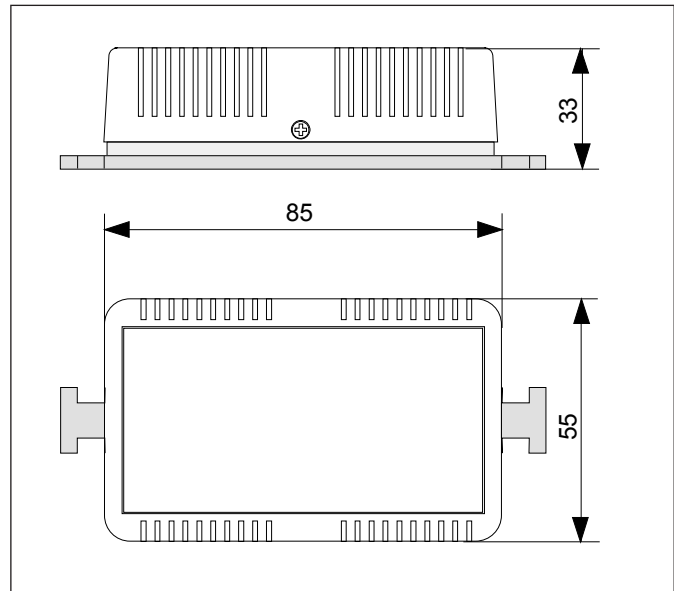
Technical Data

range of operation 50...90%rh
 breaking capacity
 max. 250VAC and
 0.1 ... 5A ohmic load for dehumidifying
 0.1 ... 1A for inductive load (power factor >0.8)
 lifetime > 6.000 breaking cycles
 allowable ambient temperature 0...60°C
 air-speed 0.2...8 m/s
 installation altitude ≤ 4.000m above sea level
 influence of temperature
 ref. to 23 °C ≤ +/- 0.2 % r.h. / K
 typ. response time t_{50} at v=2m/s 1.2min
 mounting position as you like
 contacting connecting terminals
 purpose of sensing control humidity sensing control
 nominal cross-sectional area of the conductors.....
 up to 2.5 mm² for fixed wiring conductors (single wire)
 up to 1.5 mm² for flexible cord conductors (fine-stranded)
 type of protective earth conductor bow terminal
 action 1.C.L
 degree of pollution 3
 rated impulse voltage 4kV
 ball indentation test for temperature 92°C
 applied directives / standards
 low-voltage directive 2014/35/EU
 EMC directive 2014/30/EU
 DIN EN 60730-1:2012-10
 DIN EN 60730-2-13:2008-09
 protective system IP20
 measuring element
 Polyga®-measuring element, water resistant
 dimensions 85x55x33mm
 weight approx. 92 g

Connection diagram

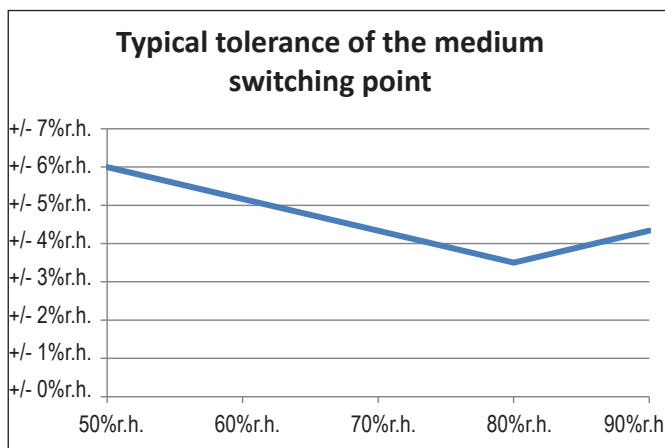


Dimensions diagram



Notes on use

If condensed water formation is to be monitored in a room, the most humid position should first be established. The coldest position does not necessarily have to be the most humid position (see hx diagram). Please ensure that any changes in the room do not result in a different, more humid spot. The condensation detector FAS 250VAC must be mounted in such a way that there is good heat contact with the selected position. Please note also that any condensate must not get into the interior of the housing. Attachment is made by using the supplied binders which can be used for pipes with diameters of up to 50mm. The housing must not be exposed to any outside heat as this may cause incorrect measurements. The mounting location should be chosen so that a representative measurement of the air humidity can be guaranteed, i.e. the ambient air must be able to reach the measuring element within the casing without obstacles. The FAS 250VAC should be exposed to the flow of air with a minimum air speed of 0.2 m/s.



1-point-adjustment at 80 % r.h. / 23 °C
 Long-term drift: ≤ ±1%r.h. p.a.

Typical switching differential with typical tolerance

Setpoint value humidity	Switching differential	Tolerance
50 % r.h.	5 % r.h.	+/- 1,5 % r.h.
60 % r.h.	4 % r.h.	+/- 1,5 % r.h.
70 % r.h.	4 % r.h.	+/- 1,5 % r.h.
80 % r.h.	3 % r.h.	+/- 1 % r.h.
90 % r.h.	3 % r.h.	+/- 1 % r.h.

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.).

No warranty is provided for defects and damage caused either by improper use or by any interference with internal components.

Contact with the measuring mechanics of the device nullifies the warranty.