

## Humidity add-on switch to monitor the formation of condensed water

**FAS**



### Adjusting the break point

It is important to set the correct break point for the equipment. A setpoint 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 break point of 80%rh. The break point can be adapted to the equipment. Open the covering cap for that purpose and finely adjust the break point.

### Type Survey

Type	Order no.	Contact type
FAS	42088012	changeover contact with silver contacts
FAS	42087012	changeover contact with gold contacts

### Description of the switch

The hygrostat module on PCB with Polyga® measuring element is arranged on an aluminium base plate such that the measuring element is immediately next to the base plate. Protected by the housing, relative humidity near to dew point can form in the interior. The aluminium plate is adjacent to the cooling pipe and transfers coldness to the measuring element. The break point can be adjusted in the interior. The break point can be adapted accordingly to the local conditions. The microswitch of the hygro module switches a changeover contact potential-free. The standard switch is lined with silver contacts. Optionally there is a microswitch with gold contacts. The FAS does not require a supply voltage resp. auxiliary energy.

### Technical Data

range of operation ..... 50...95%rh  
measuring accuracy ..... +/-3%rh  
switching difference  
(microswitch) ref. to 50%rh ..... approx. 4%rh

breaking capacity  
max. 48VAC and  
0,1 ... 5A ohmic load for dehumidifying  
0,1 ... 2A ohmic load for humidifying  
0,1 ... 1A for inductive load with  $\cos \phi = 0.7$   
lifetime ..... 100.000 breaking cycles

#### optional microswitch with gold contacts

breaking capacity  
max. 48 VAC and  
1...100 mA

allowable operating temperature ..... 0...60°C  
temperature coefficient ....

..... -0.2%rh/K rel. to 20°C and 50%rh  
half-life period at  $v=2\text{m/sec}$  ..... 1.2min  
mounting position ..... preferably ventilation slots at

right-angles to wind direction  
contacting ..... connecting terminal in the case  
electromagnetic compatibility

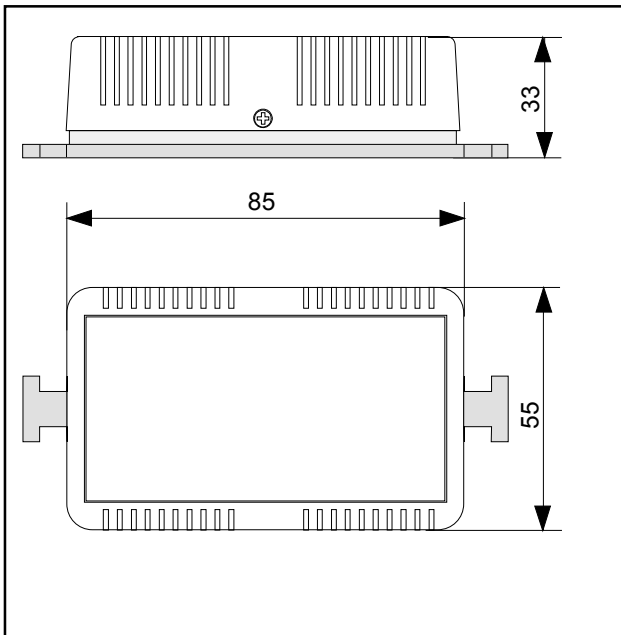
directive ..... 2006/95/EG  
applied standards

DIN EN 60730-1 ..... issue 12/05  
DIN EN 60730-2-13 ..... issue 09/02

housing ..... solid plastic, light grey  
protective system ..... IP20  
measuring element .....

..... Polyga®-measuring element, water resistant  
dimensions ..... 115x70x47mm  
weight ..... approx. 80 g

**Dimensions diagram**

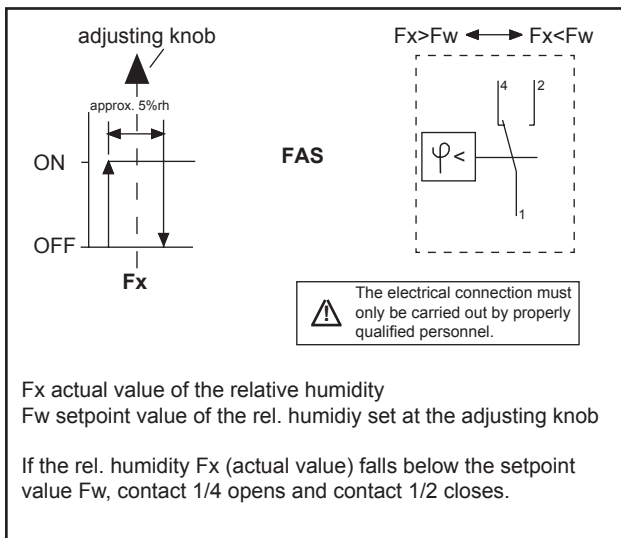


**Notes on use**

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). It should also be borne in mind that any changes in the room cannot result in a different, more humid spot. The FAS humidity add-on switch 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 should be exposed to the flow of air with a minimum air speed of 0.2 m/s.

**Connection diagram**



**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. As with almost all humidity measuring elements, 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.