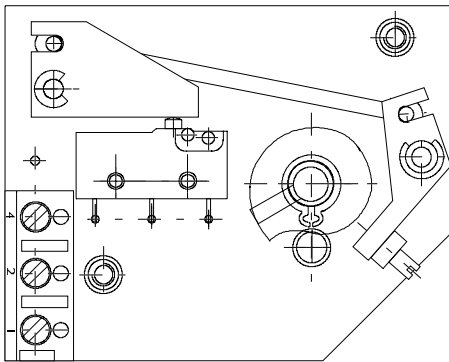



## Hygro module HM120

measuring range 30...100%rh



HM120



 The electrical connection must only be carried out by properly qualified personnel.

### Maintenance

The measuring element is maintenance-free in pure ambient air. Aggressive media containing solvent can cause measuring errors and failure, depending on the type and concentration. As with almost all humidity measuring elements, deposits which eventually form a water-repellent film over the sensor are harmful. Such substances are resin aerosols, lacquer aerosols, smoke deposits etc.

### Notes on voltage

The measurement location of the module 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. In the case of voltage below 48V, the humidity controller can be used up to 100%RH.

### Application

The hygro module **HM120** is a humidity-dependent switch that can be fitted in equipment such as hygrometers, humidifiers, dehumidifiers, ventilating fans, driers and many other items of equipment. The module represents an on-off controller with changeover contact. The switch connection is via a connecting terminal, but can also be supplied ready-made with cable connections. Several versions of different lengths are available as a shaft. Protection of the module is of the IP00 type.

### Description of the hygrometer

The humidity measuring element, produced by Galltec under the name Polyga<sup>®</sup>, consists of several synthetic fabric bands each with 90 individual fibres with a diameter of 3µm. A special process gives the fibre hygroscopic properties. The measuring element absorbs and desorbs humidity. The swelling effect, which is predominantly in a lengthways direction, is carried via a suitable lever system to a microswitch with an extremely small switching path. The measuring element reacts quickly and precisely to the change in air humidity. By adjusting the set value control knob, the lever system is engaged so that when the set air humidity is reached the microswitch is activated.

The fan shaped measuring element should be protected from dust, dirt and water. The hygro module is designed for pressureless systems.

### Technical Data

scale range	30..100%rh
measuring accuracy	±3.0%rh
range of operation	35..95%rh
switching difference (microswitch) ref. to 50%rh	.....approx. 4%rh

#### microswitch:

breaking capacity, *maximum load*

ohmic load "humidify" ..... 2A, 230V AC

"dehumidify" ..... 5A, 230V AC

inductive load\*  $\cos \varphi = 0.7$  ..... 1.0A, 230V AC

breaking capacity, *min* ..... 100mA, 20V DC / AC

lifetime ..... 100.000 cycles

max. voltage ..... 250V AC 50Hz

**Please observe the notes on voltage.**

#### optional: microswitch with gold contact:

breaking capacity, *max* ..... 100mA, 48V AC

breaking capacity, *min* ..... 1mA, 5V

allowable ambient temperature ..... 0...60°C

medium temp. coefficient ..... -0,2%/K relative to 20°C and 50%rh

allowable air speed ..... 15m/sec

half-time at v=2m/sec ..... 1.2min

fixing ..... only with plastic screws M3

mounting position ..... optional

contacting ..... connecting terminals

electromagnetic compatibility EMC

immunity ..... EN 50 082-2

emission ..... EN 50 081-2

protective system ..... IP00

measuring element ..... Polyga<sup>®</sup>-measuring element, water resistant

dimensions ..... 59x47x33mm

weight ..... approx. 30g

"subject to technical modifications"

\* *check for suitability!*