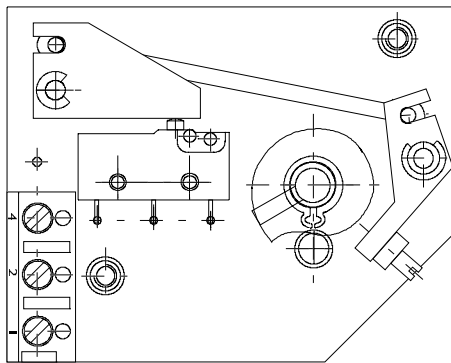


HM120



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.

Note

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. The humidity controller should not be used in aggressive media.

Hygro module HM120

measuring range 30...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 hygromat

The humidity measuring element, produced by Galltec® under the name „Polyga®“, consists of several synthetic fabric bands each with 90 individual fibres with a diameter of 0.003mm. 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

measuring range	30..100%rh
measuring accuracy	±3.0%rh
working range	35...100%rh
switching difference (microswitch) ref. to 50%rh 4%rh approx.
max. voltage	250 V AC
!!Caution: 250 V only on condition that there is no build-up of condensate in the measuring head - otherwise voltage arcing may result.	
switching capacity, <i>maximum load</i>	
ohmic load	5A 230V AC (lifetime 10.000 cycles)
Inductiv load* cos j = 0.8	0.2A, 230V AC
Inductiv load* L/R=3ms	1A to 50V DC
.....	0.5A to 75V DC
electric bulb load	0.2A to 50V DC
switching capacity, <i>minimum load</i>	100mA, 20VDC / AC
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
dimensions.....	59x47x33mm
weight	approx. 30g
"subject to technical modifications"	
* check for suitability!	

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: December 2001 valid until 31.12.2008 HM120_E. Subject to modifications, current version available at www.galltec.de. This issue supersedes all previous technical leaflets.