



**Product info sheet no. B 1.6**  
**Humidity sensing elements, Modules**  
 Humidity frequency converter

**Description**

The MELA®-*humidity frequency converter* is an OE subassembly which converts the humidity signal into a calibrated frequency signal.

The advantages of it are:

- compact dimensions
- calibrated output signal
- low operating voltage
- low power consumption
- attractive price

Use of MELA®-capacitive *humidity sensor elements* is a guarantee of:

- high long-term stability
- good dynamic performance
- resistance to dew formation
- small hysteresis.

**Technical data**

**Humidity**

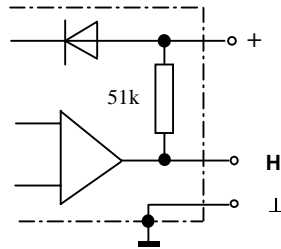
Measuring range (10...90%rh).....	57.9...48.4 kHz
Accuracy (MB 10...90% rh at 10...40°C, 1m/s) .....	±3% rh
at <10°C, >40°C .....	<0.1%/K additional
Response time .....	10s
Ambiant temperature .....	-20...+80°C

**Other data**

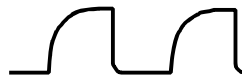
Operating voltage .....	6...30V
Power consumption .....	approx. 1mA
Weight .....	approx. 3g

"subject to technical modifications"

Output  
Circuit



Typical form of  
the output signal



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

**User instructions**

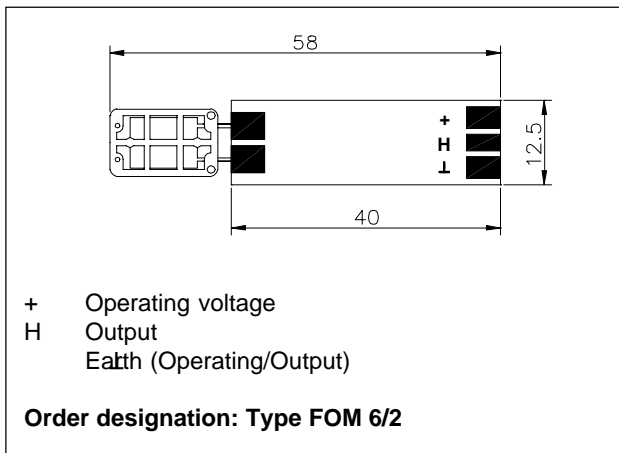
Install the MELA®-*humidity frequency converter* at a place in or on the equipment where characteristic levels of humidity can be measured. Avoid installing it close to heaters in places where it is likely to be splashed. Ensure that the sensing element is in a well ventilated area.

**Dust does not cause any harm to the humidity sensor, however, it does affect dynamic performance.** Do not touch the highly sensitive sensor element.

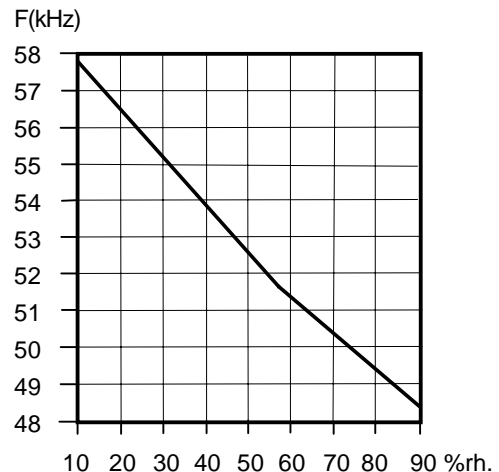
Intrinsic capacity (construction parts connected with earth) can result in additional error.

Please consult the *application instructions* for the sensing elements (product info sheet no. A 1) or check with the manufacturer for further information which you need to bear in mind when using humidity sensors with capacitive

**Dimensions**



*Frequency at the output as a function of relative humidity:*



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 : March 2004 valid until 31.12.2009 B16\_E. Subject to modifications, current version available at www.galltec.de. This issue supersedes all previous technical leaflets.