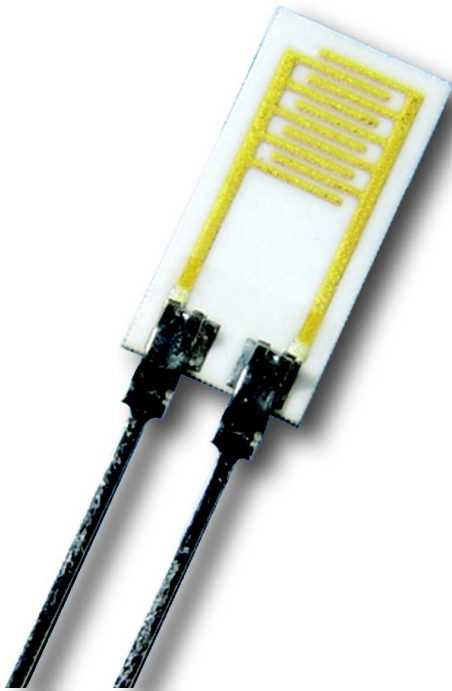


DATA SHEET

Electrolytic humidity sensor EFS-10

Description



Characteristic features

- Measuring range 20...95 % RH at 0...85 °C
- Simple evaluation
- Compact size
- No calibration needed
- Economic design

Areas of application

- Climate monitoring
- Consumer applications
- Office equipment
- Building instrumentation
- Cooling and air conditioning systems
- Air humidifiers, air dryer

Technical data

Humidity sensor EFS-10	
Measurement principle	Electrolytic
Humidity-operating range without condensation	20...95 % RH
Temperature-operating range	0...85 °C
Hysteresis	± 2 % RH
Response time t_{90}	< 120 sec
Impedance	1,5 k Ω – 10 M Ω
Rating	0,26 mW max.
Measuring voltage	1V _{eff}
Signal waveform	AC voltage (without DC voltage ratio)
Measuring frequency	0,1-5 kHz, nominal 1 kHz
Dimensions (B x L x D)	5 x 10 x 0,6 mm
Connector	SIL 30 mm, or customer specific

Features

The humidity sensor EFS-10 is an electrolytic type polymer sensor for measurement of relative humidity. The sensor converts the prevailing humidity value into impedance, which can be electronically measured.

The physical measurement principle is based on the characteristics of a hygroscopic material whose conductivity changes as a function of humidity in the environment. The humidity measuring range is right from 20 to 95 % RH. The measurement of impedance should be done with an AC current (without DC-offset). The recommended operating frequency is 1 kHz for a measuring voltage of maximum 1 V_{eff}.

The sensors of one production batch are identical in characteristics and hence, for medium precision requirements, calibration can be skipped. Because of this advantage, these sensors are ideally suited for price sensitive consumer applications.

The sensors are resistant to common household chemicals including cigarette smoke. However, the suitability for a certain application should be checked by the user before hand.

