

## Humidity Sensor: 4-20 mA

Compatible with DATAcentre, MIDCentre & Assure24seven

### FOMNEE31-RH-T-FAST



The precise and reliable measurement of humidity in processes is gaining more and more importance. The multifunctional EE31 offers the ideal solution.

The result of many years of experience in humidity measurement technology for industrial applications, the EE31 series builds on the high-quality HC series capacitive humidity sensor elements. The modular housing of the EE31 enables fast and easy on-site adjustment and calibration. No need for time-consuming dismounting and wiring of the instrument. This feature makes the EE31 series suitable for use in regulatory environments (e.g. FDA, GAMP). It is commonly used for incubators and ovens.

Technical Data	
<b>Measurement Values</b>	
<b>Relative humidity</b>	
Humidity sensor	HC1000-400
Working range	0 to 100% RH
Accuracy (including hysteresis, non-linearity and repeatability to intern. Standard, administrated by NIST, PTB, BEV) -40°C to 180°C (-40°F to 356°F)	± (1.5 + 1.5%*mv) % RH
Temperature dependence of electronics	typ. ± 0.01% RH/°C (0.0055% RH/°F)
Response time with metal grid filter at 20°C / t90	<15s
<b>Temperature</b>	
Temperature sensor element	Pt1000 (Tolerance class A, DIN EN 60751)
Working range sensing head	EE31-xDx: -40°C to 180°C (-40°F to 356°F)
Temperature dependence of electronics	typ. ± 0.005°C/°C
<b>Outputs</b>	
	4 - 20 mA $R_L < 500 \text{ Ohm}$
<b>General</b>	
Supply voltage	8 to 35V DC 12 to 30V AC (optional 100 to 240V AC, 50/60Hz)
Current consumption - 2x voltage output - 2x current output	for 24V DC/AC: typ. 40 mA typ. 80 mA
Pressure range for pressure tight probe	0.01 to 20bar (0.15 to 300psi)
Housing / protection class	PC or Al Si 9 Cu 3 / IP65; Nema 4
Cable gland	M16 x 1.5 cable Ø 4.5 - 10mm (0.18 - 39")
Electrical connection	Screw terminals up to max. 1.5mm <sup>2</sup> (AWG 16)
Working and storage temperature range of electronics	-40°C to 60°C (-40°F to 140°F)
Electromagnetic compatibility according to:	EN61326-1 EN61326-2-3 CES-003 ClassB Industrial Environment FCC Part15 ClassB
Housing	Polycarbonate housing
Type	Humidity +temperature
Filter	Stainless steel grid filter (up to 180°C / 356°F)
Cable length (incl. Probe length)	2m (6.6ft)
Probe length	65mm (2.6")
Sensing probe	Pluggable
Output signals	4-20 mA
Scaling of T-output °C	-40 to 180 (T52)