



# Moisture in Oil

## Digital Humidity and Temperature Module

### Ideal for monitoring water content in oils

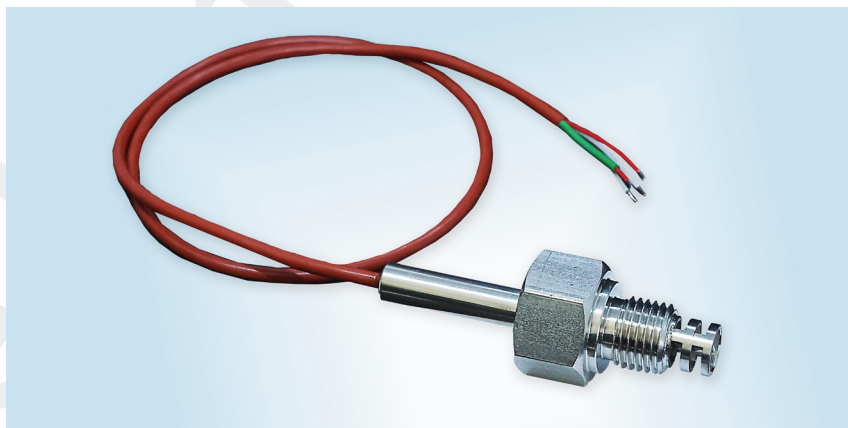
#### Benefits & Characteristics

- Sensitive moisture analysis in different mineral and synthetic oils incl. gear, transformer, hydraulics and lubricant applications
- Fully calibrated and temperature compensated
- Thermal and chemical robustness with a MK33 capacitive humidity sensors
- Interchangeable without adjustments
- Digital signal output: I<sup>2</sup>C protocol
- Screw-in stainless steel housing (M14)

#### Illustration

A compact and ready-to-use sensor for monitoring the water content of many different oils and fuels based on capacitive humidity measurement. The relative humidity output can give detailed information on condition and live-time of different oils.

Continuous and highly accurate measurement of relative humidity and temperature. System integration is made easy by a digital interface and screw-in housing. Stainless steel housing for robust integration in harsh environments.



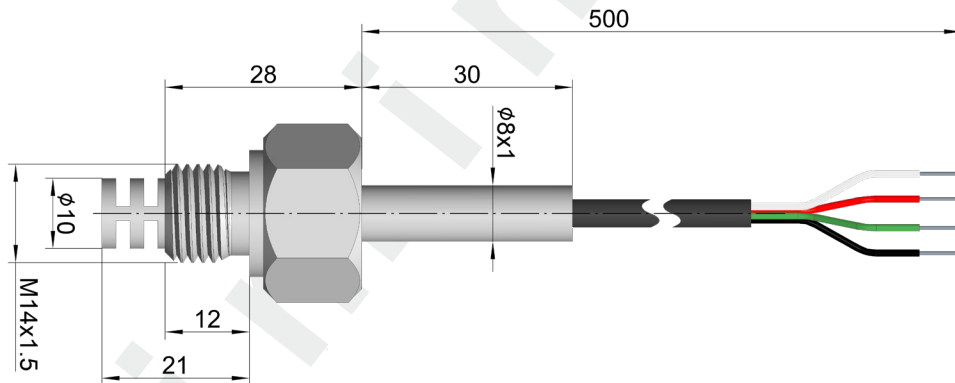
#### Technical Data

Operating temperature range:	-40 °C to +120 °C	
Operating humidity range:	0 %RH to 100 %RH	
Accuracy:	Humidity	±3 %RH at 23°C (0 to 90 %RH)
	Temperature	±0.2 °C (0 to 60 °C)
Reproducibility:	Humidity	±0.2 %RH
	Temperature	±0.1 °C
Resolution:	Humidity	0.03 %RH
	Temperature	0.015 °C
Response time $t_{63}$ in air:	Humidity	< 4 s
	Temperature	< 5 s
Hysteresis:	< ±1 % RH at 23 °C	



Operating voltage:	2.7 V to 5.5 V
Current consumption (nominal):	< 22 $\mu$ A at 1 Hz measuring rate; 85 $\mu$ A max.
Current consumption (sleep):	< 1 $\mu$ A
Digital interface:	I <sup>2</sup> C, default address 0x28
Operating voltage (limits):	-0.3 V to 6 V
Storage conditions:	-10 to +50 °C Please refer to HYT application note for packaging recommendations
Housing material:	Stainless steel 1.4571
Process connector:	M14x1.5 mm
Cable:	4x AWG 26, 500mm, open ends

### Mechanical Dimensions



### Pin Assignment

Insulation Color	White	Green	Black	Red
Assignment	SCL	SDA	GND	VDD

### Order Information

Order code	155958
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### Additional Documents

Application Note:	Document name: ANH_001
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### Disclaimer

*As additives may affect the long-term stability of the humidity measuring device, an evaluation of compatibility and measurement performance of the module in a particular oil under application relevant conditions is recommended.*



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