SIAP+MICROS
Environmental Monitoring Solutions
Since 1925

RELATIVE HUMIDITY
Sensor

t003 TRH

- High accuracy even in harsh environmental conditions
- Long-term stability
- Naturally ventilated integrated protection
- Easy to mantain

Description

TRH gives relative humidity measurements with high accuracy and reliability. The sensor is composed by a laser-cut capacitive polymer transducer connected to an electronic signal conditioning board.
The sensing element is housed into a special filtering structure which ensures a proper functioning of the sensor even in critical conditions where generally dust, water and dirt can occur. This structure makes the transducer less sensitive to aging and consequently to recalibration.
The protective shield is made out of non-hygroscopic and UV stabilized plastic that recreates a ventilated and protected environment from sunlight.
The sensor is supplied with power and signal cable (4 m).

Main Features

- **High accuracy**
- **Compact and affordable**
- **Protection against overvoltages**
- **Easy to mantain**

Technical Specifications*

Measurement performance			
Relative Humidity [%]			
Sensing element	Capacitive		
Measurement range	0 ÷ 100		
Accuracy *(Temperatures -20 ÷ 60°C)*	±2		
Resolution	0.01		
Repeatability	0.15		
Long-term stability	< 0.25 a year		
Operating conditions			
Temperature	-30°C ÷ +60°C		
Humidity	0% ÷ 100%		
Outputs			
RS485-Modbus	Relative humidity [%]		
SDI–12	Relative humidity [%]		
Tension	0 ÷ 1 V ↔ 0% ÷ 100%		
Current	4 ÷ 20 mA ↔ 0% ÷ 100%		
Power supply and Consumption			
Voltage supply	7 ÷ 30 Vdc		
Power consumption *(mA)*	Min	Typical	Max
RS485-Modbus / SDI – 12 / 0 ÷ 2 V	-	1	3
4 ÷ 20 mA	5	-	25
Mechanical specifications			
Protective body	Plastic material (ABS) and stainless steel screws		
Weight	1.2 kg		
Dimensions	Ø = 240 mm; Height = 275 mm		
Electrical connections	IP67 / 4 male poles		
Ordering codes			
Current output	t003a-TRH-I		
Tension output	t003b-TRH-V		
RS485-Modbus serial output	t003c-TRH-S		
SDI-12 serial output	t003h-TRH-12		

*Changes on technical performances can be applied upon request of specific calibration

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