PM Ecology

HUMIDITY AND TEMPERATURE SENSOR SRH1A

FEATURES

- **Measurement ranges: 0 – 100% RH; -40 ... +60°C**
- **SDI-12 output**
- **POM-C enclosure, extremely robust**
- **Fully calibrated with 1,8%RH accuracy**
- **Low power consumption**
- **Excellent long-term stability**

The SRH1A Humidity and Temperature Sensor is a highly accurate and cost effective probe with robust POM-C enclosure. It has been prepared for outdoor and indoor environments. Can be used with PM Ecology data loggers or integrated with other manufacturers' equipment.

INSTALLATION

Thanks to its compact size and multiple mounting methods, the sensor fits into tight spaces and can be fixed to masts, walls and other constructions. SRH1A is suitable for installation with a radiation shield which protects the sensor against water, dust and direct solar radiation. Apart from standard 1m cable, other cable lengths are available.

OUTPUT SIGNAL

The sensor is equipped with an SDI-12 output and is compatible with all data loggers using this communication standard.

SDI-12 (Serial Digital Interface at 1200 baud) is a serial communications protocol used in environmental measurements. The operating principle is that only an SDI-compatible device with the digital addressing system will communicate with a the pre-configured sensors. Unless the sensor has a matching configuration, it will not respond and stay in a sleep mode. SDI-12 sensors have a three wire connection.

HOUSING

The housing is made of POM – C, highly rigid material known for its hardness, durability, good creep resistance and low water absorption. As the material is fully ESD compliant, the sensor can be installed in Electrostatic Discharge Protected Areas (EPA). The cap holds the stainless steel filter with pores of 33 µm. Electronic components are sealed with epoxy resin.

MAINTENANCE

The sensor should be installed in such position to prevent water from entering. It will not damage the sensor, however the dew formed on the sensor will distort the readings until the water on the filter and sensing element dries up.

Capacitive sensitive element from the sensor can be calibrated if required with the use of specialist equipment. For more information about functional calibration contact PM Ecology directly.

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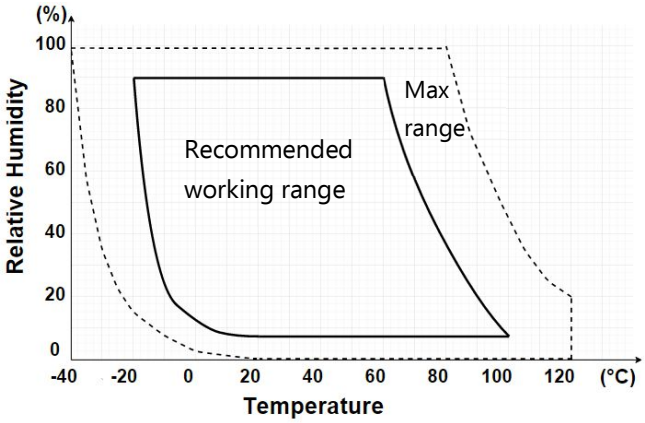
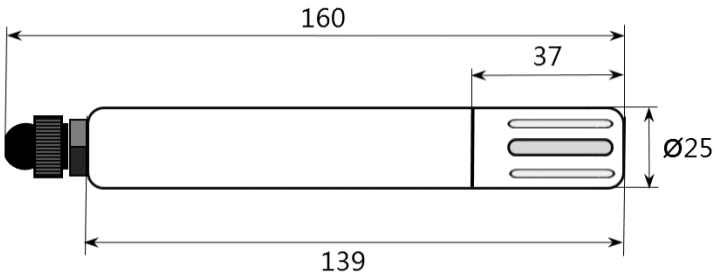
WORKING RANGE



DIMENSIONS (mm)



TECHNICAL SPECIFICATION

	Humidity	Temperature
Measuring range	0 ... 100%RH	-40 ... +60°C
Accuracy at 25 °C	±1,8%RH (0 ... 90%RH), ±3,0%RH (>90%RH)	±0,3°C (0 ... 60°C), ±0,5°C (for the remaining range values)
Output signal	SDI-12	SDI-12
Nonlinearity	<0,1%RH	-
Long-term stability	Typ. <0,25%RH / yr	Typ. <0,02°C / yr
Resolution	0,01%RH	0,01°C
Working temperature	-40 .... +60°C	
Power supply	4 ... 16 Vdc	
Power consumption	< 1mA with 12V supply	
Ingress Protection	electronics – IP 66, sensing element – IP 40	
Housing material	POM – C	
Filter material	stainless steel	
Pores size	33µm	
Cable length	1m, optional extension	
Weight	107 g	
Type	**SRH1A**	
WIRING SCHEMA		
Green	SDI-12 Data output	
Yellow	Positive (+) power supply	
White	Negative (-) power supply	
Yellow-Green	Chassis	

Contact and orders

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