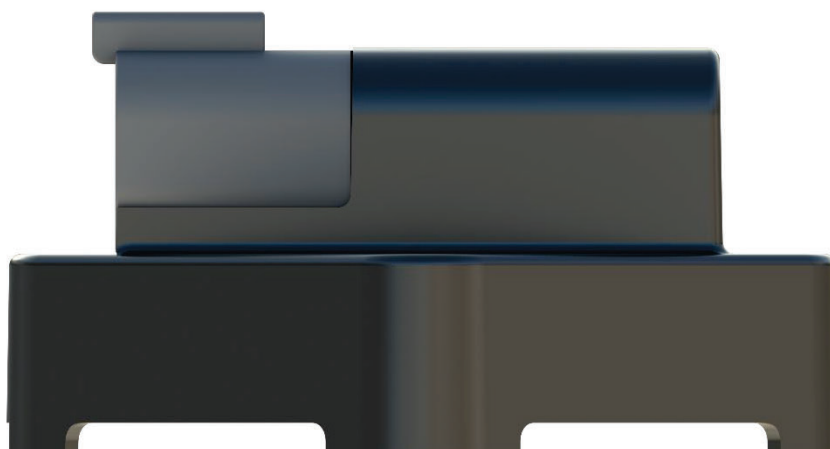


## Humidity Sensor - KP-RHRC

### Measurement specifications:

Description	Specification
Range	0-100 %RH (condensing)
Resolution	16 bits
Accuracy (factory calibrated) See: <a href="http://www.sensirion.com">www.sensirion.com</a> , <i>SHT30 sensor chip with filter</i>	SHT30: $\pm 3\%$ RH, 10...90%RH @ 0°C ... 60°C Option: SHT31: $\pm 2\%$ RH 0...100%RH @ 0°C ... 60°C Long-term drift < $\pm 1.5\%$ RH/year.
Warm up time	Instant on
Response time, $\tau$ 63%	< 8 sec
Recommended recalibration interval	No need for recalibration
Operating temperature and humidity	-20°C ... 80° Resistant to condensing environment
Storage temperature	-40°C ... 80°C
Measuring principle	Capacitive Sensirion SHT30 chip sensor with PTFE filter

:



## SPECIFICATIONS

### Specification, electrical:

Description	Specification
Supply voltage	12VDC (8V ... 15V), protected against overvoltage and reverse polarity
Current consumption @12VDC	Peak < 60mA, average <10mA
RS485 driver and circuit	60V max protected.
Miss wiring	No damage

### Serial communication:

Name	Type	Description	Specification
2-wire	RS485	RS 485 communication channel	9600, 19200 or 115000 bit/sec
Modbus RTU		Modbus communication protocol	SW selectable

### Electrical connection:

Name	Function
Integrated Deutsch DT04-receptacle. DT06-plug and cable/wire pins: ( <a href="http://www.deutsch.net">www.deutsch.net</a> )	1: 12V 2: 0V / GND 3: com A 4: com B

### Mechanical specs:

Description	Specification
Mounting	Two holes (diameter 6 mm) with 54 mm from center to center for rivet or screw
Mechanical external dimensions	See the pictures / drawings for dimensional indication. W, L, H: 52.5 x 52.5 x 36.5 mm
IP class	67, measuring cuvettes protected by 1µm pore PTFE hydrophobic and oleophobic filter membrane

## EMC

Description
EN61000-6-3 Emission, Domestic
EN61000-6-2 Immunity, Industrial: HF 10 Veff, FT $\pm 4$ kV, ESD $\pm 8$ kV air, $\pm 4$ kV contact
CE component declaration will be signed.

## Vibration and chock

Description	
IEC 60068-2-64	Test Fc 18Hz to 1kHz 3g rms 3 x 2 hours in each direct x-y-z
Description	
IEC 60068-2-27	6 directions (X-Y-Z both ways): Half sine wave 11ms with peak at 6g, 30 shocks each direction.  Vertical: 5 shocks half sine wave 11ms peak at 70g

## Salt spray

Description	
ASTM B117	Test time 168 hours  No visible corrosions after test

## Disclaimer

Description	
Exposure to aggressive gases	Exposure to VOC's and other aggressive gases, like SO <sub>2</sub> , NH <sub>3</sub> , HCl and alcohol, especially in combination with condensing environment, may adversely influence the sensors' measuring accuracy and reduce the lifetime. <a href="https://www.sensirion.com">https://www.sensirion.com</a> , Humidity_Sensors_Handling_Instructions.pdf

