



# Humidity Sensor

# TYPE MHT



Humidity sensor type MHT is used for measuring of humidity in e.g. refrigeration plants, air-conditioning, ventilating plants and reefer units. Type MHT uses a capacitive element for measuring. A micro controller compensates for nonlinearity and the sensor element is tested from factory: In this way accurate measurements are ensured.

A porous PTFE-membrane protects the sensor against water and dust. The membrane is placed in a way that leaves a very small volume between the membrane and the sensor. This ensures a fast response time and reduces the risk of "drowning" during condensing climate conditions.

The potting material is Hotmelt based on polyamide.

## TECHNICAL DATA:

### Electrical characteristics:

Supply voltage: 24V DC  $\pm 5\%$   
Operating range:  $-30^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$   
Measuring range:  $0^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$   
Storage temperature:  $-40^{\circ}\text{C}$  /  $+80^{\circ}\text{C}$   
Output signal: 4-20mA / 0-10V (see page 4)

EN 61000-4-2  
EN 61000-4-4  
EN61000-4-6

Current consumption: max. 20mA  $+5\%$   
Long-term stability:  $<0.67\%$  RH per year

### Accuracy:

15-85% RH:  $\pm 3\%$  RH  
85-100% RH:  $\pm 4\%$  RH  
Repeatability:  $\pm 0.2\%$  RH  
Response time: With air flow of 2 m/s not exceeded  
6 minutes for 63% change from 30 to 95% RH.

### Vibration test:

Peak acceleration : 6g  $>30\text{Hz}$   
Sweep : 3 x 2 mio. cycles in each direction,  
x-y-z axis.  
Shock: Tested to 20g for 18msec. half sine  
wave, 3 planes. Malfunction allowed.



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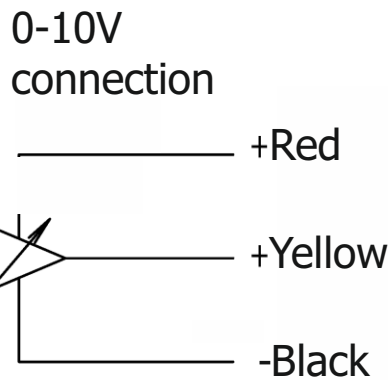
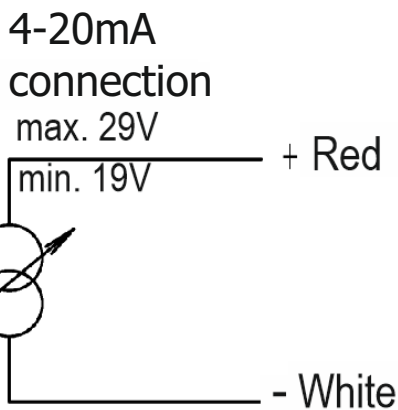
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Dust:  
Water ingress:

IP Class:  
Salt Fog:  
Altitude:

Tested to UL217  
Sensor filter must not be exposed to high pressure water. Tested to: 165 bar for 5 min. 90 cm from nozzle  
IP66  
ASTM B-117 for 1000 hours.  
0-2600 metres





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User Guide:

Avoid high pressure water on sensing element.  
Recommended tightening torque: 2.4 Nm. Use M5 screws.

%RH accuracy at various temperatures

100	±4	±4	±4	±4	±4	±4,5	±5	±6	±6	±6
90	±4	±4	±4	±4	±4	±4,5	±5	±6	±6	±6
80	±4	±3	±3	±3	±3,5	±3,5	±4	±5	±6	±6
70	±3	±3	±3	±3	±3	±3,5	±4	±4	±6	±6
60	±3	±3	±3	±3	±3	±3,5	±4	±4	±6	±6
50	±3	±3	±3	±3	±3	±3	±3,5	±4	±6	±6
40	±3	±3	±3	±3	±3	±3	±3	±3,5	±6	±6
30	±3	±3	±3	±3	±3	±3	±3	±3	±6	±6
20	±4	±3	±3	±3	±3	±3	±3	±3	±6	±6
10	±4	±4	±4	±4	±4	±4	±4	±4	±6	±6
	0	5	10	15	20	25	30	40	50	60

Temperature °C

Subject to alterations without notice  
Version 1.6 - page 3 of 4

## Head office:

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dk@senmatic.com - www.senmatic.com



# Ordering form / Humidity Sensor

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Item no.	Cable length	Output
307-113-02	2 metres	4 - 20mA 0-100% RH
307-113-05	5 metres	4 - 20mA 0-100% RH
307-115-02	2 metres	4 - 20mA 20-100% RH
307-115-05	5 metres	4 - 20mA 20-100% RH
307-116-02	2 metres	0 - 10V 0-100% RH
307-116-05	5 metres	0 - 10V 0-100% RH

For other versions, please contact the Sales Department.

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