SEM167H1

HUMIDITY TRANSMITTER

Designed, manufactured and supported by:

STATUS INSTRUMENTS

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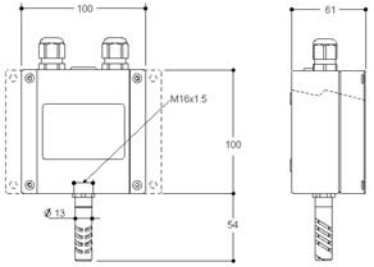
1.0 INTRODUCTION

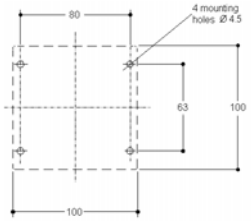
The SEM167H1 transmitteruses a high accuracy capacitive sensor integrated in a silicon microchip. This Technology allows for accurate and reliable process measurements, and offers excellent long-termstability. The sensor is very durable and moisture resistant. The “Humi-chip” module that incorporates the sensor can be easily replaced without the need for re-calibration. For further operator ease of use, relative humidity value can be displayed on the optional integrated LCD display, or sent via analogue outputs to other devices.

MOUNTING (All dimensions in mm)

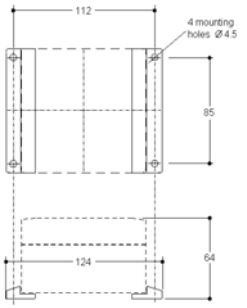
Wall model: H1-P



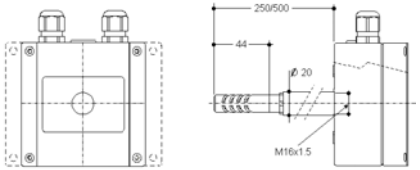
Wall mounting H1-P and H1-R
a) 4 internal holes (std.)



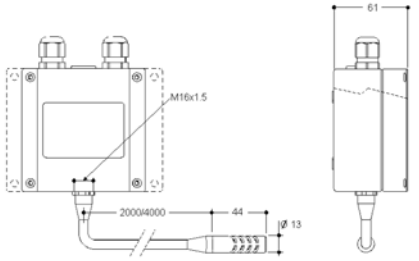
b) 2 brackets (optional)



Duct model: H1-C

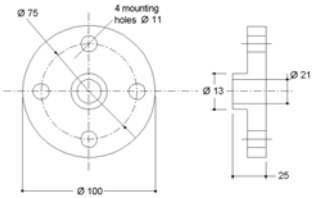


Remote sensor Model: H1-R



Mounting for Duct model: H1-C

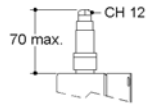
Adjustable flange Ø 100 self locking

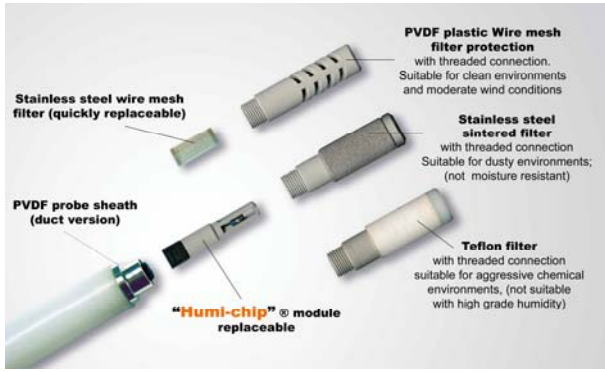


Outputs

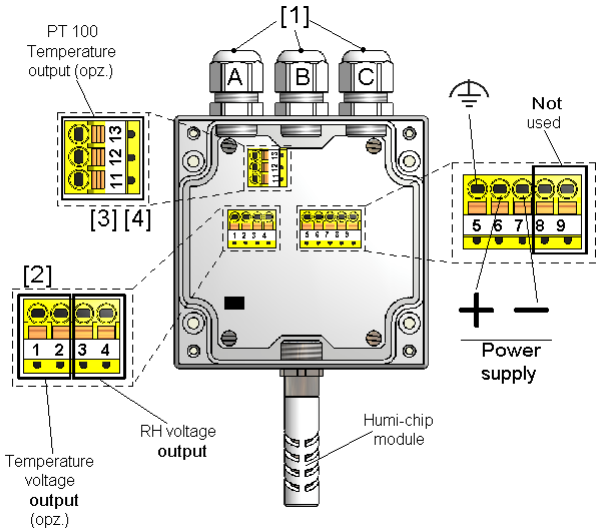
Conduit M16

Conduit M12

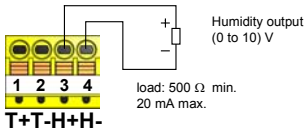




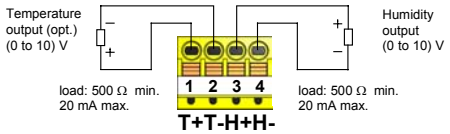
WIRING OF 2 WIRE, (0 to 10) V VOLTAGE OUTPUT MODELS



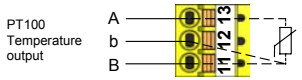
Humidity only



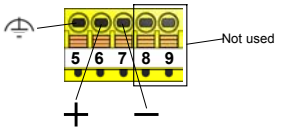
Humidity and Temperature (opt.)



Optional PT100 Temperature



Power supply



2.0 INSTALLATION

Humi-Chip measurement module incorporates an integrated temperature sensor.
The measured values are correct when the Humi-Chip Humidity and Temperature are both in equilibrium with the surrounding ambient conditions.
For optimum performance, the following recommendations must be observed:

1) Install the sensor in the most representative location of the ambient to be controlled;
2) Avoid direct exposure to sun and atmospheric agents;
3) Avoid installing the sensor next to heaters, coolers, steam vents and humidifiers;
4) Avoid turbulences which can generate unstable pressures.

2.1 Cleaning/replacing the dust filter

The dust filter should be cleaned from time to time depending on the working conditions.
Cleaning should be done:

1) Removing the filter from the probe as described below (Replacing Humi-Chip module note 1 to 3)
2) Then clean it by washing with water or by blowing with compressed air (the filter must be far from the Humi-Chip)

2.2 Replacing Humi-Chip

The sensor of the Humi-Chip module does not need any periodic calibration. The replacement sensor is delivered factory calibrated. Calibration is not required after replacement.
If the replacement of the Humi-Chip module is necessary, proceed as follows:

1) Switch off the power supply;
2) Verify that the Humi-Chip module is at a safe temperature;
3) Unscrew the protection filter;
4) Gently withdraw the module;
5) Insert the new module;
6) Re-install the protection filter.

WIRING OF 2 WIRE, (4 to 20) mA CURRENT OUTPUT MODELS

Notes:

[1] Two M16 conduit for output cables up to Ø 8.5 mm.

[2] Spring terminal strip for cable sections of (0.14 to 1.5) mm^2 (AWG28 to AWG16)

The (4 to 20) mA RH output is isolated from the optional (4 to 20) mA temperature output.

[3] Spring terminal strip for cable sections of (0.14 to 1.5) mm^2 (AWG28 to AWG16)

[4] The optional PT100 temperature output is alternative to the (4 to 20) mA temperature output.

WIRING OF 2 WIRE, (0 to 10) V VOLTAGE OUTPUT MODELS

Notes:

[1] Three M16 conduit for output cables up to Ø 8.5 mm.

[2] Spring terminal strip for cable sections of (0.14 to 1.5) mm^2 (AWG28 to AWG16)

The RH voltage output is isolated from the optional voltage temperature output.

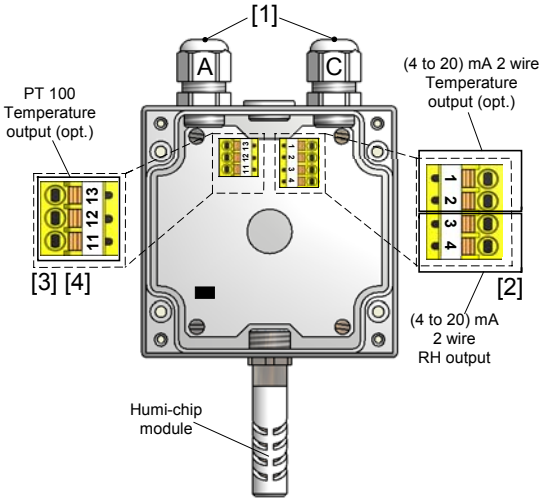
[3] Spring terminal strip for cable sections of (0.14 to 1.5) mm^2 (AWG28 to AWG16)

[4] The optional PT100 temperature output is alternative to the voltage temperature output.

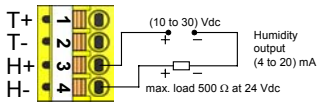
3.0 SPECIFICATION

See Data Sheet for full specification

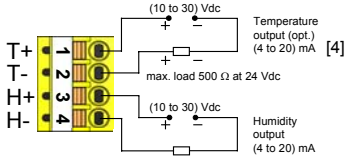
WIRING OF 2 WIRE, (4 to 20) mA CURRENT OUTPUT MODELS



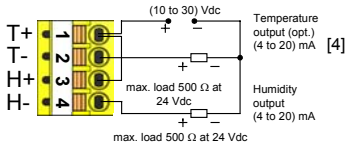
Humidity only (2 wire connection)



Humidity and Temperature connection with 2 different dc power supplies



Humidity and Temperature connection with only 1 power supply



Optional PT100 Temperature