

# SEM167H1

## HUMIDITY TRANSMITTER

Designed, manufactured and supported by:



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Stock code 52-214-2462-01



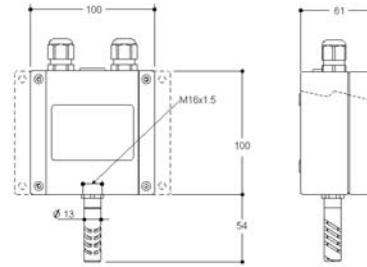
### 1.0 INTRODUCTION

The SEM167H1 transmitter uses a high accuracy capacitive sensor integrated in a silicon microchip. This Technology allows for accurate and reliable process measurements, and offers excellent long-term stability. The sensor is very durable and moisture resistant. The "Humi-chip" module that incorporates the sensor can be easily replaced without the need

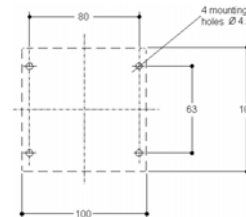
for re-calibration. For further operator ease of use, relative humidity value can be displayed on the optional integrated LCD display, or sent via analogue outputs to other devices.

### MOUNTING (All dimensions in mm)

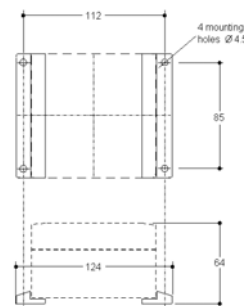
#### Wall model: H1-P



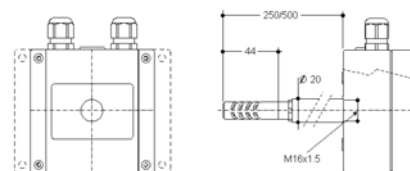
#### Wall mounting H1-P and H1-R a) 4 internal holes (std.)



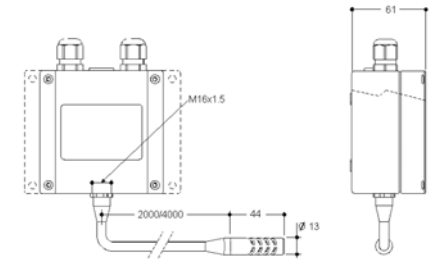
#### b) 2 brackets (optional)



#### Duct model: H1-C

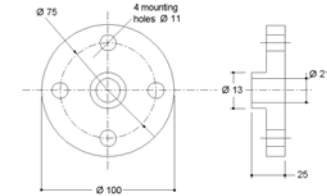


#### Remote sensor Model: H1-R



#### Mounting for Duct model: H1-C

#### Adjustable flange Ø 100 self locking

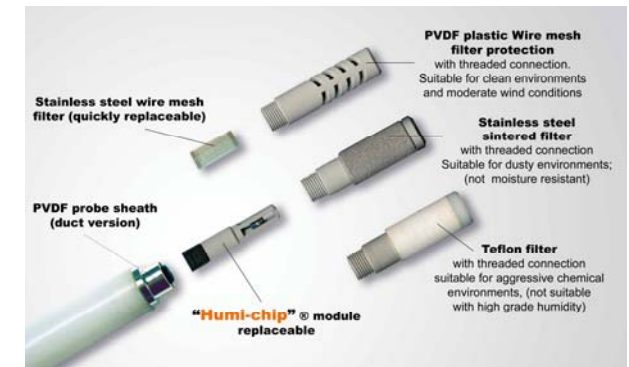
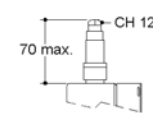


#### Outputs

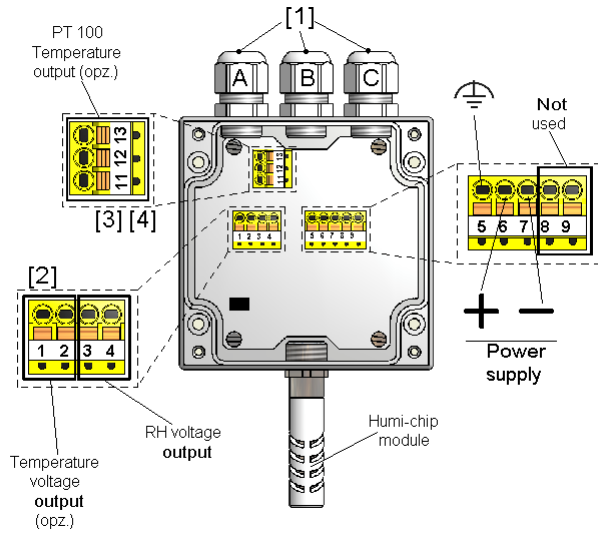
#### Conduit M16



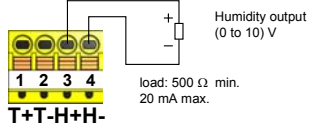
#### Conduit M12



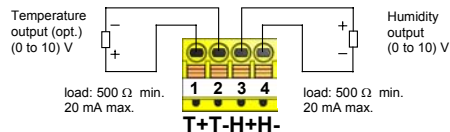
## WIRING OF 2 WIRE, (0 to 10 ) V VOLTAGE OUTPUT MODELS



### Humidity only



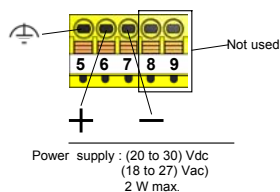
### Humidity and Temperature (opt.)



### 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<sup>2</sup> (AWG28 to AWG16)
- [3] Spring terminal strip for cable sections of (0.14 to 1.5) mm<sup>2</sup> (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

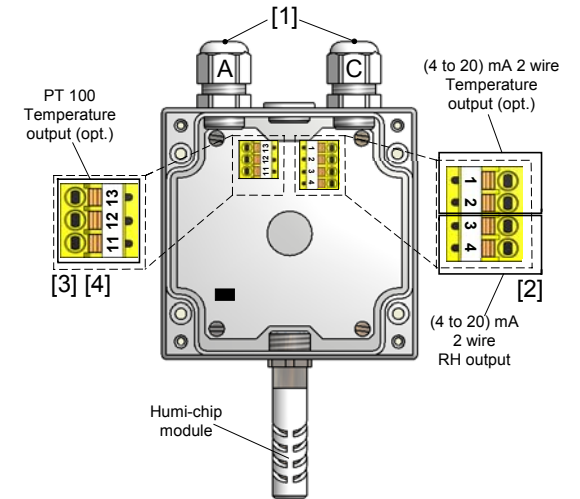
### Notes:

- [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<sup>2</sup> (AWG28 to AWG16)
- [3] Spring terminal strip for cable sections of (0.14 to 1.5) mm<sup>2</sup> (AWG28 to AWG16)
- [4] The optional PT100 temperature output is alternative to the voltage temperature output.

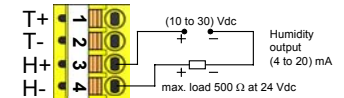
## 3.0 SPECIFICATION

See Data Sheet for full specification

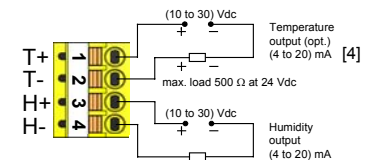
## WIRING OF 2 WIRE, (4 to 20 ) mA CURRENT OUTPUT MODELS



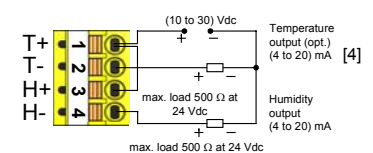
### Humidity only (2 wire connection)



### Humidity and Temperature connection with 2 different dc power supplies



### Humidity and Temperature connection with only 1 power supply



### Optional PT100 Temperature

