HUMIDITY TRANSMITTER HMD60U

HUMIDITY AND TEMPERATURE TRANSMITTER HMD60Y

MOUNTING

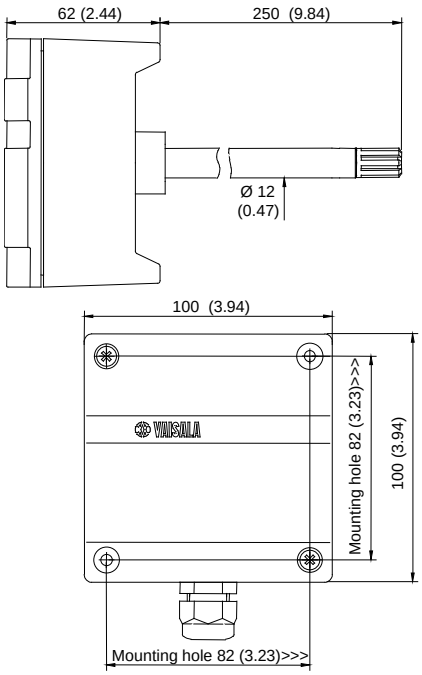


Figure 1 Dimensions of the HMD60U/Y

The HMD60U/Y humidity and temperature transmitters are two-wire transmitters. They are duct mounted, and the electronics can be disconnected without dismantling the installation.

Mount the transmitter with two screws. Place the drilling template on the duct surface and drill the holes as indicated. Remember to drill an additional hole for calibration purposes. The calibration can be conveniently performed on site with the HMI41 or HM70 portable indicators equipped with an appropriate probe and optional calibration cable.

GROUNDING

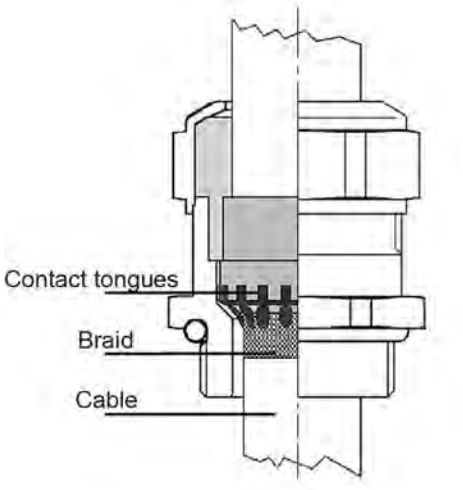


Figure 2 Signal cable grounding with bushing 18941HM

Open the lid and mount the cable bushing set 18941HM. Ground the cable by connecting the contact tongues inside the bushing to an exposed length of cable braid as shown in Figure 2. **To minimize short-circuit risk, do not expose more cable braid than is necessary for connecting the braid to the contact tongues.**

ELECTRICAL CONNECTIONS

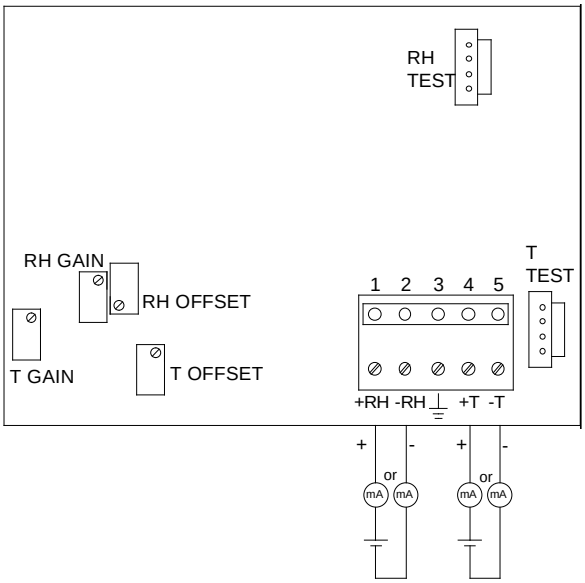


Figure 3a. Electrical connections.

Signal cables are connected to a removeable 5-pole screw connector. Make the connections according to Figure 3a above. RH test and T test connectors are used with the HMI41 or HM70 indicator equipped with an appropriate probe and optional calibration cable.

Figure 3b shows the same connections in alternative way.

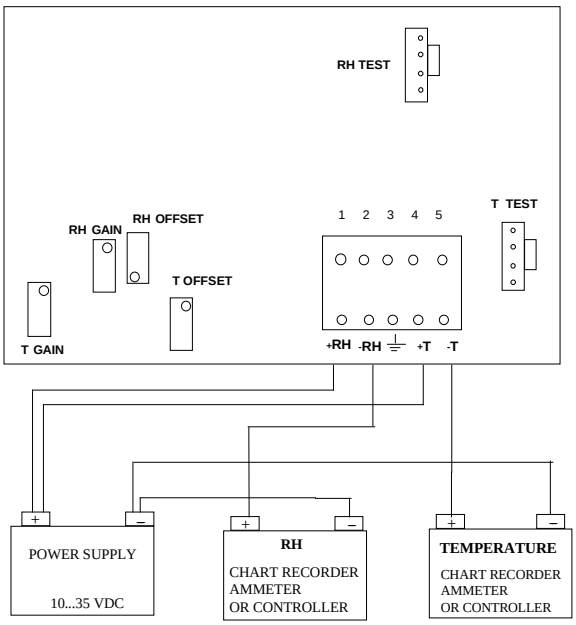
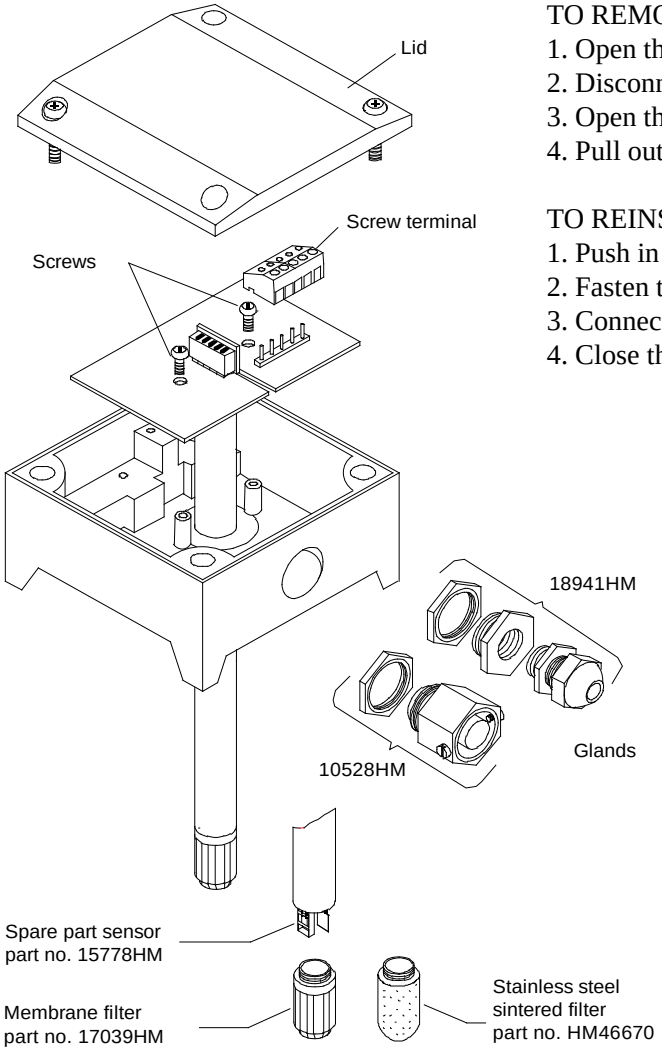


Figure 3b. Electrical connections.

ELECTRONICS



TO REMOVE THE SENSOR HEAD:
1. Open the lid.
2. Disconnect the screw terminal.
3. Open the screws (2 pcs).
4. Pull out carefully.

TO REINSTALL THE SENSOR HEAD:
1. Push in the sensor head.
2. Fasten the screws.
3. Connect the screw terminal.
4. Close the lid.

Electronics (can be disconnected), accessories, spare parts

ONE-POINT RH-CALIBRATION

The accuracy is recommended to be checked at least once a year; the interval depends on the operating conditions and the required accuracy of the measurement. The transmitter calibration can be conveniently checked with the HMI41 or HM70 indicator equipped with an appropriate probe and optional calibration cable. If adjustment is needed, use the one-point calibration potentiometer. If you prefer to calibrate the HMD60U/Y transmitters against saturated salt solutions, use LiCl (11 %RH) and NaCl (75 %RH) solutions.

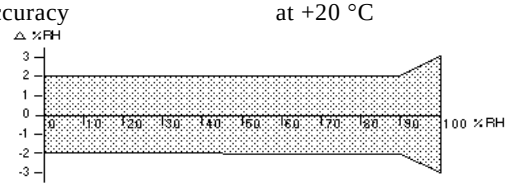
REPLACEMENT OF THE HUMICAP SENSOR AND THE FILTER

Remove the damaged sensor and insert a new one. Recalibrate the transmitter. Replace a dirty filter (membrane or sintered) to ensure a maximum lifetime and a fast response for the sensor. Do not attempt to clean the filter.

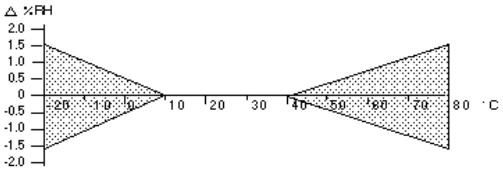
TECHNICAL DATA

Relative humidity

Measurement range	0...100 %RH
Output signal	
Accuracy	at +20 °C



Temperature dependence

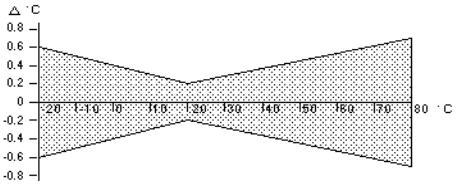


Humidity sensor	INTERCAP 15778HM
Response time (90%)	
at 20 °C in still air	15 s with membrane filter

Temperature (Y model only)

Measurement range	-20...+80 °C

Accuracy



Linearity	better than 0.1 °C
Temperature sensor	Pt 1000 IEC 751 class B

General

Supply voltage	10...35 VDC (R_L= 0Ω) 20...35 VDC (R_L=500Ω)
Output signal	4...20 mA
Operating temperature range:	
electronics	-5...+55 °C
sensor head	-40...+80 °C
Storage temperature range	-40...+80 °C
Housing:	
sensor head	stainless steel
electronics housing	cast aluminium
Cable lead-through:	
bushing	for 7...10 mm (PG9) cable (housing IP65 / NEMA 4), part no. 18941HM
or armoured cable glands	part no. 10528HM
Sensor protection:	
standard	membrane filter (part no. DRW010525)
option	stainless steel sintered filter (part no. HM46670)
Connections	screw terminals 0.5...1.5 mm^2

Electromagnetic compatibility

The emission and immunity tests have been performed according to standard EN 61326-1:1997 + Am 1:1998, Electrical equipment for measurement, control and laboratory use- EMC requirements; Light environment.

Emissions:

Test	**Setup according to**	**Performance**
Radiated interference	CISPR16	class B

Immunity:

Test	**Setup according to**
Electrostatic discharge	EN/IEC 61000-4-2
Electrical fast transients	EN/IEC 61000-4-4
RF-radiated fields	EN/IEC 61000-4-3
*GSM-field immunity	ENV50204:1995 criteria A

(*additional test)

GUARANTEE

Vaisala issues a guarantee for the material and workmanship of this product under normal operating conditions for one year from the date of delivery. Exceptional operating conditions, damage due to careless handling or misapplication will void the guarantee.

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