

Quick Guide

HMW88, HMW89, and TMW88 Wall Mounted Transmitters

Overview

This Quick Guide describes the wiring and mounting of wall mounted HMDW80 series transmitters (HMW88, HMW89, TWM88), as well as the DIP switch configuration options of the transmitters.

- For a description of the parts in the transmitters, see [Parts in wall mounted models \(HMW88/89, TMW88\) \(page 2\)](#) and [Parts in HMDW80 series transmitters with M12 connector \(page 4\)](#).
- For mounting instructions, see [Installing wall models HMW88, HMW89, and TMW88 \(page 3\)](#) and [Attaching the magnetic bracket \(page 4\)](#).
- For wiring information, see [HMW88, HMW89, and TWM88 transmitter wiring diagrams \(page 6\)](#) and [HMDW80 series M12 connector pinout and wiring](#).
- For instructions on selecting units and measurement parameters with the transmitter DIP switches, see [DIP switches \(page 7\)](#).

For full user instructions, see [HMDW80 User Guide M211510EN](#), available at the Vaisala documentation portal docs.vaisala.com.



CAUTION! When the transmitter cover is open, observe precautions for handling electrostatic sensitive devices.



Parts in wall mounted models (HMW88/89, TMW88)

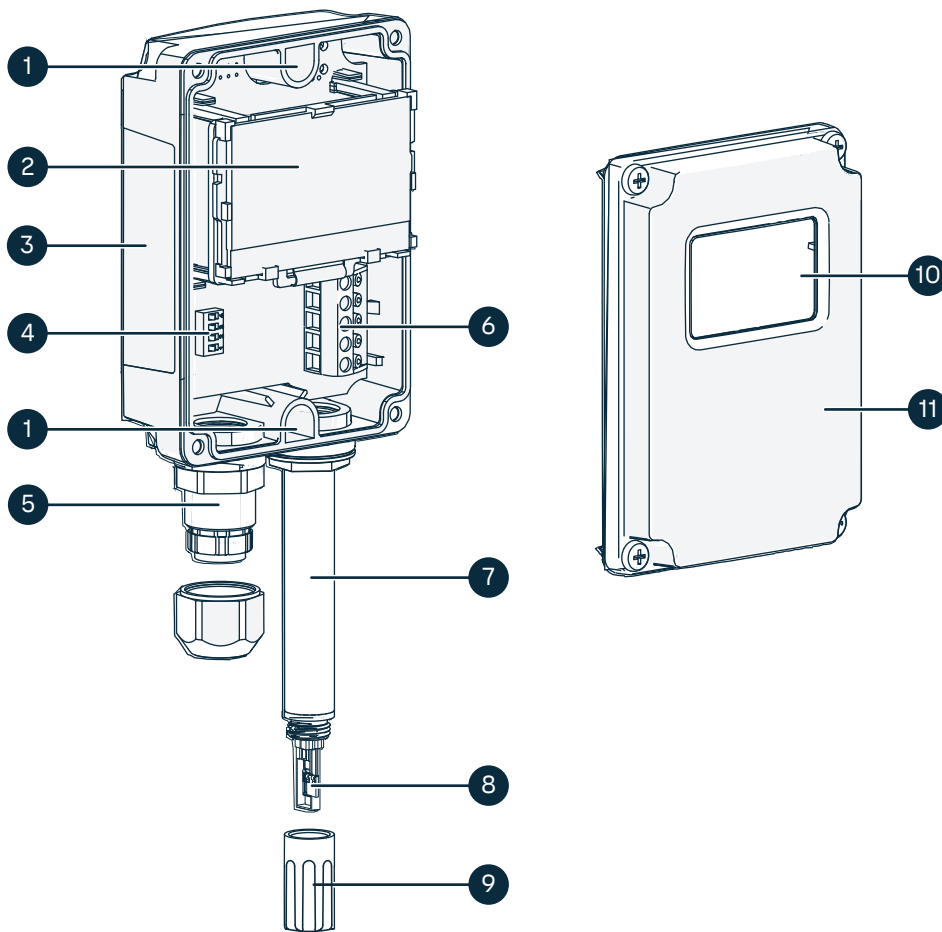


Figure 1 Parts of wall mounted models (HMW88/89, TMW88)

- 1 Screw holes for mounting (2 pcs)
- 2 Display (in HMW88D and HMW89D models)
- 3 Type label
- 4 DIP switches for selecting humidity parameter and display units
- 5 Cable gland. Suitable for 4–8 mm diameter cable
- 6 Screw terminals
- 7 Probe
- 8 INTERCAP humidity sensor and temperature sensor
- 9 PTFE membrane filter (item code ASM210856SP)
- 10 Window for display (in HMW88D and HMW89D models)
- 11 Transmitter cover with captive screws

Installing wall models HMW88, HMW89, and TMW88



- Medium size crosshead screwdriver (Pozidriv) for screws on cover and flange
- Small slotted screwdriver for screw terminals.
- Two installation screws: $\varnothing < 3.5$ mm, head $\varnothing < 10$ mm.
- Depending on the wall material and screw type, you may need a drill and a suitable drill bit to make installation holes for screws.
- Tools for cutting and stripping wires.
- 19-mm open-end wrench for tightening the cable gland.

1. Open the transmitter cover and use two screws (not included) to attach the transmitter to the wall. The probe and cable gland should point down.
2. Route the power and signal cable to the screw terminals and connect the wires. See [HMW88, HMW89, and TWM88 transmitter wiring diagrams \(page 6\)](#).
3. Close the transmitter cover and remove the yellow transport protection cap from the probe.

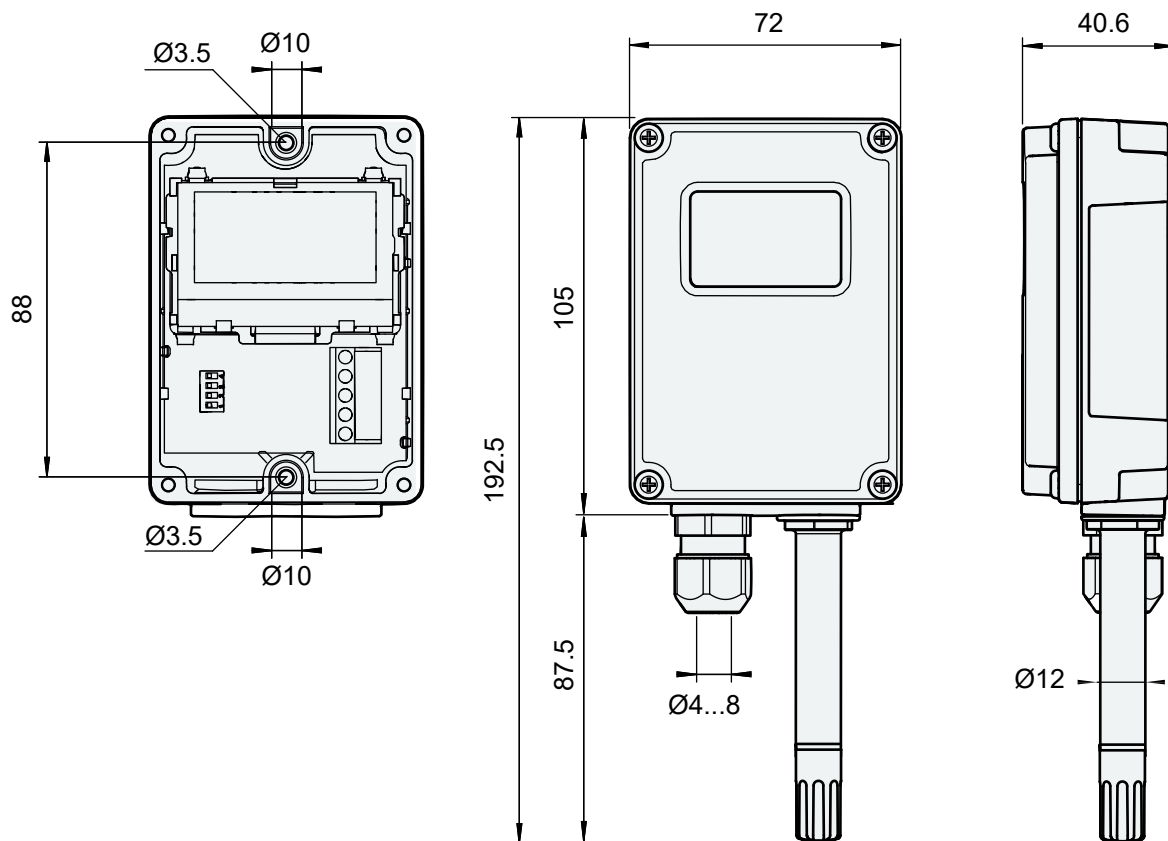


Figure 2 Wall model dimensions (HMW88/89, TMW88)

Parts in HMDW80 series transmitters with M12 connector

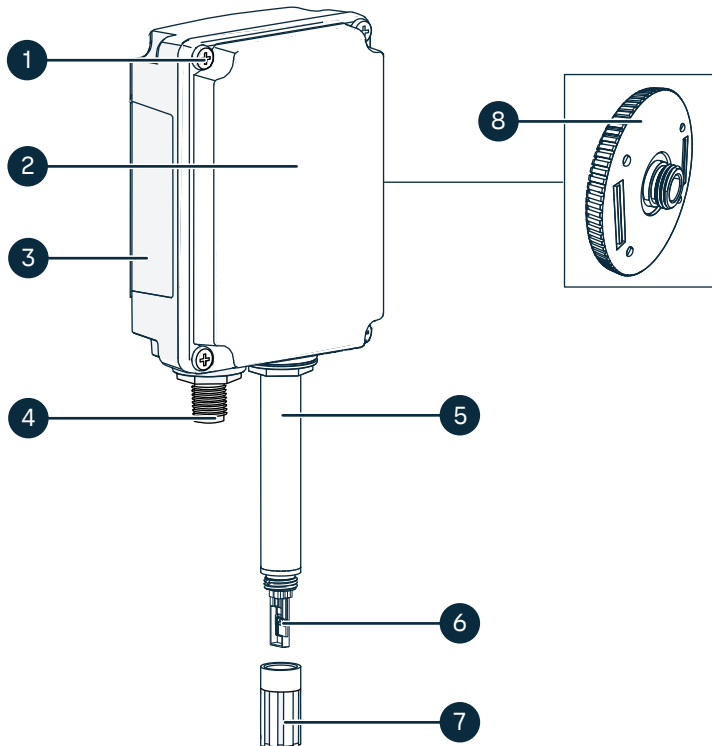


Figure 3 HMDW80 series M12 connector transmitter parts

- 1 Transmitter cover screws (4 pcs)
- 2 Transmitter cover: open to access component board and connector terminals
- 3 Type label
- 4 M12 connector (4-pin male)
- 5 Probe body
- 6 INTERCAP® temperature sensor
- 7 PTFE membrane filter
- 8 Magnetic bracket for wall mounting (at the back of the transmitter). See [Attaching the magnetic bracket \(page 4\)](#).



CAUTION! The magnet of the magnetic bracket (see item 8) is strong. Handle with care.

Attaching the magnetic bracket

The magnetic bracket (Vaisala item code ASM215638SP) is delivered separately in the transmitter package. Attach the magnetic bracket to the back of the transmitter as shown in [Figure 4 \(page 5\)](#).

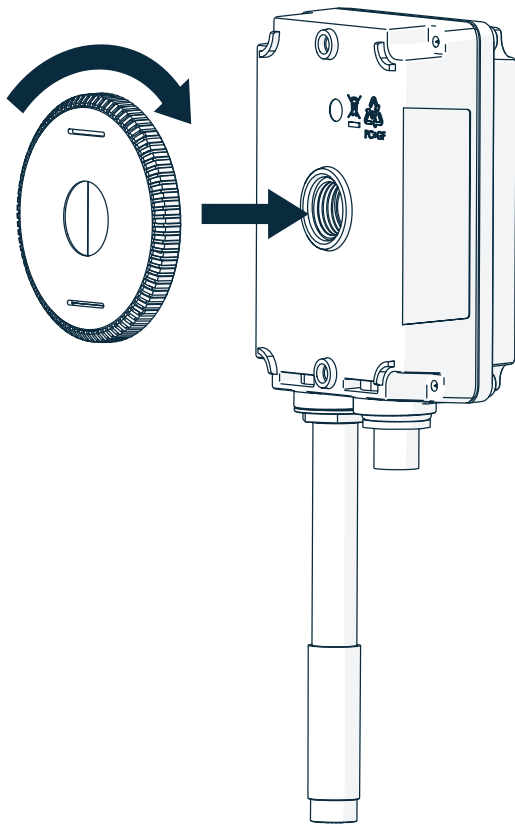


Figure 4 Attaching the magnetic bracket to transmitter

- ▶ 1. Insert the screw of the magnetic bracket into the threads at the back of the transmitter.
2. Rotate the magnetic bracket clockwise to attach it to the threads on the transmitter. Tighten to finger tightness.



NOTICE! This accessory has a strong magnet. Handle the magnet with care and keep it away from devices that are sensitive to magnetic fields (for example, pacemakers, magnetic cards, and mechanical watches).

HMDW80 series M12 connector transmitter dimensions

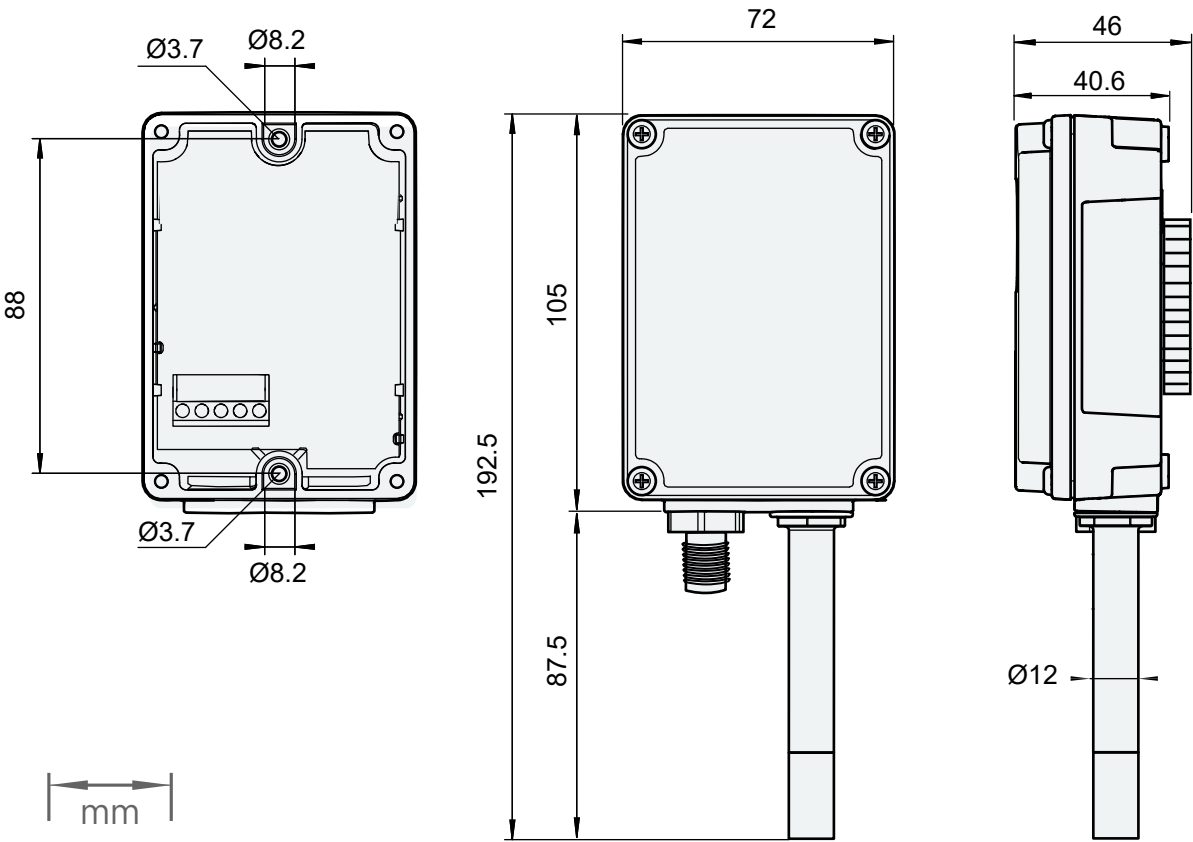


Figure 5 HMDW80 M12 connector variant dimensions (in mm)

HMW88, HMW89, and TWM88 transmitter wiring diagrams

HMW88 (2 × 4–20 mA)

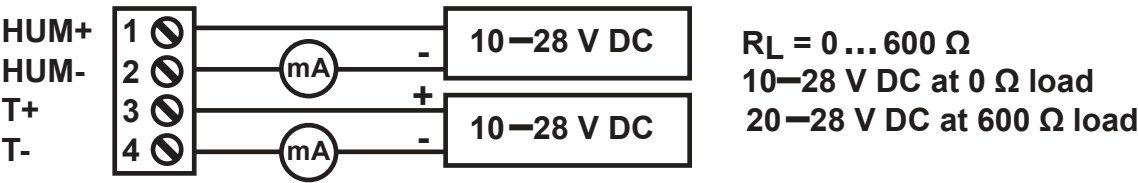


Figure 6 HMW88 wiring diagram

HMW89 (2 × 0–10 V)

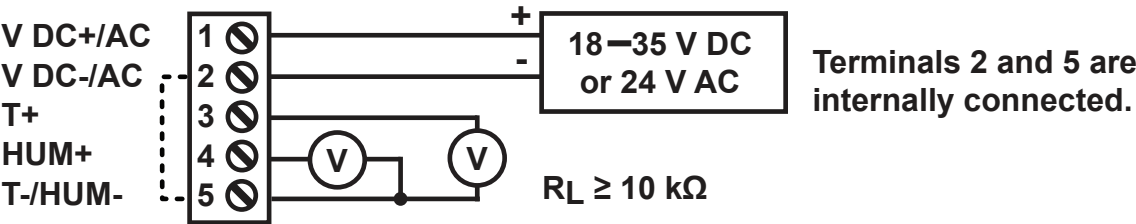


Figure 7 HMW89 wiring diagram

TMW88 (1 × 4–20 mA)

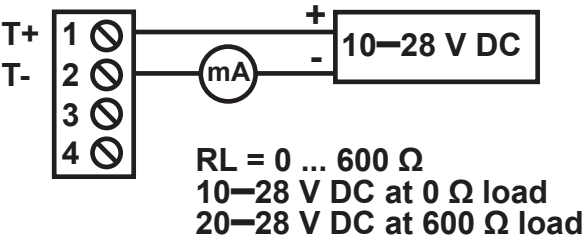
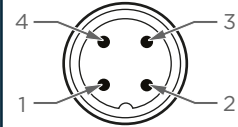


Figure 8 TMW88 wiring diagram

HMDW80 transmitters with M12 connector

Table 1 M12 connector pinout for TMW80 analog temperature measurement output

Connector pinout	Pin	Function
	Pin 1	Not connected
	Pin 2	Temperature +
	Pin 3	Not connected
	Pin 4	Temperature –

DIP switches

DIP switch factory default settings

The default DIP switch positions are shown in [Figure 9 \(page 8\)](#). Default output scaling: 0–100 %

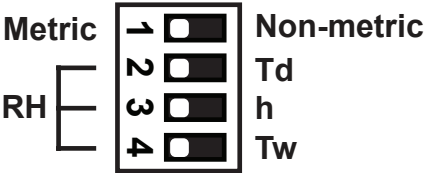


Figure 9 HMDW80 DIP switch factory defaults

- DIP 1 Left position: display units set to metric
- DIP 2 Left position: Relative humidity (RH)
- DIP 3 Left position: Relative humidity (RH)
- DIP 4 Left position: Relative humidity (RH)

DIP switch positions for dewpoint, enthalpy, and wet bulb temperature measurement

 Note that the temperature (T) output range is always set to -40 ... +60 °C (-40 ... +140 °F)

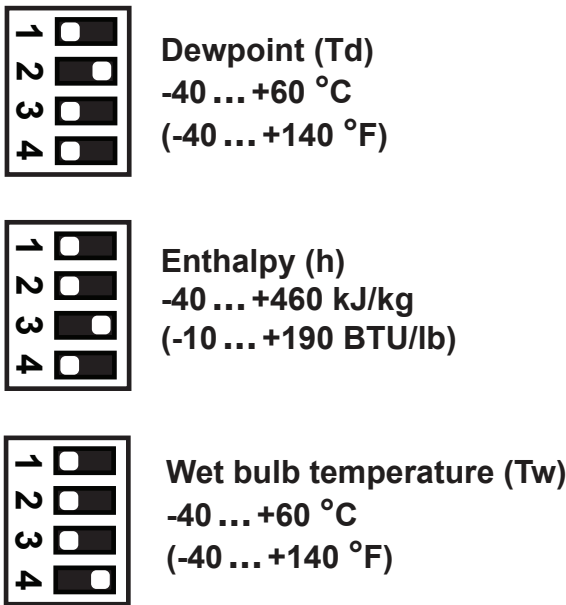


Figure 10 Dewpoint, enthalpy, and wet bulb temperature DIP positions