VAISALA

HMD60 Series Humidity and Temperature Transmitters

HMD62 and TMD62

Features

- Measurement accuracy up to ±1.5 %RH and ±0.1 °C (±0.18 °F)
- Analog output transmitter model options: HMD62 (RH and T) and TMD62 (T-only)
- All common humidity parameters available, including RH, dew point, enthalpy, and wet bulb temperature
- 4 ... 20 mA analog output
- Resistant to chemicals and dust
- IP66-rated body
- Traceable calibration certificate
- Easy field adjustment and output configuration with quick access to transmitter electronics also when installed
- Compatible with Vaisala Insight PC software

The duct mounted HMD60 series HUMICAP® transmitters are designed for light industrial applications and demanding HVAC applications such as museums, cleanrooms, and laboratories.

Robust Design, Stability, and Reliability

The all-metal body is suitable for building sites and industrial settings. HMD60 series transmitters provide state-of-the-art stability and environmental resistance thanks to the Vaisala HUMICAP® R2 sensor.

Traceable Accuracy

HMD60 transmitters are always delivered with a traceable (ISO9001) calibration certificate. Upon request, accredited (ISO17025) calibration certificates can also be provided.

Field Configurable Outputs

The analog HMD62 and TMD62 transmitter models use floating 4 ... 20 mA loop powered output. The analog outputs are field configurable with easy parameter selection using DIP switches.

For special scaling and other additional configuration and adjustment options, you can use the convenient Vaisala Insight PC software for Windows® (see www.vaisala.com/insight).

When required, HMD60 can also be intuitively field adjusted using trimmers or with the Vaisala HM70 hand-held meter.

Technical Data

Relative Humidity Measurement Performance

Humidity sensor	Vaisala HUMICAP®R2
Measurement range	0 ... 100 %RH
Stability	±2.5 %RH over 2 years
Accuracy at 0 ... +40 °C (+32 ... +104 °F) (Incl. Non-Linearity, Hysteresis and Repeatability)	
0...90%RH	±1.5%RH
90...100%RH	±2.5%RH
Accuracy at +40 ... +80 °C (+104 ... +176 °F) and -40 ... 0 °C (-40 ... +32 °F) (Incl. Non-Linearity, Hysteresis and Repeatability)	
0 ... 90 %RH	±2.5%RH
90 ... 100 %RH	±3.5%RH
Factory calibration uncertainty	±1.0 %RH
Start-up and Response Time	
Start-up time at +20 °C (+68 °F)	8 s
Response time (T63) at +20 °C (+68 °F)	15 s
Calculated Humidity Parameters (Default Analog Output Scale)	
Dew point	-40 ... +80 °C (-40 ... +176 °F)
Dew point / frost point	-40 ... +80 °C (-40 ... +176 °F)
Absolute humidity	0 ... 300 g/m^3 (0 ... 131.1 gr/ft^3)
Wet bulb temperature	-40 ... +80 °C (-40 ... +176 °F)
Enthalpy	-40 ... 1600 kJ/kg (-9.5 ... 695.6 Btu/lb)
Mixing ratio	0 ... 600 g/kg (0 ... 4200 gr/lb)

Temperature Measurement Performance

Measurement range	-40 ... +80 °C (-40 ... 176 °F)
Default analog output scale	-20 ... +80 °C (-4 ... +176 °F)
Accuracy at +20 °C (+68 °F)	±0.1 °C (0.18 °F)
Temperature dependence	±0.005°C/°C
Factory calibration uncertainty	±0.1 °C (0.18 °F)
Response time (T63) with free convection	8 min

Operating Environment

Operating temperature, electronics	-40 ... +60 °C (-40 ... +140 °F)
Operating temperature, probe	-40 ... +80 °C (-40 ... +176 °F)
Storage temperature range	-40 ... +80 °C (-40 ... +176 °F)
Maximum flow speed	50 m/s with sintered filter
Electromagnetic compatibility	EN61326-1, Industrial Environment

Mechanical Specification

Housing material	Cast aluminium
Probe material	Stainless steel
IP rating	IP66 (NEMA 4X)
Weight	511 g (18 oz)

Inputs and Outputs

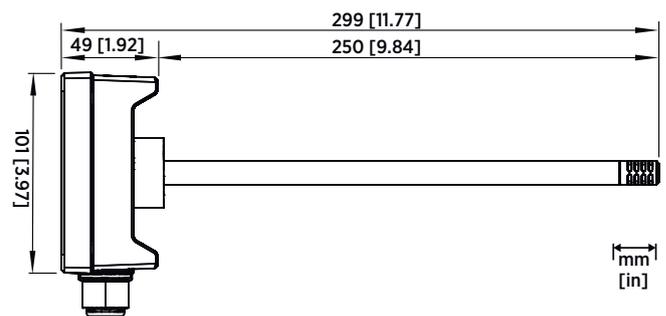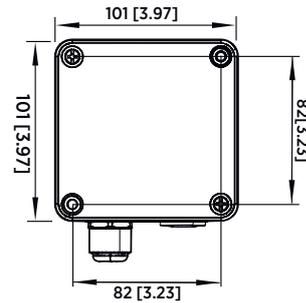|	
Power supply input	10 ... 35 VDC (RL = 0 Ω) 20 ... 35 VDC (RL = 600 Ω)
Analog outputs	• TMD62: 1 x T output 4 ... 20 mA • HMD62: 1 x RH output 4 ... 20 mA, 1 x T output 4 ... 20 mA • Calculated output parameters for HMD62 include T_d, T_{df}, A, X, T_w, and H.
Service port	M8 4-pin male connector: • MI70 hand-held indicator (requires cable 219980SP) • Vaisala Insight PC software[1] (requires USB cable 219690)
Screw terminal wire size	0.5 ... 2.5 mm^2

1) Vaisala Insight software for Windows® available at www.vaisala.com/insight.

Spare Parts and Accessories

USB cable for PC operation (Vaisala Insight software)	219690
Connection cable for HM70 (MI70) hand-held meter	219980SP
Membrane filter	ASM212652SP
Sintered filter	HM46670SP
Conduit fitting and O-ring (M16x1.5 / NPT1/2")	210675SP

HMD60 Dimensions (Front and Side)

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