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HMD60/70 Humidity and Temperature Transmitters for Ducts in HVAC Applications

Vaisala HUMICAP® Humidity and Temperature Transmitters HMD60 and HMD70 are designed for use in air conditioning applications where accurate and stable control of relative humidity and temperature are required.

Features/Benefits

- Full 0 ... 100 %RH measurement
- Accuracy up to ±2 %RH
- True two-wire transmitters with 4 ... 20 mA loop powered output (HMD60)
- Selectable signal output of 0 ... 1 V, 0 ... 5 V or 0 ... 10 V (HMD70) with optional current module also 0 ... 20 mA (HMD70)
- Vaisala HUMICAP® Sensor for excellent accuracy and long-term stability, negligible hysteresis and resistance to dust and most chemicals.
- Temperature compensated
- IP65 (NEMA 4) housing
- Also available as temperature-only transmitters HMD 60T/70T
- NIST traceable (certificate included)

The duct mounted Vaisala HUMICAP® Humidity and Temperature Transmitters HMD60 and HMD70 are designed for monitoring relative humidity and temperature in building energy management systems. The combination of high accuracy, stability and reliable operation, make these products the ideal choice for demanding applications.

Resistant to Chemicals and Dust

The duct mount HMD60 and HMD70 transmitters can also be used in many industrial humidity monitoring applications, where their stability and resistance to chemicals and dust are of great value. A useful feature of these duct mount transmitters is the ability to remove the electronics without removing the unit from the duct.

Measures both Humidity and Temperature

The HMD60 and HMD70 transmitters are available in three models: U for humidity measurement-only, Y for humidity and temperature measurement, and T for temperature only.

Fast, On-Site Calibration

The accuracy of the transmitters is simple to check using either the Vaisala HUMICAP® Hand-Held Humidity and Temperature Meter HM70 or the Vaisala HUMICAP® Humidity Indicator HMI41. The calibration can be done in seconds with a single potentiometer without disturbing the operation, resulting in great savings both in maintenance time and costs.

Technical Data

60 Series: 2-wire, 4 to 20 mA Output

Duct mount	RH only	HMD60U
	RH & T	HMD60Y
	T only	HMD60T

70 Series: 3-wire, Variable Voltage Output

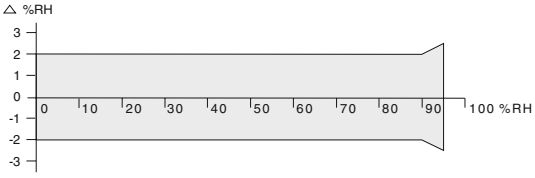
Duct mount	RH only	HMD70U
	RH & T	HMD70Y
	T only	HMD70T

Relative Humidity

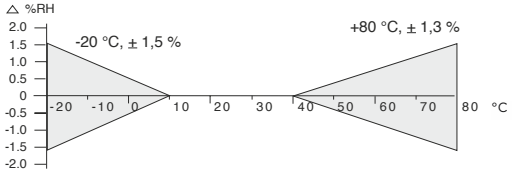
Measurement range

duct mount 0 ... 100 %RH*

Accuracy at +20 °C



Temperature dependence



Response time at +20 °C (+68 °F),

90% response 15 s (with membrane filter)

Stability ± 2 %RH / 2 years

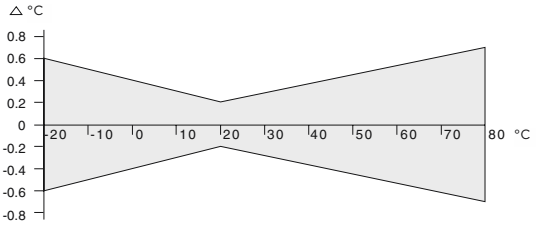
Temperature (Y and T Models)

Linearity better than 0.1 °C

Sensor Pt 1000 RTD Class F0.3 IEC 60751

Measurement range -20 ... +80 °C (-4 ... 176 °F) **

Accuracy



** Optional temperature scales are available on request.

General - 60 Series

Supply voltage	10 ... 35 VDC (RL = 0 ohm)
	20 ... 35 VDC (RL = 500 ohm)
Output signal	4 ... 20 mA

General - 70 Series

Supply voltage range depends on the selected output signal

	DC	AC
0 ... 10 V	19 ... 35 V	16 ... 24 V

See User´s guide for other output signals

WITH OPTIONAL CURRENT MODULE

0 ... 20 mA (RL = 0 ohm)	10 ... 35 V	11 ... 24 V
**0 ... 20 mA (RL = 500 ohm)	20 ... 35 V	17 ... 24 V

Power consumption @ 24 VAC

HMD70U	10 mA typical
HMD70Y	12 mA typical

General

Operating temperature range	
electronics	-5 ... +55 °C (+23 ... +131 °F)
probe	-20 ... +80 °C (-4 ... +176 °F)
Storage temperature range	-40 ... +80 °C (-40 ... +176 °F)
Maximum flow speed	50 m/s
Current module	part no. 18945 HM
Housing	
probe	stainless steel
electronics	cast aluminum
Connections	screw terminals 0.5 ... 1.5 mm^2
Sensor protection	
standard	membrane filter (part no. DRW010525)
optional	stainless steel sintered filter (part no. HM46670SP)
Humidity sensor	
HUMICAP180	15778HM
Cable thread-through	
bushing for 7 ... 10 mm (PG9)	
bushing for NPT1/2" cable glands	242020
cable housing IP65 (NEMA 4)	part no. 18941HM
armoured cable glands	part no. 10528HM
(must be ordered separately)	

Complies with EMC standard EN61326 and EN55022

Dimensions

Dimensions in mm (inches)