

# HMW61/71 Humidity and Temperature Transmitter for Industrial/HVAC Applications



*Vaisala HUMICAP® Humidity and Temperature Transmitters HMW61/71 are protected against dust and sprayed water.*

The wall mount Vaisala HUMICAP® Humidity and Temperature Transmitters HMW61 and HMW71 are designed for monitoring relative humidity and temperature in demanding environments.

## Withstands dust and sprayed water

The transmitters are protected against dust and sprayed water, meeting the IP65 (NEMA 4) requirements. All the materials used have been chosen for excellent corrosion resistance. In addition, the transmitters incorporate Vaisala HUMICAP® Sensor, which is insensitive to dust and most chemicals.

All of these features make the HMW61/71 transmitters especially suitable for humid and wet environments, e.g. greenhouses, live stock farms, indoor swimming pools and other wash down areas.

## Measures both humidity and temperature

The HMW61/71 transmitters are available as relative humidity only (U), and as relative humidity and temperature (Y).

## 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 operation, resulting in savings in both maintenance time and costs.

Customized calibration and maintenance contracts for HMW61/71 are available on request.

## Features/Benefits

- Full 0...100 %RH measurement
- Accuracy up to  $\pm 2$  %RH
- True two-wire transmitter with a 4...20 mA loop powered output (HMW61)
- Three-wire transmitter with a selectable signal output of 0...1 V, 0...5 V or 0...10 V (HMW71)
- Optional temperature measurement
- Electronic, on-site, one-point calibration
- 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
- NIST traceable (certificate included)



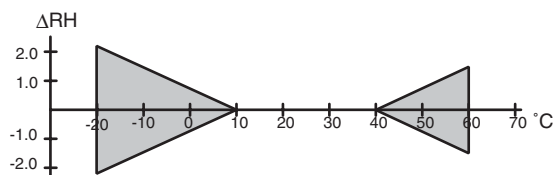
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# Technical Data

## Relative humidity

Measurement range	0 to 100 %RH
Accuracy at +20 °C (+68 °F)	±2 %RH (0 to 90 %RH) ±3 %RH (90 to 100 %RH)

Temperature dependence

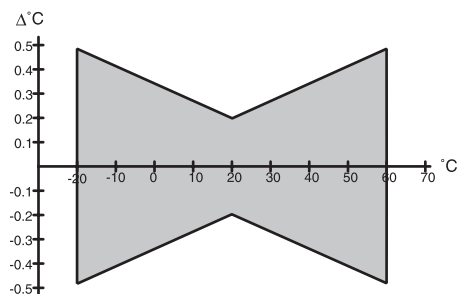


Response time (90%) at +20 °C (+68 °F) in still air	15 seconds (with membrane filter)
Humidity sensor	HUMICAP® 180

## Temperature (Y model only)

Measurement range	-20...+60 °C (-4...+140 °F)
	Optional temperature scales available on request.

Accuracy



Linearity	better than 0.1 °C (0.18 °F)
Temperature sensor	Pt 1000 IEC 751 class B

## General HMW61U/Y

Supply voltage	10...35 VDC (RL = 0 ohms) 20...35 VDC (RL = 500 ohms)
Output signal	4...20mA
Output signal corresponds to	0...100 %RH and -20...+80 °C (-4...+176 °F)

## General HMW71U/Y

Supply voltage range depends on the selected output signal. When an AC supply is used, an isolated source is recommended.

	DC	AC
0...1 V	10...35 V	9...24 V
0...5 V	14...35 V	12...24 V
0...10 V	19...35 V	16...24 V

Output signal corresponds to 0...100 %RH and -20...+80 °C (-4...+176 °F)

Factory setting 0...1 V. Other outputs selectable by jumper connections. An output change causes an error, which is less than 0.5 %RH without recalibration.

Power consumption @ 24 VAC

HMW71U	10 mA typical
HMW71Y	12 mA typical

## General

Operating temperature range	-20 °C...+60 °C (-4...+140 °F)
Storage temperature range	-40 °C...+80 °C (-40...+176 °F)
Material:	
Housing	ABS/PC plastic
Probe	ABS/PC plastic
Mounting plate	ABS plastic
Housing classification	IP65 (NEMA 4)
Sensor protection	
Membrane filter	part no. DRW010525
Probe cap	part no. HM47329
Connections	Screw terminals 0.5...1.5 mm <sup>2</sup>

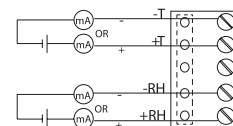
For field check

HM70 hand-held humidity and temperature meter or HMI41 humidity indicator

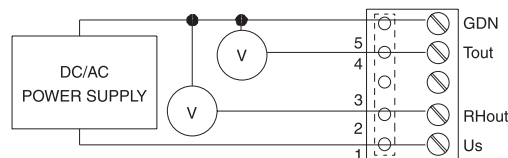
Complies with EMC standard EN61326-1:1997 + Am1:1998 + Am2:2001; Industrial Environment.

## Wiring

HMW61 wiring diagram

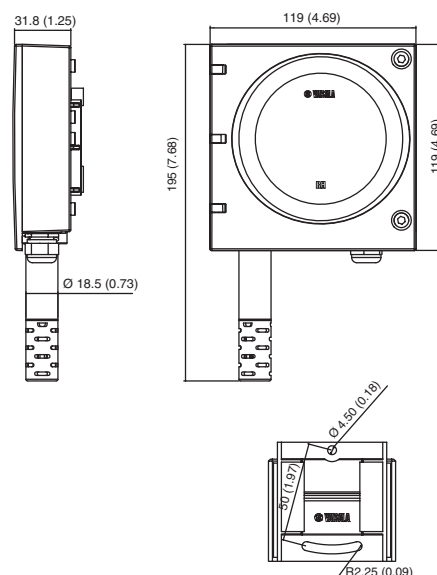


HMW71 wiring diagram



## Dimensions

Dimension in mm (inches).



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