



## HMW40/50 Wall and Duct Mount Transmitters for HVAC Applications



### FEATURES & BENEFITS

- Specially designed for building energy management systems
- 10...90 %RH measurement
- -10...+60 °C (+14...+140 °F) operating range for duct units
- -5...+55 °C (+23...+131 °F) operating range for wall units
- 4...20 mA 2-wire output (HMD/W40)
- Selectable voltage 3-wire output (HMD/W50)
- Combines excellent stability with easy installation and reliable operation
- No recalibration
- Fully interchangeable Vaisala INTERCAP® Sensor is easy to replace
- Low cost

### DESCRIPTION

Vaisala INTERCAP® Humidity and Temperature Transmitters HMD/W40/50 are competitively priced and require no routine maintenance – a smart choice for your HVAC/EMC applications.

#### The two and three-wire Vaisala

INTERCAP® Humidity and Temperature Transmitters HMD/W40 and HMD/W50 are designed for use in energy management systems in buildings. They combine excellent stability with easy installation and reliable operation. The HMD40/50 are for duct installations and the HMW40/50 for wall installations.

#### Low maintenance costs

The HMD40/50 humidity transmitters use Vaisala INTERCAP® Sensor - the world's first interchangeable capacitive humidity sensor. The transmitters require no recalibration if the sensor is changed. This means great savings in overall maintenance costs. The sensor is also insensitive to dust as well as most chemicals.

#### Measures both humidity and temperature

The 40/50 series is available as humidity and temperature (Y), or humidity only (U) transmitters. The transmitters measure humidity with a  $\pm 3$  %RH accuracy and a  $\pm 1$  %RH stability per year.

#### Selectable functions

(HMD/W50) The HMD/W50 transmitters feature selectable output signals of 0 to 1 V and 0 to 10 V. They can be powered by either AC or DC voltage.

### TECHNICAL DATA

#### Relative humidity

Measurement range (for which accuracy is specified)	10...90 %RH
Operating range	
HMD40/50	0...100 %RH
HMW40/50	0...90 %RH
Accuracy at +20 °C	better than $\pm 3$ %RH
Stability	$\pm 2$ %RH over 2 years
Temperature dependence -10...+60 °C	$< \pm 1.5$ %RH from (+14...140 °F)
Sensor part no.	INTERCAP® Sensor, 15778HM

#### Temperature (40Y and 50Y)

Measurement range	
HMD40/50	-10...+60 °C (+14...+140 °F)
HMW40/50	-5...+55 °C (+23...+131 °F)
Total accuracy at +25 °C	$\pm 0.3$ °C ( $\pm 0.54$ °F)
Temperature dependence	0.01 °C/°C (.01 °F/°F)
Sensor	Pt 1000 IEC 751 class B



# Regulator Systems

MANUFACTURER OF AIR CONDITIONING CONTROLS AND INSTRUMENTATION

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### TECHNICAL DATA

Output signal for relative humidity  
(equals 0...100 %RH)

HMD/W40 4...20 mA  
HMD/W50 0...1 V & 0...10 V

Output signal for temperature

HMD/W40 4...20 mA  
HMW50 0...1 V & 0...10 V  
HMD50 0...10 V  
HMD40Y, HMD50Y equals -40...+60 °C (-40..140 °F)  
HMW40Y, HMW50Y equals -5...+55 °C (+23..131 °F)

Load resistance >20 kohm  
Power supply  
HMD/W40 10...28 VDC  
HMD/W50 for 0...1 V output:  
12...35 VDC/12...24

VAC  
for 0...10 V output:  
15...35 VDC/15...24

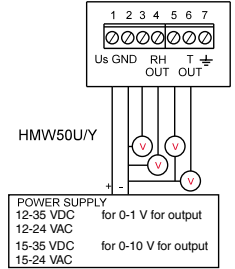
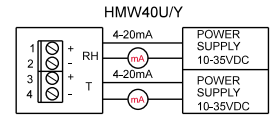
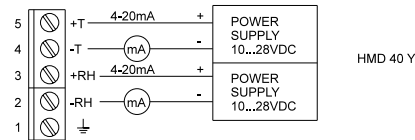
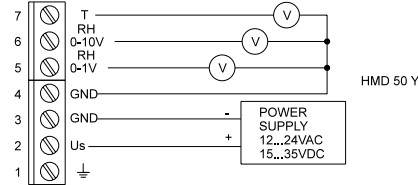
VAC  
Current consumption  
HMD/W40 4 mA minimum  
HMD/W50 6 mA typical

Operating temperature range  
HMD40/50 -10...+60 °C (+14...+140 °F)  
HMW40/50 -5...+55 °C (+23...+131 °F)  
Storage temperature range -40...+60 °C (-40...+140 °F)  
Operating humidity range  
HMD40/50 0...100 %RH  
HMW40/50 0...90 %RH

Sensor protection  
standard membrane lter part no. 17039HM  
option plastic grid, part no. 17038  
Housing Material ABS Plastic  
Housing classification (HMD40/50) IP65 (NEMA 4)

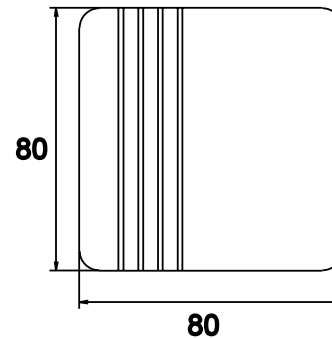
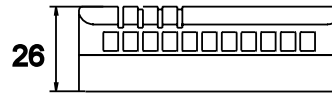
Complies with EMC standard EN61326-1:1997 + Am 1:1998; Generic Environment.

### WIRING



### DIMENSIONS

#### HMW40 / 50



#### HMD40 / 50

