

WM33 & 52

Relative Humidity and Temperature Transmitter, Multi Unit

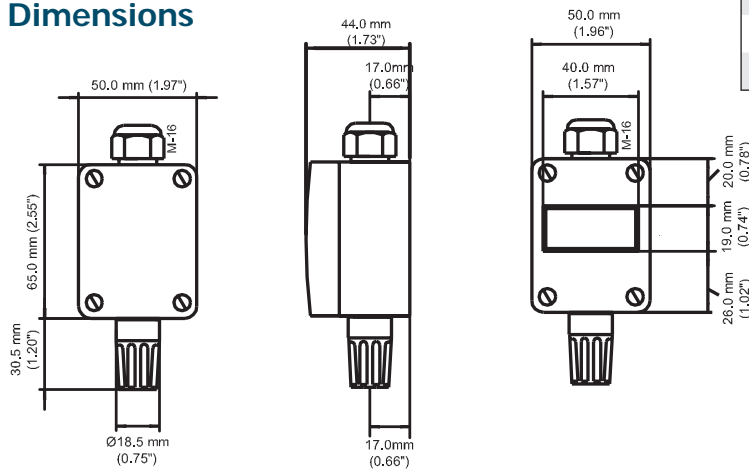


Wall-mounted units that have the ability to display and provide an output signal of % RH, dew point or absolute humidity and temperature. The WM Series offers excellent measurement accuracy and stability wherever a wall-mounted sensor is required.

Highlights

- WM33 was designed for low cost HVAC applications
- WM52 has digital technology and is designed for accurate measurements in a controlled environment
- Easy to re-calibrate to maintain high accuracy

Dimensions

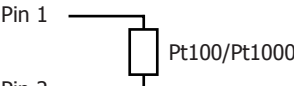


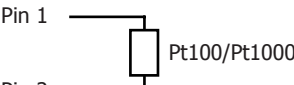
Technical Specifications	
Performance	
Measurement range (RH)	0–100% RH
Measurement range (T)	-4 to +176°F / -20 to +80°C or Pt100/1000
RH Accuracy at 23°C/73°F	WM52: $\pm 2\%$ RH (10–90% RH) WM33: $\pm 3\%$ RH (30–80% RH)
Temperature Accuracy	WM52: $\pm 0.2^\circ\text{C}$ (-10 to +50°C) $\pm 0.36^\circ\text{F}$ (14 to 122°F) WM33: $\pm 0.3^\circ\text{C}$ (5 to 40°C) $\pm 0.54^\circ\text{F}$ (41 to 104°F)
Stability – RH Sensor	$\pm 1\%$ RH/year
Response time – RH Sensor	<10 sec typical without filter (for 90% of the step change)
Electrical output/input	
Output signal	4–20 mA, 0–1, 0–5, 0–10 VDC
Supply voltage	14–30 VDC, 5–30 VDC (0–1 V & mA output)
Operating conditions	
Operating humidity Probe, housing, storage	5–95% non-condensing
Operating temperature Probe, Housing Storage	-20 to +160°F / -30 to +70°C -40 to +165°F / -40 to +75°C
PRT	
Measurement range	Pt100/1000: -60 to +395°F / -50 to +200°C
Accuracy	Pt100/1000: $\pm 0.15\%$
Mechanical specification	
Housing material	Molded polymer housing
Weight	2.9oz / 82g
Electrical connections	Screw terminals
Alternative outputs	
Dew point	-40 to +140°F / -40 to +60°C
Absolute humidity	0 - 87.4gr/ft ³ / 0–200g/m ³

Accessories and spare parts

You can check your hygrometer with the control kit HKC which is based on the principle of non-saturated salt solutions. Refer to technical data sheet CONTROL KIT.	Control Kit HKC
Electrical connection	Standard cable gland
Slotted protection cap, white	A000001
PVDF filter	A000014
PVDF filter with protection cap	A000016
Wire mesh filter with protection cap, black	A000021
Stainless steel sintered filter 5/10/20 µm	A000025/26/27
Foil 2µm filter with white protection cap	A000041
Foil 1.5µm filter with white protection cap	A000045

Electrical Connections

3/4 wire VDC power supply voltage output	
Pin 1	
Pin 2	Output temperature
Pin 3	Common ground
Pin 4	Output RH
Pin 5	Power supply V+

2 wire VDC power supply mA output	
Pin 1	
Pin 1	Output temperature -
Pin 2	Output temperature +
Pin 3	Output RH +
Pin 4	Output RH -

3/4 wire with display	
Pin 1	Output temperature
Pin 2	Common ground
Pin 3	Output RH, Dew Point, Absolute Humidity
Pin 4	Power supply V+

Order codes

Relative humidity and temperature transmitter

WM52 5 DX D T3

Accuracy and version configuration	
3% accuracy	WM33
2% accuracy	WM52

Output configuration 1	
4–20 mA analog output (not available with display code DX)	2
0–10 V analog output	3
0–5 V analog output	4
0–1 V analog output	5

Display configuration 1	
No display	XX
Display version – WM52 only	DX

Temperature output range and configuration	
No temperature output, RH signal only –	X (not available with display code DX)
-4 to +176°F / -20 to +80°C temp range	T1
32 to 122°F / 0 to 50°C temp range	T3
Pt100: -60 to +390°F / -50 to +200°C	T4 (not available with display code DX)
Pt1000: -60 to +390°F / -50 to +200°C	T5 (not available with display code DX)
Other output scaling on request	TX

Display configuration 2 - only in combination with display	
Dew point temperature (Tdew), only available with Temperature code T1	D
Relative humidity	H
Absolute humidity in g/m ³ / gr/ft ³ , only available with Temperature code T1	A

Example: WM52 5 DX D T3

Relative humidity and temperature sensor WM52, 2% accuracy, 0 to 1 V output for relative humidity and 32 to +122°F / 0 to 50°C temperature signal, with display.

Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version. Ref: WM33&52_1001US_P



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