

# WM281

## Digital Relative Humidity/Temperature Transmitter for Wall-Mounting



The WM281 relative humidity transmitter includes the interchangeable HYGROSMART module. The interchangeable module lets you recalibrate the transmitter simply by replacing the sensor head with the HYGROSMART module. As a result, maintenance costs are greatly reduced and down-time is minimized.

### Highlights

- Analog and digital output standard
- Based on the interchangeable Hygrosmart module
- Analog output signals selectable through software
- Metric or imperial measurement units selectable through software

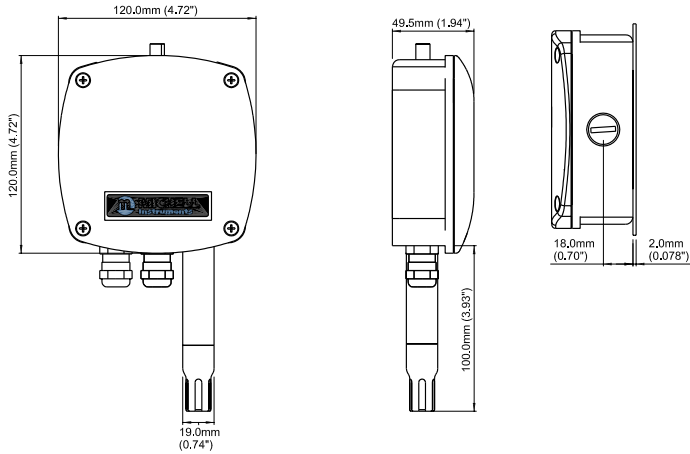
### Technical Specifications

Performance	
<b>Measurement range (RH)</b>	0–100% RH
<b>Measurement range (T)</b>	-30 to +70°C / -22 to +158°F
<b>Accuracy at 23°C / 73°F Humidity</b>	<±2% RH (5-95% RH)
<b>Accuracy at 23°C / 73°F Temperature</b>	±0.4°C (-10 to +50°C) ±0.72°F (14 to 122°F)
<b>Stability – RH Sensor</b>	<±1% RH/year
<b>Response time – RH Sensor</b>	<10 sec typical (for 90% of the step change)
Electrical output/input	
<b>Output signal configurable on request</b>	0–1 VDC, 0–5 VDC, 0–10 VDC 0–20 mA, 4–20 mA, RS485
<b>Supply voltage</b>	15 ≤ VAC ≤ 27 / 18 ≤ VDC ≤ 38
<b>Load resistance</b>	Current output: R ≤ 500 Ω
<b>Power consumption</b>	1.7 W
Operating conditions	
<b>Operating humidity</b> Probe, Housing, Storage	0–100% RH
<b>Operating temperature</b> Probe Housing Storage	-30 to +85°C / -22 to +185°F -30 to +70°C / -22 to +158°F -40 to +70°C / -40 to +158°F
Mechanical specification	
<b>Ingress protection</b>	IP67
<b>Material</b> Housing Probe	Aluminum die casting Delrin
<b>Dimensions</b> Housing Probe	120 x 120 x 49.5 mm / 4.72 x 4.72 x 1.94" L=100mm, ø 19mm / L=3.93", ø 0.74"
<b>Weight</b>	450g / 15.87oz
<b>Electrical connections</b>	Screw terminals

### 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	<b>Control Kit HKC</b>
Delrin slotted cap, with stainless steel mesh filter	<b>K7</b>
Stainless steel sintered filter	<b>H2</b>
Stainless steel sintered filter with teflon coating	<b>J2</b>
Delrin slotted cap, with polyester filter/PTFE	<b>Z7</b>
Cable USB for configuration "DIGICOR" (USB/TTL)	<b>F035263</b>
RS422/485 to PC (RS232) converter	<b>330185</b>
Hygrosmart with Pt100 output	<b>I7000.1</b>

## Dimensions



## Electrical Connections

Pin	Description
1	Power supply V+
2	Power supply V -
3	Output RS485 Ground
4	Ground
5	Output Channel 1 Temperature +
6	Output Channel 1 Ground -
7	Output Channel 2 RH +
8	Output Channel 2 Ground -
9	RS485 Data+
10	RS485 Data-
11	Not connected
12	Not connected
13	Output Channel 3 (not connected)
14	Output Channel 3 Ground (not connected)

**Do not connect pin 2 (V-) to pin 4 (Ground)**

## Order codes

Relative humidity and temperature transmitter

WM281 A X X K7 N030 P070

Temperature and humidity output	
4–20 mA 2-wire	A
0–10 V	B
0–5 V	C
0–1 V	D
0–20 mA	E

Protections and filters	
Delrin slotted cap, with stainless steel mesh filter	K7
Stainless steel sintered filter	H2
Stainless steel sintered filter with teflon coating	J2
Delrin slotted cap with polyester filter/PTFE	Z7

Maximum temperature	
See table A	

Minimum temperature	
See table A	

Table A	
-30°C / -22°F	N030
-20°C / -4°F	N020
0°C / 32°F	0000
+20°C / +68°F	P020
+30°C / +86°F	P030
+50°C / +122°F	P050
+70°C / +158°F	P070
Other output scaling available on request	TX

### Example: WM281 A X X K7 N030 P070

Relative humidity and temperature transmitter WM281. Temperature range -30°C to +70°C / -22°F to +158°F, with 4-20 mA 2-wire temperature and humidity output, delrin cover with stainless steel mesh filter.

**Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version. Ref: WM281\_97185\_V1\_UK\_1009**