

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	
Measurement range (RH)	0–100% RH
Measurement range (T)	-30 to +70°C / -22 to +158°F
Accuracy at 23°C / 73°F Humidity	<±2% RH (5-95% RH)
Accuracy at 23°C / 73°F Temperature	±0.4°C (-10 to +50°C) ±0.72°F (14 to 122°F)
Stability – RH Sensor	<±1% RH/year
Response time – RH Sensor	<10 sec typical (for 90% of the step change)
Electrical output/input	
Output signal configurable on request	0–1 VDC, 0–5 VDC, 0–10 VDC 0–20 mA, 4–20 mA, RS485
Supply voltage	15 ≤ VAC ≤ 27 / 18 ≤ VDC ≤ 38
Load resistance	Current output: R ≤ 500 Ω
Power consumption	1.7 W
Operating conditions	
Operating humidity Probe, Housing, Storage	0–100% RH
Operating temperature 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	
Ingress protection	IP67
Material Housing Probe	Aluminum die casting Delrin
Dimensions 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"
Weight	450g / 15.87oz
Electrical connections	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	Control Kit HKC
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
Cable USB for configuration "DIGICOR" (USB/TTL)	F035263
RS422/485 to PC (RS232) converter	330185
Hygrosmart with Pt100 output	I7000.1

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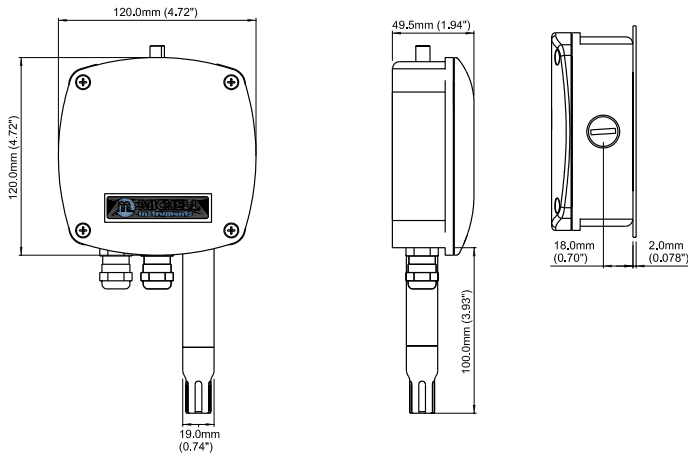
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Dimensions



Electrical Connections

Pin	
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