

WR283

Digital Relative Humidity and Temperature Transmitter - Remote High Temperatures

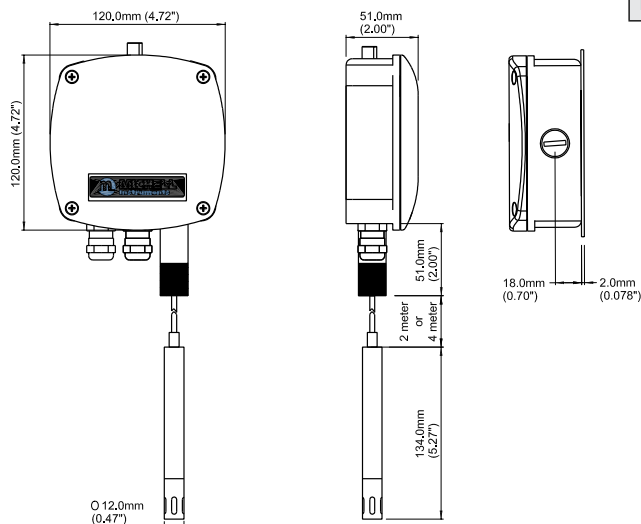


The WR283 relative humidity sensor uses the HYGROSMART module, integrated in the interchangeable probe and cable. This device can be used in high-temperature applications thanks to the remote placing of the measurement element and its small overall size. The interchangeable probe allows for simple recalibration and lower maintenance costs.

Highlights

- Analog and digital output standard
- Interchangeable probe
- Analog output signals selectable through software
- Metric or imperial measurement units selectable through software

Dimensions



Technical Specifications

Performance	
Measurement range (RH)	0–100% RH
Measurement range (T)	-30 to +200°C / -22 to +392°F
Accuracy at 23°C / 73°F Humidity	<±2% RH (5–95% RH)
Accuracy at 23°C / 73°F Temperature	±0.4°C / ±0.72°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	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 +200°C / -22 to +392°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 Stainless steel
Dimensions Housing Probe	120 x 120 x 51mm / 4.72 x 4.72 x 2.00" L=134mm, ø12mm / L=5.27", ø 0.47"
Weight	450g / 15.87oz
Electrical connections	Screw terminals

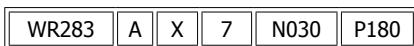
Accessories and spare parts	
You can check your hygrometer with the control kit HKC which is based on the principle of non-saturated salt solutions. Refer to technical data sheet CONTROL KIT	Control Kit HKC
Aluminum mounting flange for fixing probe	FLA012
Cable USB for configuration "DIGICOR" (USB/TTL)	F035263
RS422/485 to PC (RD232) converter	330185
Stainless steel mesh filter	K8
PEEK cap with stainless steel mesh filter	K9
Stainless steel sintered filter	H3
Stainless steel filter, teflon coated	J3
SS probe with 2m cable, SS cover and SS mesh filter	USTE002
SS probe with 4m cable, SS cover and SS mesh filter	USTE005
SS probe with 2m cable and SS sintered filter	USTE006
SS probe with 4m cable and SS sintered filter	USTE007
Victrex PEEK probe cover with 2m cable & SS mesh filter	USTE008
Victrex PEEK probe cover with 4m cable & SS mesh filter	USTE009

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



Output configuration	
4-20 mA	A
0-10 V	B
0-5 V	C
0-1 V	D
0-20 mA	E

Interchangeable Probe	
Stainless steel probe with 2m / 6.5' cable output, plus stainless steel cover with stainless steel mesh filter (standard)	2
Stainless steel probe with 4m / 13.1' cable output, plus stainless steel cover with stainless steel mesh filter	5
Stainless steel probe with 2m / 6.5' cable output and stainless steel sintered filter	6
Stainless steel probe with 4m / 13.1' cable output and stainless steel sintered filter	7
Victrex PEEK probe cover with 2m / 6.5' cable output and stainless steel mesh filter	8
Victrex PEEK probe cover with 4m / 13.1' cable output and stainless steel mesh filter	9

Maximum temperature
See table A

Minimum temperature
See table A

Table A	
Temperature value	Code
-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
+100°C / +212°F	P100
+140°C / +284°F	P140
+150°C / +302°F	P150
+180°C / +356°F	P180
+200°C / +392°F	P200
Other output scaling available on request TX	

Example: WR283 A X 7 N030 P180

Relative humidity and temperature transmitter WR283 with 4–20 mA 2-wire humidity signal, stainless steel probe with 4m / 13.1' cable and stainless steel sintered filter, -30 to +180°C / -22 to +356°F temperature range.

Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version. Ref: WR283_97192_V1_UK_1009