

# DT282

## Digital Relative Humidity and Temperature Transmitter - Duct Installation



The DT282 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

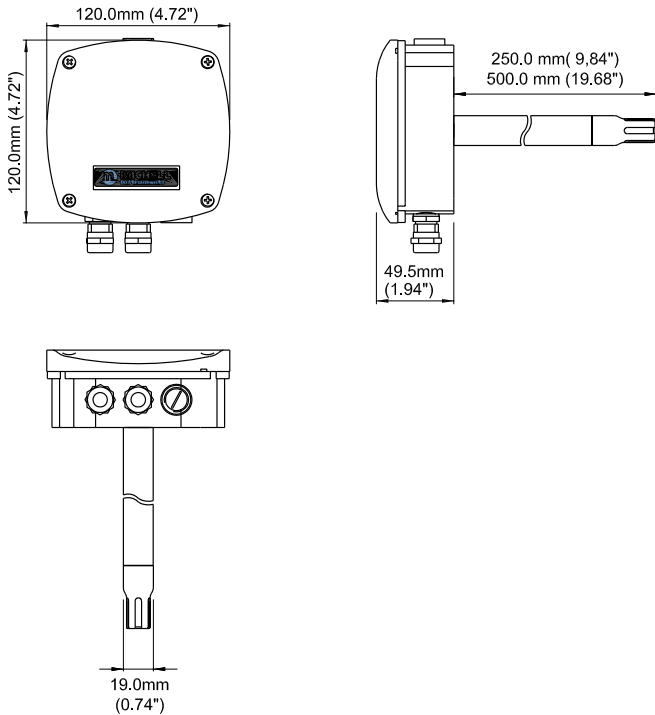
### Technical Specifications

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 / ±0.72°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</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 SS Aisi 316
<b>Dimensions</b> Housing Probe	120 x 120 x 49.5mm / 4.72 x 4.72 x 1.94" L=90mm, ø18mm / L=3.54", ø 0.71"
<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>
Aluminum mounting flange for fixing probe	<b>FLA019</b>
Cable USB for configuration "DIGICOR" (USB/TTL)	<b>F035263</b>
RS422/485 to PC (RD232) converter	<b>330185</b>
Hygrosmart with Pt100	<b>I7000.1</b>
AISI 316 cap with stainless steel mesh filter	<b>K6</b>
Stainless steel sintered filter	<b>H2</b>
Stainless steel sintered filter with teflon coating	<b>J2</b>
Stainless steel cap with polyester filter/PTFE	<b>Z6</b>

**Dimensions**



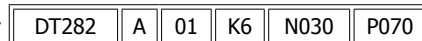
**Electrical Connections**

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



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

Probe length	
250.0mm / 9.84"	01
500.0mm / 19.68"	02

Protections and filters	
AISI 316 cap with stainless steel mesh filter	K6
Stainless steel sintered filter	H2
Stainless steel sintered filter, teflon coated	J2
Stainless steel cap with polyester filter/PTFE	Z6

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
Other output scaling available on request TX	

**Example: DT282 A 01 K6 N030 P070**

Relative humidity and temperature transmitter DT282 with 4–20 mA 2-wire humidity signal, stainless steel probe 250mm / 9.84" length, with filter, -30 to +70°C / -22 to +158°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: DT282\_97189\_V1\_UK\_1009**