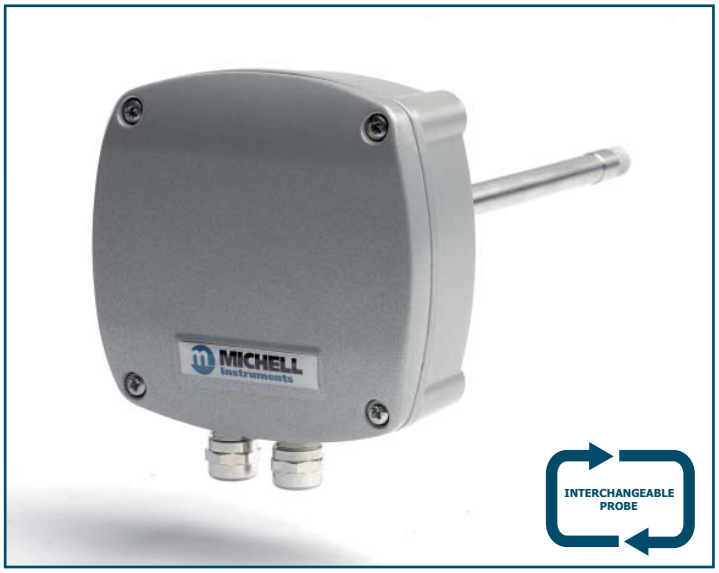
# DT284

## Digital Relative Humidity and Temperature Transmitter Remote Version




The DT284 relative humidity sensor uses the HYGROSMART module, integrated in the interchangeable probe. This device can be used in high-temperature applications due to the remote placing of the measurement element and its small overall size.

### Highlights

- 12mm / 0.47" probe diameter
- Analog and digital output standard
- Interchangeable probe
- Analog output signals selectable through software
- Metric or US measurement units selectable through software

### Technical Specifications

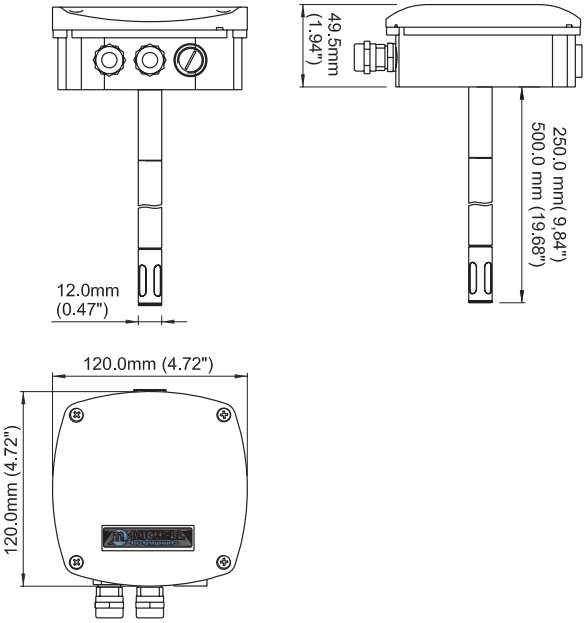
| | |
|---|---|
| **Performance** | |
| **Measurement range (RH)** | 0–100% RH |
| **Measurement range (T)** | -30 to +140°C / -22 to +284°F |
| **Accuracy at 23°C / 73°F Humidity** | <±2% RH (5–95% RH) |
| **Accuracy at 23°C / 73°F Temperature** | ±0.4°C / ±0.72°F |
| **Stability – RH Sensor** | ±1% 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<br>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**<br>Probe, Housing, Storage | 0–100% RH |
| **Operating temperature**<br>Probe<br>Housing<br>Storage | <br>-30 to +140°C / -22 to +284°F<br>-30 to +70°C / -22 to +158°F<br>-40 to +70°C / -40 to +158°F |
| **Mechanical specification** | |
| **Ingress protection** | IP67 |
| **Material**<br>Housing<br>Probe | <br>Aluminum die casting<br>Stainless steel |
| **Dimensions**<br>Housing<br><br>Probe | <br>120 x 120 x 49.5mm /<br>4.72 x 4.72 x 1.94"<br>L=250/500mm, ø12mm<br>L=9.84/19.7", ø 0.47" |
| **Weight** | 450g / 15.9oz |
| **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 protection cap with stainless steel mesh filter | **K9** |
| Stainless steel sintered filter | **H3** |
| Stainless steel sintered filter, teflon coated | **J3** |

# DT284

## Dimensions




## Electrical Connections

| Pin | |
|---|---|
| 1 | V+ |
| 2 | V - |
| 3 | RS485 output 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 | Not connected) |
| 14 | Not connected) |

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

## Order codes

Relative humidity and temperature transmitter | DT284 | A | X | 11 | N030 | P140 |

| Temperature and humidity output | |
|---|---|
| 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 250.0mm / 9.9”, and stainless steel cover with stainless steel mesh filter (standard) | 3 |
| Stainless steel probe 500.0mm / 19.7”, and stainless steel cover with stainless steel mesh filter | 10 |
| Stainless steel probe 250.0mm / 9.8” and stainless steel sintered filter | 11 |
| Stainless steel probe 500.0mm / 19.7” and stainless steel sintered filter | 12 |
| Probe 250.0mm / 9.8” with Victrex PEEK termination and cover and stainless steel mesh filter | 13 |
| Probe 500.0mm / 19.7” with Victrex PEEK termination and cover and stainless steel mesh filter | 14 |

| Maximum temperature |
|---|
| See table A |

| Minimum temperature |
|---|
| See table A |

| Table A | |
|---|---|
| Temperature value | Code |
| -50°C / -58°F | N050 |
| -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 |

**Example: DT284 A X 11 N030 P140**
Relative humidity and temperature transmitter DT284 for high-temperature applications. Temperature range -30°C to +140°C / -22 to +284°F, 4-20 mA 2-wire temperature/humidity signal, interchangeable stainless steel probe 250.0mm / 9.8” and stainless steel sintered filter.

**Please note: Michell Instruments adopts a continuous development program which sometimes necessitates specification changes without notice. Please contact us for latest version. Ref: DT284_0908**

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