

# Humidity

On the next pages you will find three different hygrometers: one hygrometer with fixed humidity probe, one with humidity probe and cable and one hygrometer which also measures the surface temperature via infrared.



## Hygrometers

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### Applications:

- Humidity and temperature measurement
  - Surface temperature measurement with special probes
  - Process monitoring
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# Hygrometers

Find your perfect hygrometer:

| Hygrometers                             | Measurement range | Probe type                          | Probe connection |
|---|-------------------|-------------------------------------|------------------|
| TFH 610 Hygrometer                      | 0% rH ... 100% rH | Capacitive                          | Fixed            |
| TFH 620 Hygrometer                      | 0% rH ... 100% rH | Capacitive                          | Lemo             |
| THI 350 Hygrometer/Infrared Thermometer | 0% rH ... 100% rH | Infrared (temperature and humidity) |                  |



## TFH 610 Hygrometer with fixed humidity probe



### Technical Data

|                                |                                       |
|--------------------------------|---------------------------------------|
| Measurement range: Humidity    | 0 % rH ... 100 % rH                   |
| Measurement range: Temperature | 0 °C ... +50 °C (32 °F ... 122 °F)    |
| Accuracy: Humidity             | ±2.5 % rH (from 10 % ... 90 %)        |
| Accuracy: Temperature          | ±0.5 °C (±0.9 °F)                     |
| Resolution: Humidity           | 0.1 %                                 |
| Resolution: Temperature        | 0.1 °C (0.2 °F)                       |
| Operating temperature          | 0 °C ... +50 °C (32 °F ... 122 °F)    |
| Storage temperature            | -25 °C ... +60 °C (-13 °F ... 140 °F) |
| Protection class               | IP 40                                 |
| Dimensions (L x W x H)         | 115 x 54 x 22 mm                      |
| Weight                         | Approximately 90 g                    |
| Humidity sensor                | External capacitive sensor, fixed     |
| Temperature sensor             | External thermistor                   |
| Battery                        | Lithium battery 3.0 V / 1000 mAh      |
| Battery lifetime               | Up to 5 years                         |
| Sampling rate                  | 1 sec to 15 sec                       |
| Certificate                    | Factory calibration certificate       |

- High precision
- Approximately 5 years battery life time

| Type    | Description   | Part No.  |
|---------|---|-----------|
| TFH 610 | Hygrometer for humidity and temperature measurement (including probe) | 1340-5610 |

## TFH 620 Hygrometer with MIN/MAX and hold options



### Technical Data

|                                |  |
|--------------------------------|--|
| Measurement range: Humidity    | 0 % rH ... 100 % rH                    |
| Measurement range: Temperature | 0 °C ... +60 °C (32 °F ... 140 °F)     |
| Accuracy: Humidity             | ±2 % rH (from 5 % ... 95 %)            |
| Accuracy: Temperature          | ±0.3 °C (±0.5 °F)                      |
| Resolution: Humidity           | 0.1 %                                  |
| Resolution: Temperature        | 0.1 °C (0.2 °F)                        |
| Operating temperature          | 0 °C ... +50 °C (32 °F ... 122 °F)     |
| Storage temperature            | -25 °C ... +60 °C (-13 °F ... 140 °F)  |
| Protection class               | IP 67 (device without probe)           |
| Dimensions (L x W x H)         | 115 x 54 x 22 mm                       |
| Weight                         | Approximately 90 g                     |
| Humidity sensor                | External capacitive sensor, removeable |
| Temperature sensor             | External Pt 1000 sensor                |
| Probe position                 | External, plug-in probe                |
| Battery                        | Lithium battery 3.0 V / 1000 mAh       |
| Battery lifetime               | Up to 5 years                          |
| Sampling rate                  | 1 sec to 15 sec                        |
| Certificate                    | Factory calibration certificate        |

- Cable probe available
- High precision
- Approximately 5 years battery life time

| Type              | Description   | Part No.  |
|-------------------|---|-----------|
| TFH 620 + TPH 100 | Hygrometer for humidity and temperature measurements with air probe | 1340-5621 |

## Accessories for TFH Hygrometers



**AG 140** Protective cover for handheld devices, red



**AH 600** Calibration set for TFH 620

| Type   | Description   | Part No.  |
|--------|---|-----------|
| AG 140 | Protective cover for handheld devices, red              | 1340-5005 |
| AH 100 | PTFE filter for TFH 610 and TFH 620                     | 1340-5627 |
| AH 200 | Bronze sintered filter for TFH 610 and TFH 620          | 1340-5626 |
| AH 300 | Stainless steel sintered filter for TFH 610 and TFH 620 | 1340-5625 |
| AH 500 | Carrying case for TFH 620                               | 1340-5090 |
| AH 600 | Calibration set for TFH 620                             | 1340-5097 |

## THI 350 Hygrometer/Infrared Thermometer with automatic dew point calculation



### Technical Data

|   |  |
|---|--|
| Measurement range   | -60 °C ... +500 °C (-76 °F ... +932 °F)  |
| Temperature accuracy  | ±1.0 °C (+15 °C ... + 35 °C),<br>±2 °C (-33 °C ... 500 °C),<br>±2 °C for the remaining measurement range |
| Emissivity factor   | 0.95 standard, adjustable from 0.1 to 1.0  |
| Resolution (-9,9~199,9 °C)  | 0.1 °C / 0.1 °F  |
| Response time   | 1 sec  |
| Operating Temperature   | 0 °C to +50 °C (+32 °F to +122 °C)   |
| Distance:Spot   | 12:1   |
| Measurement range relative air humidity (T <sub>amb</sub> = 23 ± 5degC) | 1~99 %, Accuracy: ± 3 % of 20~80 %, otherwise ±5 %   |
| Dew point   | -50~50 °C, Accuracy: ±2.5 °C of 20~30 %rH;<br>±2 °C of 31~40 % rH; ±1,5 °C of 41~95 rH                   |
| Battery   | 2 x AAA Micro (Alkaline recommended)   |
| Battery lifetime  | Typically 180 h, at least 140 h of continuous use  |
| Dimensions (L x W x H)  | 46 x 143 x 184.8 mm  |
| Certificate   | Factory calibration certificate  |

- Visible and audible alarm upon exceeding of user settable limits
- Distance:spot ratio = 12:1

| Type    | Description  | Part No.  |
|---------|--|-----------|
| THI 350 | Infrared thermometer with air humidity measurement | 1340-1790 |