

# Humidity

On the following pages you will find two different hygrometers: one hygrometer with fixed humidity probe and one with humidity probe and cable.



## 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



## 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	IP40
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 / 1,000 mAh
Battery lifetime	Up to 5 years
Sampling rate	1 sec to 15 sec
Certificate	Factory calibration certificate (32.8 % rH and 75.4 % rH)

- Approximately 5 years battery life time

Type	Description	Part No.
TFH 610	Hygrometer for humidity and temperature measurement	1340-5610A

## Accessories for TFH Hygrometers



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



**AH 100** PTFE filter for TFH 610 and TFH 620



**AH 300** Stainless steel sintered filter for TFH 610 and 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 300	Stainless steel sintered filter for TFH 610 and TFH 620	1340-5625

## 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	IP67 (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, cable length 90 cm
Battery	Lithium battery 3.0 V / 1,000 mAh
Battery lifetime	Up to 5 years
Sampling rate	1 sec to 15 sec
Certificate	Factory calibration certificate (32.8 % rH, 52.9 % rH and 75.4 % rH)

- 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, cable length 90 cm	1340-5621A

## Filter for the ebro humidity devices

ebro® provides convenient filters for their humidity devices in order to protect the sensitive humidity probes from mechanical strain and dust. Effectively, this enhances the protection class of the device.



### Installation of the filters

Installation is very easy: unscrew the plastic protection cap – screw the filter – done!

### Types of filters

**ebro® provides two different filters:**



The **stainless steel sintered filter** also increases the protection class to IP40. The stainless steel massively increases the mechanical protection, e.g. from crushing the filter. Nothing will happen to your probe! In addition, the stainless steel is highly resistant to corrosion even in high temperature applications.



The **PTFE-filter** provides little protection from mechanical strain but seals the probe from dust – protection class IP60. In dusty environments, unprotected humidity probes, or probes protected by sintered filters, can quickly be covered in dust. This massively affects the humidity measurement, or prohibits it entirely. It won't happen with the PTFE filter.

Type	Description	Part No.
AH 100	PTFE filter	1340-5627
AH 300	Stainless steel sintered filter	1340-5625

Both data loggers and handheld devices can be equipped with the filters:

- EBI 25-TH (see p. 15)
- EBI 300 TH (see p. 28)
- TFH 620 (see p. 99)
- EBI 300 TH (see p. 25)
- TFH 610 (see p. 98)

