

# HUMIDITY

## Capacitive humidity sensor Typ FHA646-E1 / -E1C / -E2C / -E3C



- ▶ Handy sensor for test measurements and stationary applications up to +60 °C.
- ▶ Sensor tube made of plastic.
- ▶ Intelligent ALMEMO® extension cables, up to 100 meters long.



- ▶ Sturdy sensor for test measurements and stationary applications up to +80 °C.
- ▶ Sensor tube made of stainless steel.
- ▶ Splash-protected cable gland.
- ▶ Active compensation of humidity measurement by means of the integrated temperature sensor (new measuring range for all ALMEMO® devices with effect from 2003).
- ▶ Wide range of operating temperatures.
- ▶ Intelligent ALMEMO® extension cables, up to 100 meters.

### Accessories :

- Protective caps see page 09.06
- Brackets for wall mounting, distance from wall approx. 40 mm
- Movable aluminum screw connection with Teflon sealing ring
- Connecting flange for screw connection, hole circle 38 mm Ø
- Extension cable, 2 meters long
- Extension cable, 4 meters long
- Intelligent extension cable, 5 meters long
- Intelligent extension cable, 10 meters long
- Intelligent extension cable, 20 meters long
- Intelligent extension cable, 30 meters long
- Intelligent extension cable, 50 meters long
- Intelligent extension cable, 100 meters long

### Types (including manufacturer's test certificate)

- Humidity sensor with plastic tube, -20 to +60 °C
- Humidity sensor with stainless steel tube 160 mm, active temperature compensation, -20 to +80 °C
- Humidity sensor with stainless steel tube 270 mm, active temperature compensation, -20 to +80 °C
- Humidity sensor with stainless steel tube 530 mm, active temperature compensation, -20 to +80 °C

### Technical data :

#### Operative range:

FHA646-E1	-20 to +60 °C/ 5...98 % r.H.
FHA646-E1C / -E2C / -E3C	-20 to +80 °C/ 5...98 % r.H.

#### Humidity measuring circuit

Measuring range :	0 to 100 % r.H.
Sensor :	capacitive
Accuracy :	± 2 % r.H. at nominal temperature
Reproducibility :	<1 % r.H. at nominal temperature
Nominal temperature :	+25 ± 3 °C
Sensor operating pressure :	atmospheric pressure
Response time T <sub>90</sub> :	approx. 10 seconds (without filter) at 5 m/s

#### Temperature measuring circuit

Sensor :	NTC type N
Accuracy :	-20 to 0°C: ±0,4°C 0 to 70°C: ±0,1°C 70 to 80°C: ±0,6°C
Reproducibility :	0,1°C

#### Mechanical design

Sensor tube :	diameter 12 mm
FHA646-E1 :	plastic, 155 mm long
FHA646-E1C:	stainless steel, 160 mm long
FHA646-E2C:	stainless steel, 270 mm long
FHA646-E3C:	stainless steel, 530 mm long
Protective cap :	SK7, metal-mesh filter
Cable gland :	splash-protected (only FHA646xC)
Cable :	1.5 meters long, with ALMEMO® connector, longer ALMEMO® cable (up to 30m), available on request

- Order no. : ZB9600W
- Order no. : ZB9600KV
- Order no. : ZB9600F
- Order no. : ZA9060VK2
- Order no. : ZA9060VK4
- Order no. : ZA9060VK5
- Order no. : ZA9060VKC10
- Order no. : ZA9060VKC20
- Order no. : ZA9060VKC30
- Order no. : ZA9060VKC50
- Order no. : ZA9060VKC100

- Order no. : FHA646E1**
- Order no. : FHA646E1C**
- Order no. : FHA646E2C**
- Order no. : FHA646E3C**