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 T90: 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:
  - FHA646-E1: diameter 12 mm
  - FHA646-E1C: plastic, 155 mm long
  - FHA646-E2C: stainless steel, 160 mm long
  - FHA646-E3C: stainless steel, 270 mm long
  - FHA646-E3C: stainless steel, 530 mm long
- Protective cap: SK7, metal-mesh filter (only FHA646xC)
- Cable gland: splash-protected
- Cable:
  - 1.5 meters long, with ALMEMO® connector, longer ALMEMO® cable (up to 30m), available on request

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

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

We reserve the right to make technical changes.