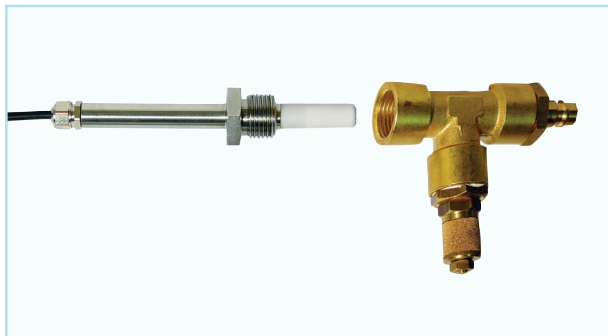


HUMIDITY

Pressure-sealed humidity sensor FHA 646 E7C



- ▶ Compact screw-fit sensor made from stainless steel
- ▶ for pressure pipes up to 16 bar
- ▶ Splash-protected screw-fit 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).

New

Option for FHA646E7C: Sensor coating

Heavily polluted and / or corrosive environments may damage the humidity sensor and cause drift in the measured values. The coating that completely covers the probe head (temperature / humidity sensor element) minimizes the adverse effects of dirty media and much improves long-term stability.

Order no. OA9646SC

Accessories

Adapter for measuring compressed air

Protective caps see page 09.05

Extension cable, 2 meters

Extension cable, 4 meters

Intelligent ALMEMO® extension cable, 10 meters long

Other lengths 20, 30, 50, 100 meters see page 07.03

Order no. ZB96467AP

Order no. ZA9060VK2

Order no. ZA9060VK4

Order no. ZA9090VK10

Technical data

Operative range -20 to +80 °C / 5 to 98 % RH

Humidity measuring circuit

Measuring range 0 to 100 % RH

Sensor capacitive

Accuracy ±2% RH in the range <90% RH at nominal temperature

Reproducibility <1% RH at nominal temperature

Nominal temperature 25 ±3 °C

Sensor operating pressure up to 16 bar

Response time T90 approx. 8 seconds (without filter)

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 Stainless steel, diameter 12 mm, total length 140 mm

Mounting Screw thread G1/2" Immersion depth 47 mm

Protective cap SK7, PTFE sinter filter

Cable connector 1.5 meters, with ALMEMO® Longer ALMEMO® cables (up to 30 meters) on request

Variants

(including manufacturer's test certificate and pressure test protocol)

Screw-fit humidity sensor, -20 to +80 °C, total length 140 mm, cable 1.5 meters

Order no. FHA646E7C

Capacitive humidity sensor FHA 646 R



- ▶ Compact sensor with extremely small dimensions
- ▶ Wide operating temperature range -30 to +100 °C
- ▶ Particularly suitable for measuring operations between PCBs, inside cases, in walls, ceilings, and insulation layers used in the construction industry, and for the protection of listed historic monuments

Accessories

Clamped screw connection with thread adapter for telescopic extension / extension sets (max. 80 °C) Order no. ZV9915KV

Telescope extension

Ø 15 to 24 mm, 330 / 1010 mm Order no. ZV9915TV

Extension set

Ø 15 mm, 4 x 255 mm Order no. ZV9915VR3



Extension cable, 2 meters Order no. ZA9060VK2

Extension cable, 4 meters Order no. ZA9060VK4

Intelligent ALMEMO® extension cable, 10 meters long Order no. ZA9090VKC10

Other lengths 20, 30, 50, 100 meters see page 07.03

Technical data

Operative range -30 to +100 °C / 5 to 98 % RH

Humidity measuring circuit

Measuring range 0 to 100 % RH

Sensor capacitive

Accuracy ±2% RH in the range <90% RH at nominal temperature

Reproducibility <1% RH at nominal temperature

Nominal temperature 25 ±3 °C

Response time T₆₃ approx. 10 seconds at 1 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 +100 °C ±0.6 °C

Reproducibility 0.1 °C

Mechanical design

Sensor tube nickel-plated, 50 mm long, 5 mm Ø

Protective cap None

Cable High-temperature cable (up to 100 °C), 2 meters long, with ALMEMO® connector (No other lengths available)

Variants

Humidity sensor -30 to +100 °C with sensor tube 50 mm, cable 2 meters Order no. FHA646R

01/2011 We reserve the right to make technical changes.

ALMEMO® temperature / humidity sensor in protective all-weather housing FHA 646 AG



Technical data and variants

see Chapter 13, Meteorology, page 13.12