



- Measurement of Relative Humidity
- Display
- Recommended operating range: 5 - 95 % RH, 0 - 60°C
- Short response times
- Analogue output (4 - 20 mA)
- Limit contact optional (open collector)
- For indoors and air ducts
- Capacitive method of measurement



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Model:
AFA-G



Description:

Type AFA-G humidity sensors are suited for measuring relative humidity in air or in other non-aggressive gases. The sensors are based on capacitive metrology which is reasonably-priced, maintenance-free and highly accurate. Capacitive humidity sensor elements form the basis of these sensors. An electrode system, a moisture-sensitive polymer layer and a gold layer that is permeable to vapour are situated on a small thin glass or ceramic substrate. Since the hygroscopic polymer layer can absorb water molecules that alter its dielectric constant, this layered system acts as a moisture-dependant capacitor, whose capacitance is a measure of the surrounding relative humidity. The change in capacitance is converted to an electrical output signal by electronics normally mounted on the humidity sensor element. Both parts form a capacitive humidity sensor that can be adjusted using humidity references. Accuracy is approximately $\pm 2\%$ RH.

Besides providing the output signal of 4-20 mA, the measuring instrument allows the measured value to be read off a red LED display at the measuring point. The display is supplied from the 4-20 mA signal current and thus requires no additional power supply. The measuring instruments are also available with a programmable switching output. Sensors from the range are delivered with an aluminium sensor unit and a gauze filter. The connection is made with a right-angle plug according to DIN 43650.

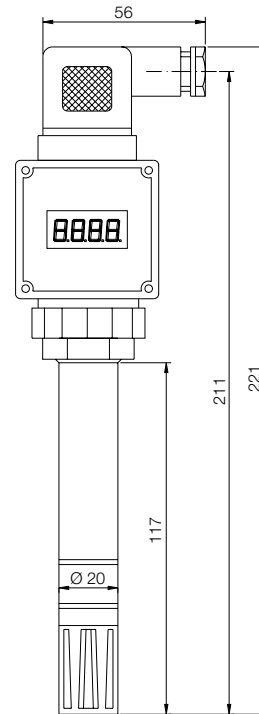
Application examples:

- Monitoring and control of air conditioning systems, drying plant, humidifiers and dehumidifiers
- Bakery technology
- Warehousing
- Ripening warehouses for food
- R & D (e.g. environmental engineering)
- Households
- Greenhouses

Technical details:

- Measuring range: 0-100% RH
- Measuring accuracy: $\pm 2\%$ RH (for range 5-95% RH and 10-40°C)
- Additional measurement error: $< 0.1\%/K$
- Response time (T 90) 10 s
- Ambient temperature: 0-60°C
- Storage temperature: -30 to +80°C
- Degree of protection sensor/electronics: IP 30/IP 65
- Operating voltage: 17-35 V DC
- Analogue output: 4-20 mA
- Load: 0-800 Ω
- Switching output: open collector, PNP max. 90 mA
- Min. air speed: ≥ 1 m/s (at right angles to the sensor)

Dimensions:



Type codes

