

AFF-SD-...
AFF-SD-...

On-wall humidity and temperature sensor



AFF-SD, AFTF-SD (Tyr1)

Summary

The AFF-SD-... and AFTF-SD-... are on-wall relative humidity and temperature sensors for universal use in the HVAC applications.

Application

- HVAC systems – room temperature and humidity measuring, industrial spaces, storage rooms and rooms with increased demands on mechanical sustainability of the sensors

Function

The sensor measures temperature and relative humidity of air and other non-aggressive gases. It is used in refrigeration, air conditioning and clean room technology as well as in residential and public buildings. The temperature and humidity sensor signals are converted into active signals 0..10 V or 4...20 mA. Relative humidity is measured by a capacitive sensor. The sensor is protected by a exchangeable diaphragm filter.

The sensors are intended for operating in a normal and chemically non-aggressive environment. They do not need any servicing or maintenance and can be mounted in any position.

The sensors are fixed to the wall or any flat surface by screws. Holes are reachable after removing the cover.

Technical data

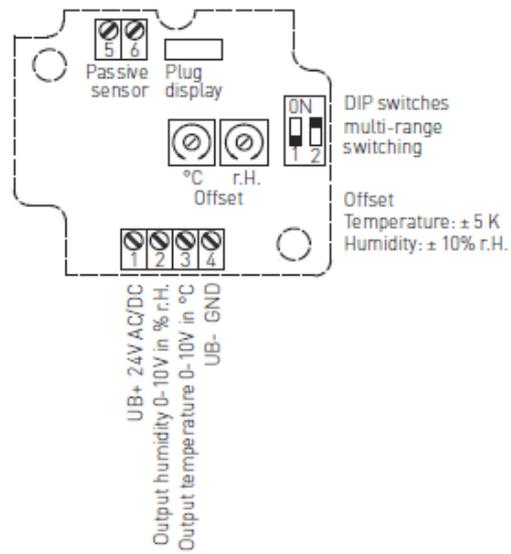
Power	24 V AC ($\pm 20\%$) and 15...36 V DC ($\pm 10\%$) for –U (voltage output 0...10 V) 15...36 V DC ($\pm 10\%$) for –I (current output 4...20 mA)
AFF-SD/AFTF-SD	
Operating range:	
- temperature	-35 ...+80 °C
- humidity	0...95% rH
Measuring range:	
- temperature	-35 ...+35 °C; -35 ...+75 °C; 0 ...+50 °C; 0 ...+80 °C (see table below)
- humidity	0...100% rH
Deviation	$\pm 3\%$ rH (20...80 % at 20°C), otherwise $\pm 5\%$ ± 0.8 K at 20 °C (depending on installation conditions)
Long-term stability	$\pm 1\%$ per year
Storage and transport temperature	-25...+85 °C
Protecting tube	stainless steel, \varnothing 16 x 45 mm
Protection class	III (according to EN 60730)
Protection degree	IP 65 (according to EN 60529)
Terminals	screw terminals for wires 0,14 – 1,5 mm ²
Cover	polyamid reinforced with 30 % glass fiber, colour similar to RAL9010
Dimensions	see below

Sensor types

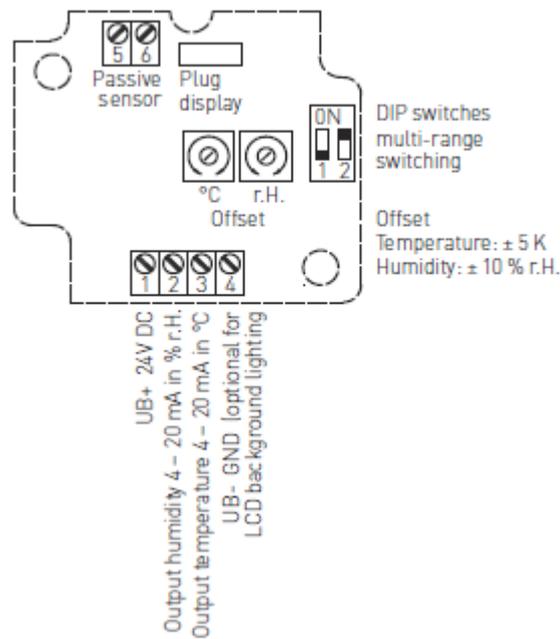
Type	Output rH	Output t
AFF-SD-I	4...20 mA	-
AFF-SD-U	0...10 V	-
AFTF-SD-I	4...20 mA	4...20 mA
AFTF-SD-U	0...10 V	0...10 V

Terminals

AFTF-SD-U (Tyr1)



AFTFSD-I (Tyr1)



AFF-SD-U

- 1 +UB 24V AC/DC
- 2 Output humidity in % r.H. 0...10V
- 3 Free
- 4 -UB-GND

AFF-SD-I

- 1 +UB 24 V DC
- 2 Output humidity in % r.H. 4...20 mA
- 3 Free
- 4 -UB-GND (optional for backlighting)

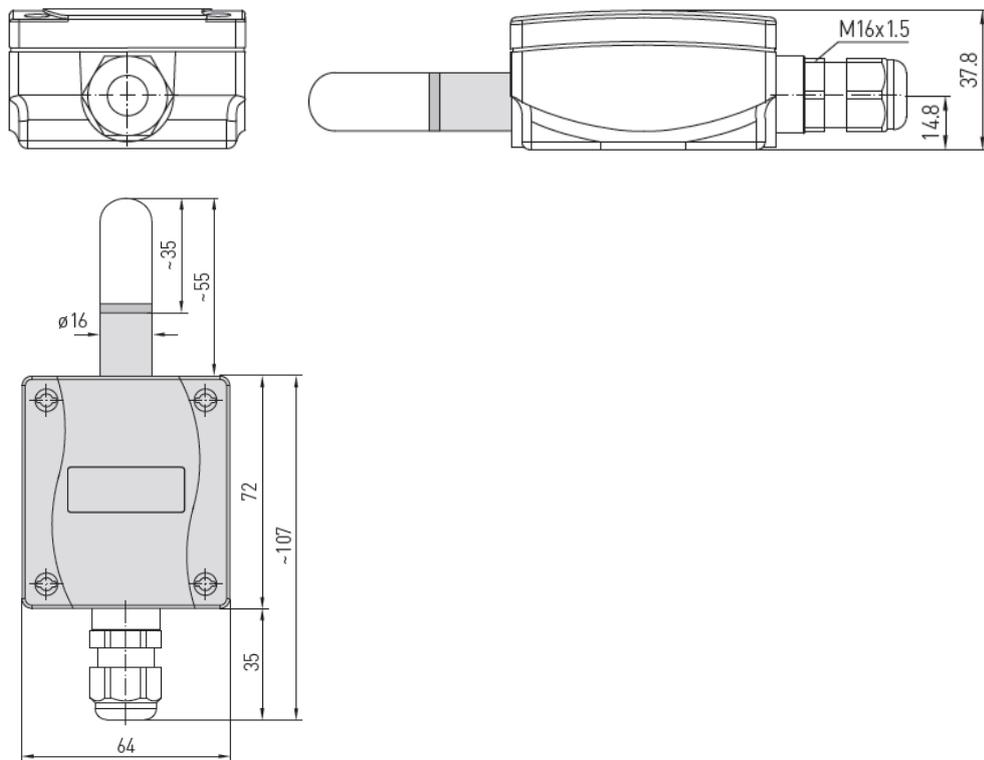
AFTF-SD-U

- 1 +UB 24V AC/DC
- 2 Output humidity in % r.H. 0...10V
- 3 Output temperature in °C 0...10V
- 4 -UB-GND

AFTF-SD-I

- 1 +UB 24 V DC
- 2 Output humidity in % r.H. 4...20 mA
- 3 Output temperature in °C 4...20 mA
- 4 -UB-GND (optional for backlighting)

Temperature measuring ranges (adjustable)	DIP 1	DIP 2
-35 ... +75 °C	ON	ON
-35 ... +35 °C	OFF	OFF
0 ... +50 °C (default)	OFF	ON
0 ... +80 °C	ON	OFF

Dimensions**AFF-SD, AFTF-SD (Tyr1)**

Dimensions are in *mm*.

**Changes in
versions**

05/2016 — The first catalogue version.