domat
control system

AFF20-...
AFTF20-...

On-wall humidity and temperature sensor

AFF20, AFTF20 (Tyr2)

Summary

The AFF20-... and AFTF20-... 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 diaphragma 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 (±20%) and 15...36 V DC (±10%) for **–U** (voltage output 0...10 V)
		15...36 V DC (±10%) for **–I** (current output 4...20 mA)

AFF20/AFTF20

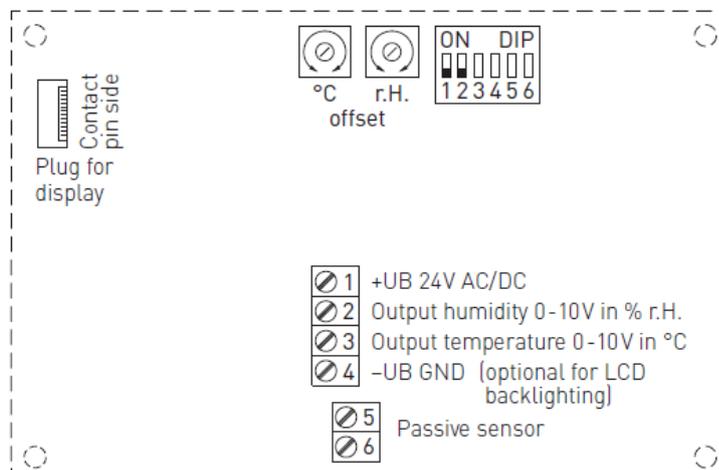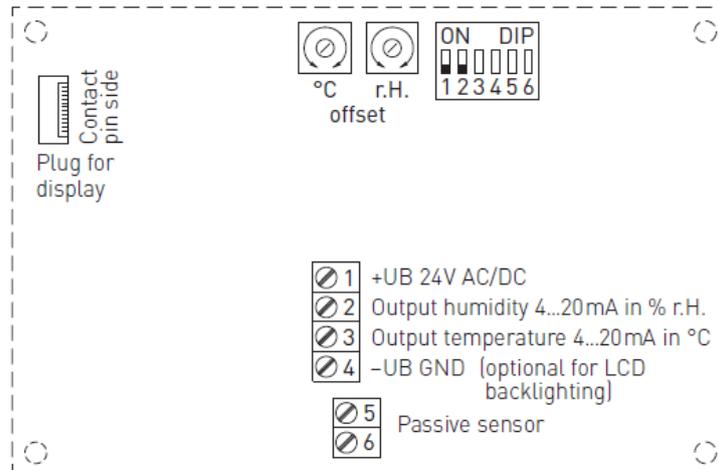|	
Operating range:	
- temperature	-35 ...+80 °C
- humidity	0...95% rH
Measuring range:	
- temperature	-35 ...+35 °C; -35 ...+75 °C; 0 ...+50 °C; 0 ...+80 °C (see table below)
- humidity	0...100% rH
Deviation	±2 % rH (20...90 % at 20°C), otherwise ±3 %
	±0.5 K at 20 °C (depending on installation conditions)
Long-term stability	±1% per year
Storage and transport temperature	-25...+85 °C
Protecting tube	stainless steel, ⌀ 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 mm²
Cover	polyamid reinforced with 30 % glass fiber, colour similar to RAL9010
Dimensions	see below

Sensor types

Type	Output rH	Output t
AFF20-I	4...20 mA	-
AFF20-U	0...10 V	-
AFTF20-I	4...20 mA	4...20 mA
AFTF20-U	0...10 V	0...10 V

Terminals

AFTF20-...-U (Tyr2)

1 +UB 24V AC/DC
2 Output humidity 0-10V in % r.H.
3 Output temperature 0-10V in °C
4 –UB GND (optional for LCD backlighting)
5 Passive sensor
6

AFTF20-...-I (Tyr2)

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   **AFF20- ..., AFTF20-... (Tyr2)**
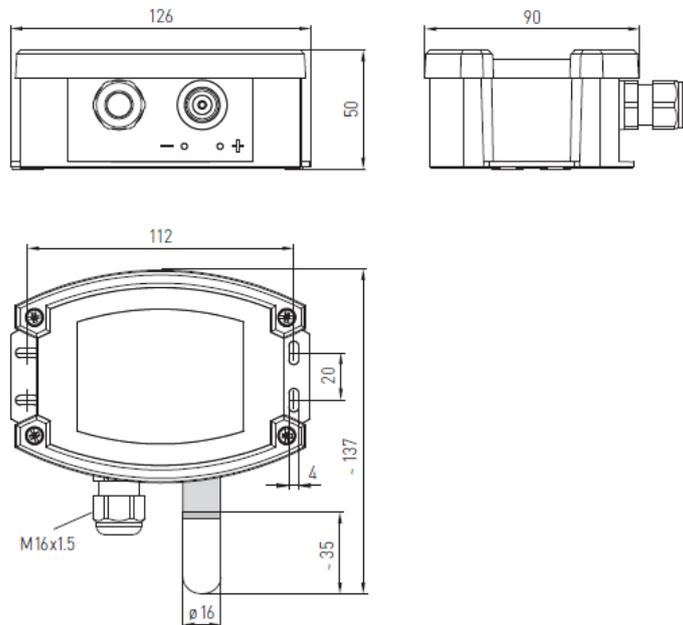
Dimensions are in *mm*.

Changes in versions   05/2016 — New sensor design version and dimensions. Changed storage ambient conditions.