

KFF-20...
KFTF-20...

Air duct temperature and humidity sensor



Summary

The KFF-20... and KFTF-20... are an air duct temperature and relative humidity sensors for universal use in the HVAC sector.

Application

- HVAC systems – air duct temperature and humidity measuring

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 an 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.

The sensors are fixed to the duct by means of an included flange.

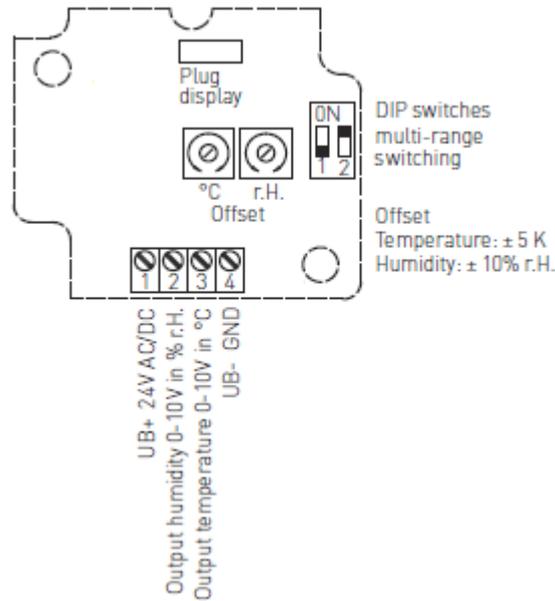
Technical data

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)
Operating range: - temperature - humidity	-35 ...+80 °C 0...95% rH
Measuring range: - temperature - humidity	-35 ...+35 °C; -35 ...+75 °C; 0 ...+50 °C; 0 ...+80 °C (see table below) 0...100% rH
Deviation	$\pm 2\%$ rH (20...90 % at 20°C), otherwise $\pm 3\%$ ± 0.8 K at 20 °C (depending on installation conditions)
Long-term stability	$\pm 1\%$ per year
Storage and transport temperature	-25...+50 °C

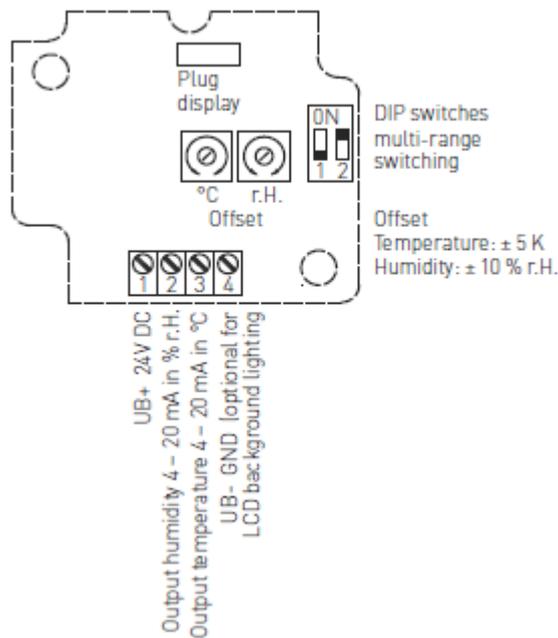
Operating temperature	-5...+55 °C
Protecting tube	stainless steel, Ø 16 x 225 mm
Protection class	III (according to EN 60730)
Protection degree	IP 65 (according to EN 60529)
Terminals	screw terminals for wires 0,14 – 1,5 mm ²
Cover	polyamid reinforced with 30 % glass fiber, colour similar to RAL9010
Dimensions	see below

Terminals

KFTF-20U



KFTF-20I



KFF-20U	
1	+UB 24V AC/DC
2	Output humidity in % r.H. 0...10V
3	Free
4	-UB-GND

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

KFTF-20U	
1	+UB 24V AC/DC
2	Output humidity in % r.H. 0...10V
3	Output temperature in °C 0...10V
4	-UB-GND

KFTF-20I	
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

Type table

Type	Output rH	Output t
KFF-20I	4...20 mA	-
KFF-20U	0...10 V	-
KFTF-20I	4...20 mA	4...20 mA
KFTF-20U	0...10 V	0...10 V

Optional with display.

Dimensions

