



- ❑ Measurement of temperature and relative humidity
- ❑ Digital signal transmission from the sensor to the evaluation electronics
- ❑ Response time of a few seconds
- ❑ Easy interchangeability of the sensor
- ❑ Alphanumeric LCD display
- ❑ Analog outputs 0/2...10 V or 0/4...20 mA
- ❑ Supply voltage 15...30 Vdc or 24 Vac ( $\pm 15\%$ )
- ❑ Compact plastic housing Protection class IP54; UL 94 HB
- ❑ Measuring range relative humidity 0 ... 100% (short term condensation possible)
- ❑ Measuring range temperature -30...+ 50 °C, 0...50 °C, 0...100 °C
- ❑ Calculation and display of dew point temperature, enthalpy wet bulb temperature and absolute humidity

The transducer PFT28Ka converts the measured variables of temperature and relative humidity into the following parameters: dewpoint temperature, absolute humidity, moisture ball temperature and enthalpy.

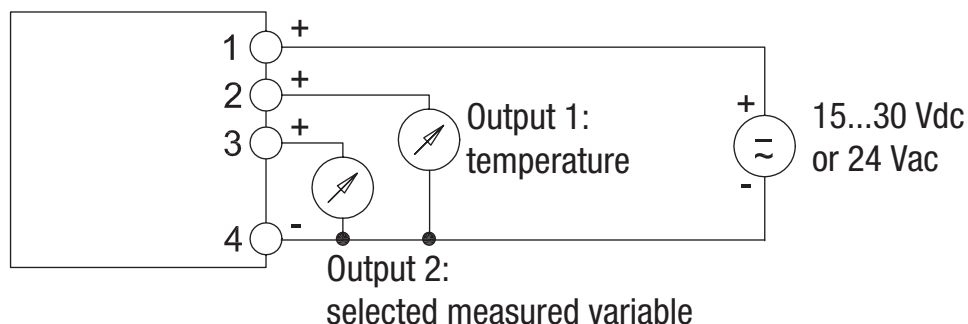
The device has two analog outputs: Output 1 supplies the temperature signal and one of four further measured variables can be applied to output 2 via two-pole DIP switches.

For direct display of the measured value, measured value and unit, the device has a two-line alphanumeric display.

Different versions are available:

A room sensor for wall mounting, a duct sensor for installation in a ventilation duct and a cable management variant with 2 m cable. In both versions, the sensor tube is installed directly on the housing. The output signals can be switched from 0/2 ... 10 V to 0/4 ... 20 mA with a plug-in bridge. The device is supplied with 15 ... 30 Vdc or 24 Vac.

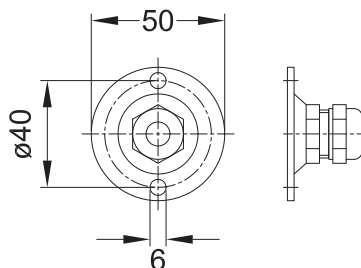
### Connections



### Connecting terminal:

- 1+ 4- Supply voltage 15...30 Vdc or 24 Vac ( $\pm 15\%$ )
- 2+ 4- Output 1: 0/2...10 V or 0/4...20 mA
- 3+ 4- Output 2: 0/2...10 V or 0/4...20 mA

### Mounting flange MF-M90



## PERFORMANCE / ACCURACY / ERROR LIMIT:

### Relative Humidity:

Resolution: 12 Bit  
 Characteristic: linear (digital linearization)  
 Response time: approx. 4 seconds (63% time, slightly moved air)  
 Long term stability: typical < 1 % RH per year

	<u>Standard sensor:</u>	<u>Sensor with narrowed tolerance:</u>
Reproducibility:	± 0,1 % RH	± 0,1 % RH
Tolerance:	± 3,5 % RH at 30...70 % RH	± 2,0 % RH at 10...90 % RH
	± 5,0 % RH at 00...29 % RH	± 4,0 % RH at 00...09% RH
	± 5,0 % RH at 71...100 % RH	± 4,0 % RH at 91...100 % RH

### Temperature:

Resolution: 14 Bit  
 Characteristic: linear  
 Response time: approx. 20 seconds

	<u>Standard sensor:</u>	<u>Sensor with narrowed tolerance:</u>
Reproducibility:	± 0,1 °C	± 0,1 °C
Tolerance:	± 0,5 °C at 25 °C	± 0,3 °C at 25 °C
	± 2,0 °C at -40 °C	± 1,5 °C at -40 °C
	± 3,0 °C at +120 °C	± 2,0 °C at +120 °C

## TECHNISCHE SPEZIFIKATIONEN:

Operating mode: Measuring mode  
 Measuring medium: Humidity and temperature  
 Sensor: single-Chip sensor for relative humidity and temperature with digital signal converting and chip calibration memory

Measuring range: temperature T = -30...+50 °C  
 relative humidity: RH= 0...100 %  
 dew point temperature: td = -30...+50 °C  
 wet bulb temperature: tf = -30...+50 °C  
 enthalpy: E = 0...200 kJ/kg  
 absolute humidity: a.F. = 0...50 g/kg

Special measuring range: sensor: -40...+120 °C  
 Operation temperature range: electronic: -10...+50 °C

Storage temperature: -25...+60 °C

## PHYSICALLY:

Housing: Ultra mid with folding ABS cover, directly mounted sensor cable (2 m length, Ø 5 mm)  
 Dimensions: 95 x 70 x 54 mm (WxHxD)  
 Weight: approx. 300 g  
 Schutzart: IP 54 according EN 60529; UL 94 HB  
 Display: two-line alphanumeric LCD display, 2x16 digit  
 Electrical connections: Cable entry M16x1.5, screw terminals, electronics protected against incorrect polarity

## ELECTRONIC:

Supply voltage: 15...30 Vdc; 24 Vac (±15%)  
 Power consumption: approx. 14 mA @ 24 Vdc at 0...10 V output  
 Outputs: 0/2...10 V or 0/4...20 mA switchable via DIP-switch and jumper  
 Output 1: temperature  
 Output 2: one of four other measured variables selectable by a two-pole DIP-switch

## CONFORMITY:

EMV: tested according EN 61000-6-2, EN 61000-6-3, CE mark  
 RoHS: According RoHS-directive 2011/65/EU

	Item no.
Climate transmitter PFT28K as cable sensor	7422
Special assignment of the measured variables to output 2	7399
<b>Output 1 &amp; Output 2 are pretended in case of order by customer!</b>	
Exchangeable sensor, pluggable, permanently calibrated	72190
Austauschsensoren mit eingengerter Toleranz	72191
Exchange sensor with restricted tolerance	72192
Special length of the sensor tube	72193
Optional sensor protection with sinter filter	72194