

Temperature and Humidity Sensors

Instruction for use

Application

for electrical transmission of relative humidity of air and air temperature, with a capacitive sensor for measurement of relative humidity and a platinum resistor PT 100 for measurement of air temperature. The outgoing analogue signal can be used for meteorological purposes or as input signal for control and regulation applications.

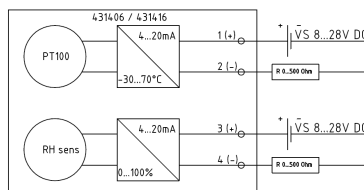
Construction and Mode of Operation

With a capacitive sensor and a PT 100 with electronic signal conditioning the actual humidity of air and air temperature will be transformed into a proportional standardised electrical output. The water resistant housing of the sensor will protect the electronic against the influence of the weather. Condensation at the sensor element will not result in damaging the sensor but until the sensor is total dry false measurements occur.

Technical Data

	air temperature	relative humidity of air	
accuracy	: $\pm 0,3$ K	± 2 % r.h.	(5...90%r.F., $25^{\circ}\pm 3$ K)
temperature error	: $\pm 0,007$ % / K	<0,1 %/K	(<10°C,> 40°C)
settling time (T90)	: ca. 20 s	ca. 10 s	(minimum air velocity $\geq 1,5$ m/s)
measuring range	: -30 ... 70°C	0 ... 100 %	
operating voltage	: 8 ... 28 V DC		
operating current	: 4 ... 20 mA		
electronic output	: 2 x 4 ... 20 mA		
load resistance	: 12 V; 0 ... 150 Ohm		
	24 V; 0 ... 750 Ohm		
case	: 431406 ABS Plastic grey, 431416 Aluminium white		
mounting	: clamping diameter 12 mm		
operating temperature	: -40 ... 80 °C		
protecting sensor/electronic	: IP 30 / IP 65		
recommended cable	: LiYCY 4 x 0,2 mm ²		

Connection Cart



position	colour (OEM)	connection
1 (+)	red	supply 8...28V DC (T)
2 (-)	blue	output air temperature
3 (+)	yellow	supply 8...28V DC (H)
4 (-)	green	output humidity of air

The Fischer company reserves the right, to make changes/improvements to their products and specifications at any time without prior notice.



Feingerätebau K. Fischer GmbH
Venusberger Straße 24
D-09430 Drebach
Germany

Tel +49 (0) 37341 / 487-0
Fax +49 (0) 37341 / 487-30
E-Mail info@meteoclima.de
Internet www.meteoclima.de