

Thermo Hygro Sensor *standard*



Description

Rugged and precise sensor for the measurement of temperature and relative humidity of the ambient air.

A radiation shield protects the sensor against rain and solar radiation.

Technical Data

Sensor

Temperature

Sensing element.....	Pt 100, according to IEC 751, 1/3 class B
Transducer.....	Electronical transducer with current output
Output signal	-30..+70 °C = 4..20 mA
Accuracy.....	± 0.5 °C
Temperature coefficient	± 0.007%/10K for T < 10 °C and T > 40 °C
Response time.....	90 s (for 90% recovery)
Output load	Max. 100 Ω at 12 V supply voltage

Relative Humidity

Sensing element.....	Capacitive sensor
Transducer.....	Electronical transducer with current output
Output signal	0..100% RH = 4..20 mA
Accuracy.....	5..95% RH ± 2% RH at 10..40 °C
Temperature coefficient	± 0.1%/K for T < 10 °C and T > 40 °C
Response time.....	90 s (for 90% recovery)
Output load	Max. 100 Ω at 12 V supply voltage

Power Supply

Supply voltage	10..30 VDC
Current consumption	Max. 40 mA

Casing of Sensor

Material..... Aluminium, lightgrey coating
 Protection class IP 31
 Dimensions ø20 x 150 mm
 Protection cap..... Stainless steel

Electrical Connection

Connector 7 pin circular connector, IP 67
 Cable..... 4 x 0.25 mm², optionally shielded

Wiring

7 Pin Connector	Wire	Function
3	white	(+) power supply humidity
2	brown	signal humidity
7	green	(+) power supply temperature
5	yellow	signal temperature
casing	yellow/green and shield	cable shield



Sensor without radiation shield

Radiation Shield

Type Naturally aspirated multi-plate radiation shield
 Material..... White plastic
 Dimensions ø120 x 300 mm
 Mounting Aluminium bracket for wall mounting, stainless steel U-bolt for installation on a pipe with ø30..50 mm outside diameter

Environmental Conditions

Operating temperature -40..+80 °C
 Relative humidity 0..100%



Hirschgraben 24
D-22089 Hamburg • Germany
phone: +49(0)40-75 66 08 98
fax: +49(0)40-75 66 08 99
eMail: info@wilmers.com
www.wilmers.com