



## Weather sensor for humidity and temperature

- Parameters measured Air temperature and relative air humidity (measured), absolute air humidity, dewpoint and mixing ratio (calculated)
- Measurement technology PT1000, capacitive
- Product Highlights Low power draw, long-term stable, suitable for extreme temperatures, protective housing included
- Interface SDI-12 V1.3

The compact, long-term stability weather sensor OTT TRH is responsible for the measurement of relative humidity and temperature. In addition it can calculate the values for absolute humidity, dew point and mixing ratio and output these via the SDI-12 interface. A protective cap prevents dust and dirt from entering the sensor system. The included protective housing provides weather and radiation protection.

Sensor IR20	
Sensor output	
measured	Temperature in °C or °F, relative humidity in %
calculated	Absolute humidity in g/m <sup>3</sup> , dew point in °C or °F, mixing ratio in
	g/kg





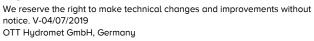


## **Technical Data** OTT TRH



Relative humidity		
Measuring range	0 100 % RH	
Accuracy at 25 °C and 4.5 V DC	max. ±2 % RH ( 0 [] 90 % RH)**; max. ±3 % RH ( 90 [] 100 % RH)**	
15 V DC* (incl. repeatability,		
hysteresis and calibration	*for supply voltages of>15V DC, other accuracy values apply	
uncertainty)	**temperature dependency: <±2% at -10°C 60°C	
Resolution	0.10%	
Repeatability	±0.1 %RH	
Hysteresis	<1 % RH	
Long-term stability	typ. < ±1.5 %/year	
Response time wtih protection	RH90 typ. <15 s at 0.35 m/s	
сар		
Temperature		
Sensor	PT1000 DIN A	
Measuring range	-40 °C +80 °C	
Accuracy at 4.5 V DC15 V DC*	±0.1 °C at 20 °C; ±0.5 °C at -40 °C, 80 °C linearity	
Resolution	0.01 °C	
Response time wtih protection	T90 <300 s at 1 m/s airflow; T90 <250 s at 2 m/s airflow	
сар		
Absolute humidity		
Measuring range	0 1000 g/m <sup>3</sup>	
Resolution	0.1 g/m <sup>3</sup>	
Dew point		
Measuring range	-40 °C +80 °C	
Resolution	0.01 °C	
Mixing ratio	0 1000 a/ka	
Measuring range Resolution	0 1000 g/kg	
	0.1 g/kg SDI-12 V1.3	
Interface		
Supply voltage	4.5 V DC 28 V DC	
Supply Vollage		
Current consumption		
Quiescent	< 20 µA at 12 V	
Temperature measurement	typ. 550 μA	
Humidity measurement	typ. 260 μA	
Ambient conditions		
Operating temperature	-40 °C +80 °C	
Storage temperature	-50 °C +80 °C	
Operating humidity	0 100 % RH	
Protection class	IP65	

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## Technical Data OTT TRH

vertikal (pole/pipe)



Sensor protection	Protection cap with metal grid filter
Material and dimensions	
Housing sensor	Polycarbonate
Dimension sensor	Ø 12 mm x 140 mm
Material cable	PUR (black), moulded/shielded
Cable length	3.5 m
Wiring	color code printed on housing
Standards	EG (2004/108/EG), EN 61326-1:2006
OTT RS7 Weather and Radiation	
Protection	
Number of lamellae	7
Operating temperature	-40 °C +80 °C
Material and dimensions	
Lamellae	2 components (PS, PA)
Bracket	stainless steel
Height incl. mount	230 mm
Weight (without sensor)	700 g
Pole/pipe diameter for	
horizontal (pipe)	3/4 5/4 inch (27 mm 43 mm)

1 ... 2 inch (27 mm ... 60 mm)





