

AGRICULTURE
AIRPORTS
BUOY & MARINE
COASTAL

HYDROLOGY
INDUSTRIAL & PLC
INTRINSICALLY SAFE
IOT

METEOROLOGY
OCEANOGRAPHY
ROAD MANAGEMENT
POLAR AND WINTER

SHIPS
SKI LIFT & SNOW MAKING
SMART CITIES
WEATHER STATIONS



Relative humidity and temperature

2-in-1 meteorological sensor probe with **temperature, humidity, dew point** and **frost point** output. Ultra-low 0.8 mA power consumption minimizes self heating during low wind conditions. Meets WMO requirements for accurate air temperature, humidity and long term stability. Also features triple level lightning protection including surge, transient and ESD protection.

Also with barometric pressure

MeteoTemp® RH+T+PRESSURE, is a **3-in-1** sensor probe with the same form factor as the 2-in-1 probe. It adds **barometric pressure** to the already superb 2-in-1 temperature, humidity, dew point and frost point probe without increasing power consumption to maintain the same low levels of self-heating and retain WMO accuracy requirements for temperature and humidity. Features a highly reliable sealed barometric pressure transducer in the sensor head.

VERY LOW MEASUREMENT UNCERTAINTY & HIGH ACCURACY IN ALL-WEATHER

Minimize self-heating in low wind

Due to their extremely low power consumption, MeteoTemp® sensors minimize self-heating which is critical during low wind conditions. In combination with the reference standard naturally ventilated MeteoShield® Pro^{gen3} or the FARS MeteoShield® Pro^{gen3}, MeteoTemp® sensors achieve some of the industry's lowest measurement uncertainties for outdoor temperature & humidity measurement in all climates, especially in low wind and in all weather conditions.

TRIPLE-LEVEL LIGHTNING PROTECTION ENSURES SURVIVAL AND RELIABILITY

Known to survive lightning strikes

MeteoTemp® sensors have been known to be the only instruments to survive direct lightning strikes to weather stations. They share the same advanced lightning protection of MeteoWind® sensors and meet the highest international standards for industrial equipment safety with **MTBF > 132 years** per MIL-HDBK-217 Rev F, Notice 2 & ANSI/VITA 51.1-2013 (R2018):

- EMC Emissions according to EN50081-1 / IEC61000-6-1
- EMI Transients according to EN50081-1 / IEC61000-6-2
- SURGE test 4 kV / 2 kA acc.to EN50082-2 / IEC61000-6-2
- ESD 15000 V (15 kV)



FOR APPLICATIONS WHERE WMO ACCURACY AND RELIABILITY WITH LIGHTNING PROTECTION
AND ALL-WEATHER RESISTANCE IS IMPORTANT

Reach you gold standard of measurement with MeteoTemp® + MeteoShield® Pro^{gen3} / FARS MeteoShield® Pro^{gen3}

- Achieve one of the industry's lowest measurement uncertainties
- Class leading all-weather accuracy for professional climatology
- 360° sensor protection for outdoor air temperature & humidity measurement
- Extremely low power consumption for AWS and AWOS data logging
- Simple installation and calibration
- Reliability with the highest level of lightning and ESD protection per IEC EN 61000

Electrical specifications of sensor

Type	Accuracy	Stability	Resolution	Measuring range	Operating range	Response*	Meets WMO
Temperature (silicone type)	±0.1 °C (0...65 °C) ±0.2 °C (-45...65 °C)	<0.03 °C per year	0.01 °C	-40...105 °C	-40...105 °C	2...30 s	yes
Relative humidity (capacitive type)	±1.5 % RH at 25 °C Hysteresis ±0.8 %	<0.2 % RH per year	0.01 % RH	0...100 % RH	0...100 % RH	4...30 s	yes
Dew point / frost point	(calculated)	-	0.01 °C	-40...105 °C	-40...105 °C	4...30 s	yes
Barometric pressure (piezo-resistive type)	±0.5 hPa (0...55 °C) (750...1100 hPa)	-0.5 hPa per year	0.012 hPa	300...1100 hPa	10...1300 hPa	0.1 s	yes

* τ63% sensor response time listed is without a filter cap. Response time with filter cap will vary based on cap porosity, material and fluid (air) flow. In applications where sensors are used in wet, dirty and dusty environments, we recommend regular inspection of filter cap cleanliness to maintain long term accuracy. Inspection interval should be determined by application and user experience in their application environment.

Electrical specifications of sensor

Output signal & communication	RS-485 with MODBUS RTU or ASCII
Supply voltage	5...24 VDC with reverse polarity protection (startup in-rush current < 100 mA for 1 ms)
Power consumption	0.8 mA at 1 Hz output including RS-485 communication, 0.025 mA quiescent current
Lightning & surge protection	per IEC EN 61000-4-2, EN 61000-4-4, EN 61000-4-5 on both data & power lines, surge, EFT/burst, ESD 15 kV

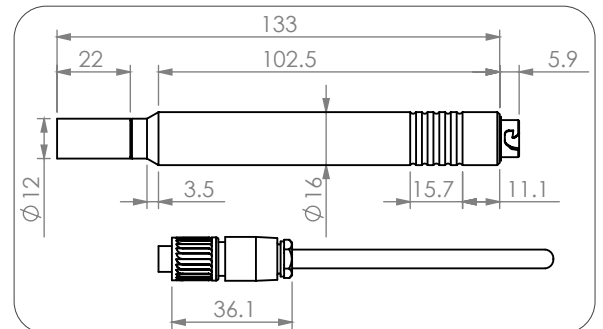
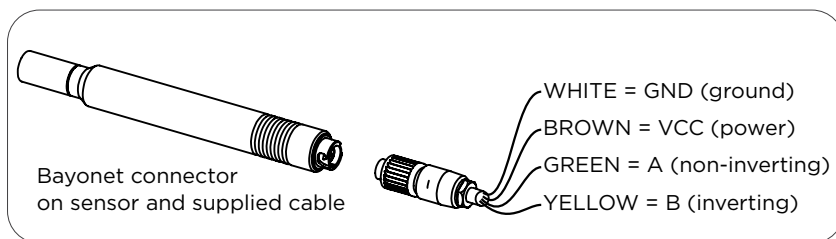
Environmental ratings of sensor

Operating temperature & humidity	-40...105 °C	0...100 % RH
Connection	Bayonet connector with silicone o-ring	
IP - protection rating	IP66W (DIN 40050)	

General specifications

Dimensions	Length = 133 mm (164 mm with mating connector), Ø16 mm base, Ø12 mm PTFE sensor cap	
Weight (mass)	approx. 20 g (without mating connector and cable)	

ULTRA-LOW POWER MINIMIZES SELF-HEATING IN LOW WIND



ISO: 9001 QUALITY