



MICRO-WEATHER STATION FOR PRECISION MICRO-CLIMATE MEASUREMENT

WMO precision for temperature and humidity

Wireless & solar powered
Robust & impact resistant



Professional WMO precision

Temperature, humidity, dew point, frost point and rain measurement

Stable long-term accuracy

3-in-1 sensor tip housed inside the helical MeteoShield® Pro offers long-term stability and low uncertainty of measurement

Accurate in all climates & weather

Housed in a MeteoShield® Pro for accurate measurement in all weather conditions and a high level of protection to the sensors

Easy calibration procedure

Traceability is assured by a removable sensor tip which is interchangeable and can be easily calibrated with a calibration adapter or replaced

View & export live weather data

allMeteo® Web portal enables easy world-wide view of your weather station data including data export, API data access and live data view. It also offers the ability to manage your fleet of weather stations.

MeteoHelix® micro weather stations

Exceeding WMO accuracy standards has never been so easy and affordable.

Designed for measurement precision and ease of use, MeteoHelix IoT weather stations offer professional research grade accuracy meeting World Meteorological Organization standards.

Unique measurement properties of the patented double-helix design make this weather station highly resistant to long-term sensor drift and sensor measurement errors from the sun and other environmental factors.

This helical micro-weather station is the perfect choice for climate research in tough measurement environments.

Available in SigFox and LoRaWAN. NB-IoT coming soon.

allMeteo® portal for data display and configuration.



Type	Accuracy	Stability	Resolution	Measuring range	Operating range	Response*	Meets WMO
Temperature	±0.2 °C (typical)	<0.02 °C per year	0.1 °C	-40 °C...105 °C	-40 °C...105 °C	5-30 s	yes
Relative humidity	±1.5 %RH @ 25 °C hysteresis ±1 %	<0.3 %RH per year	0.2 % RH	0...100 %RH	0...100 %RH	8-40 s	yes
Dew point / Frost point	(calculated)	-	0.1 °C	-40 °C...105 °C	-40 °C...105 °C	8-40 s	yes
Solar irradiation	5 % of daily total	-0.6 % per year	2 W/m ²	0...1500 W/m ²	-40 °C...105 °C	< 1 s	no
Atmospheric pressure	±1.5 hPa @25°C (750 - 1100hPa)	-1 hPa per year	0.04 hPa (mbar)	300...1100 hPa	10...1300 hPa	0.1 s	no
Rain (optional reed switch input)	Rain gauge dependent	Rain gauge dependent	0.001...10 mm per pulse (set in allMeteo)	0...255 pulses per 10 minutes	Rain gauge dependent	-	yes

Sampling rate is 10 seconds per WMO requirements.

* T63 % sensor response time listed is with 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.

All-weather measurement accuracy meeting WMO standards

PRECISE FOR THE PROFESSIONAL, EASY TO USE FOR EVERYONE

Impact resistant, mechanically strong, simple to install. Designed with open data standards.





Electrical specifications of sensor	
Wireless communication	Available versions: Sigfox, LoRaWAN, NBIoT available in late 2019
Supply voltage	Solar powered with internal Li Ion battery for 4+ months of operation without sun
Power on/off	Magnetically activated on/off switch located in sensor head
External connections	4 meter cable interface for pulse output rain gauge sensors
Environmental rating of sensor	
Operating temperature & humidity	-27 °C to +65 °C (-40 °C in testing) 0 % to 100 % RH
IP – Protection rating	IP65W (DIN 40050) Protected from dust and weather
General specifications	
Dimensions	Diameter = 170 mm, Height = 226 mm
Weight (mass)	1.2 kg (2.0 kg including stainless steel holder)

Highest levels of total measurement accuracy & lowest uncertainty in outdoor air temperature & humidity measurement per WMO standards.

A weather station inside the revolutionary MeteoShield Pro

Naturally ventilated helical solar shield/screen. **Double-Helix shape eliminates** temperature errors from solar radiation more effectively than conventional multi-plate shields while offering unsurpassed **protection from the sun, dirt, rain, snow, sand & dust**. Double-helix increases clean air flow and rejects dirt particles away from the sensor, while keeping sensors cleaner than traditional multi-plate and fan aspirated shields.



Coming soon: **MeteoSense IoT Pro expansion module**
Designed for soil moisture sensors, leaf wetness sensors, wind meters, soil temperature sensors, snow temperature sensors, snow height sensors, RS485 smart sensors, analog sensors, rain gauges and more.

2 x	Digital (Pulse / Frequency up to 2 kHz)
2 x	0 - 2.5 V
1 x	RS-485 MODBUS ASCII & RTU
1x	1°C
Output	Sigfox, LoRaWAN, NBIoT

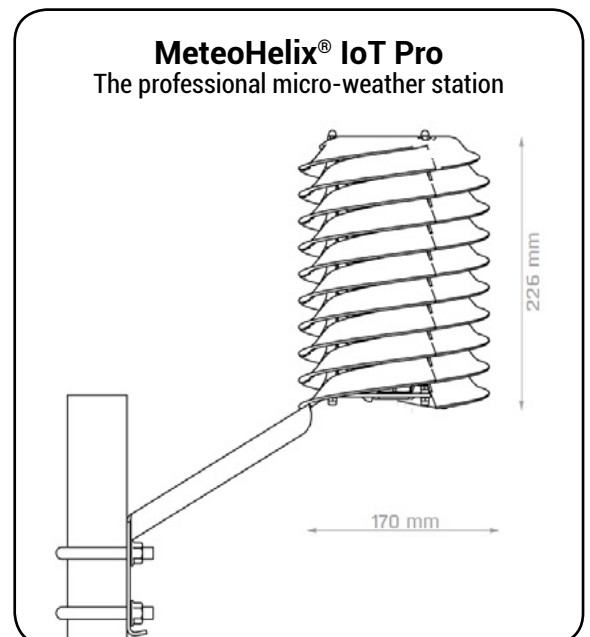
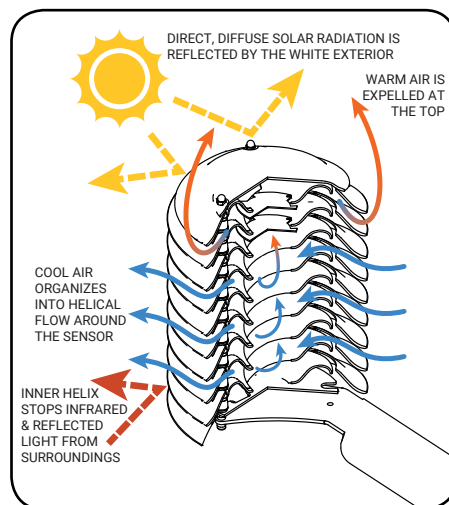
Benefits of the MeteoShield's double-helix shape

Helical radiation shield shape ventilates better than multi-plate radiation shields while maintaining better temperature sensor protection from dirt, sand, dust, rain, snow and ice.

BENEFITS:

- Extending sensor life
- Long-term measurement stability

MeteoHelix performs better than many fan-aspirated radiation shields especially in high-reflectivity environments such as over snow, water, pavement or in cities in Smart-City applications.



Reach your gold standard of measurement with BARANI DESIGN ISO:9001 quality

