

Plugstation

Sônica



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The **Plugstation Sônica** is equipment for measuring climate parameters using ultrasonic sensor technology for wind direction and speed, wind gusts, as well as humidity, temperature, and solar radiation. With data transmission options via Wi-Fi, mobile data, satellite, Ethernet, and LoRaWAN to the Web Portal and App, the station features a design with no moving parts, ensuring greater durability and lower maintenance requirements. Ideal for applications that demand precision, robustness, and continuous reliability.



DS112501EN

Technical Specifications

Parameter	Type	Description	
Network	Wi-Fi	802.11bgn 2,4Ghz Authentication Method Open/WPA/WPA2	
	2G / 3G / 4G	LTE-FDD: B1/B3/B7/B8/B20/B28A; WCDMA: B1/B8; GSM: B3/B8	
Optional Networks	Ethernet	Additional communication module for RJ45 cable	
	Satelital	Additional Satellite communication module	
	LoRaWAN	Additional LoRaWAN communication module	
Processor	Dual Core	240Mhz (600DMIPS)	
Memory	SPI Flash	16MB	
Sensor Reading Interval	Minutes	1, 2, 3, 4, 5, 10, or 15 minutes (adjustable)	
Storage/ Datalogger	Days	1, 2, 3 ou 4 minutes	Online only (Plugminute)
		5 minutes	More than 90 days of information
		10 minutes	More than 180 days of information
		15 minutes	More than 270 days of information
CNSS Antenna	GPS	Global Navigation Satellite System	
Battery	Lithium-ion	4000 mAh (rechargeable)	
	Type	Sealed	
	Minimum Duration	3 days (72 hours)	
	Service Life	3 years (36 months)	
Operating Temperature	External	-10° C to +60° C	
Power Supply	Solar Panel	10W, 18V/600mA, Off-Grid	
	Power Adapter	12v3.36a	
Enclosure	Polycarbonate	UV protection	
		IP66 protection rating	
Display	Monochrome	0.96", 128X64 pixels	
Certification	Anatel	07483-24-12364	
Sensor Ports	Connections	Three RS485 ModBus communication ports for sensors	



Standard Sensors

Parameter	Minimum	Maximum	Resolution	Accuracy
Temperature	-40 °C	60 °C	0,1 °C	±0,2 °C
Humidity	1%	99%	1%	±2%
Precipitation	0 mm	9.999 mm	0,1 mm	<5mm/h, ±20%; 5mm/h to 50mm/h, ±10%; >50mm/h, ±20%
Wind Gust	0 km/h	144 km/h	1 km/h	±5%
Wind Speed	0 km/h	144 km/h	1,8 km/h	<10m/s, ±0.5m/s; ≥10m/s, ±5%
Wind Direction	0°	359°	1°	±15°
Light Intensity	0 LUX	200000 LUX	0,1 LUX	±25%
UV Index*	1	15	1	
Atmospheric Pressure	300 hPa	1100 hPa	0,1 hPa	± 1 hPa

*UV Index: indicates the range from 1 (low) to 15 (extreme).

Calculated Sensors

Parameter	Minimum	Maximum	Accuracy
Evapotranspiration*	0mm		0,1mm
Thermal Sensation	-30° C	60° C	0,1° C
Dew Point	-20° C	40° C	0,1° C
Delta T	0° C		0,1° C

*Calculated using the Penman-Monteith method

Software

Parameter	Type	Description
Web Portal	Access	Portal that allows viewing of station-collected data in real time
Availability	Uptime	Greater than 99.95%
Android/iOS App	Access	Applications that allow viewing of station data in real time
API	Integration	REST API enabling interoperability between systems
	Limit	5,000 free accesses per month per Station
	Protocol	HTTPS
PlugAPI Pro	Access	Plans for more than 5,000 accesses per month
NTCIP Protocol	Integration	Protocol enabling direct connectivity with the station. Complies with ANTT Resolution No. 3,323 of 11/18/2009
Historical Data	Availability	Processed historical data available for 5 years

