



FS6003

Weather station compact, digital output (Modbus RTU)

Measuring size: temperature, rel. humidity, air pressure, brightness, precipitation, wind speed, wind direction, twilight, Global measuring

Output: Modbus RTU

Highlights: GPS receiver with integrated RTC, sun position calculation



Description

The weather station FS6003 was developed for the diverse demands of building control technology. The device combines precision of data acquisition with a very compact design. Easy integration into new and existing installations is guaranteed. The recording of a total of 11 meteorological parameters in the smallest space distinguishes the device. The wind measurement takes place without moving parts. The thermal anemometer measures wind speed and direction without mechanical wear. A costly maintenance is eliminated. A gold-plated sensor also detects small amounts of precipitation. The built-in heating liquefies snow and sleet and ensures a quick drying. The integrated GPS module automatically receives the date, time, station altitude and geographical position. A manual setting of the time is eliminated. From the GPS parameters the weather station determines the azimuth and the elevation of the position of the sun. Using the altitude above sea level and the measured air pressure, the reduced air pressure is calculated. All parameters are output with the data telegram. Data is output serially via MODBUS RTU. The weather station is mounted on a mast or with the help of a wall bracket directly to the building.



Technical Specifications


Measurement range wind speed	0-40 m/s, resolution 0,1 m/s
Measuring range wind direction	0-360°, resolution 1°
Measurement range temp.	-30...+60°C
Measurement range r.H.	0-100% r.h., resolution 0,1% r.h.
Measurement range air pressure	300-1100 hPa, resolution 0,01 hPa
Measurement range brightness	0-150 kLux, resolution 0,1 kLux
Measurement range twilight	0-999 Lux, resolution 1 Lux
Global measuring range	0-1300 W/m ² , resolution 1 W/m ²
Measurement range precipitation	yes/no
Accuracy wind speed	±1 m/s (< 10 m/s, else ±5%, rms average over 360°)
Accuracy wind direction	±10° (laminar flow)
Accuracy temperature	±1 K (ws > 2m/s, -5...+25°C)
Accuracy humidity	± 5 % r.H. (0...20 °C)
Accuracy air pressure	±0,5 hPa (20°C)
Accuracy brightness	±3%
Accuracy twilight	±10 Lux
Supply voltage	18...30 V DC, 18...28 V AC
Current consumption	< 300 mA @ 24 V DC
Digital output	Modbus RTU
Electrical connection	7-pole connector (cable 5x0,14 not included)
Housing	polycarbonate PC, UV-stabilised, white RAL 9003
Weight	220 g
Protection type	IP65
Dimensions	Ø 130 mm x 67,5 mm
Working temperature	-30...+60°C
Storage temperature	-20...+50°C
Installation	Pole mount 25 mm pipe diameter
Approvals	CE, EAC, RoHS





Variants

Article Number	
Description	Output
FS6003-MBR-A1B1H1R1T1W1W2-G	
Precipitation: yes/no, Brightness: 0-150 kLux, Twilight: 0-999 Lux, Wind speed: 1-40 m/s, Wind direction: 1-360°, Temperature: -30...+60°C, Humidity: 0-100% r.H., Global radiation: 0-1300 W/m², Air pressure: 300-1100 hPa	Modbus RTU

Accessories

	ZM/O Meteorology accessories
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	FS6901 Stand with mast tube
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	FS6921 Datalogger DLU
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Dimensional Drawing

