SEM5046 Compact Photovoltaic Meteorological Station

MAIN FEATURES

- Miniaturization design
- High integration, all-in-one
- Thermopile principle
- Special process heat insulation treatment of protective cover
- Support extended parameter

APPLICATION

- Meteorological monitoring
- Micro environmental monitoring
- Grid environment monitoring
- Agrometeorological monitoring
- Traffic meteorological monitoring
- PV environmental monitoring

OVERVIEW

SEM5046 compact meteorological station is an instrument used in photovoltaic power station and new energy monitoring field. The product innovatively integrates various meteorological parameters that need to be monitored in the operation and maintenance management of the photovoltaic power station into one structure, which can simultaneously measure: atmospheric temperature, relative humidity, module temperature, wind speed, wind direction, atmospheric pressure, total solar radiation POA, and total radiation daily cumulative radiation.
An RS485 interface is connected with the photovoltaic inverter to replace the traditional photovoltaic environmental monitor.

SPECIFICATION

ITEMS	Range	Accuracy	Resolution	Sampling frequency
Ambient temperature	- 40 °C - + 85 °C	±0.3°C@25°C	0.01 °C	1Hz
Relative humidity	0-100%RH	± 3% RH (10% - 80% RH, no condensation)	0.01%RH	1Hz
Wind speed	0-60m /s	± (0.3+0.03V) m/s; V≤30m/s ± (0.3+0.05V) m/s; V ≥ 30m/s (V=wind tunnel standard wind speed)	0.01m/s	4Hz
Wind direction	0-359.5°	± 3 ° (Wind speed =10m/s)	0.1°	4Hz
Atmospheric pressure	500 -1100hPa	±0.5hPa (25°C, 950-1100hPa)	0.1hPa	1Hz
Component temperature	-20°C～+80°C	≤ ±0.2°C	0.1°C	1HZ
Solar radiation	0~2000W/m2	≤ ±3%	1W/m2	1HZ
Total radiation accumulation	0-65MJ	≤±%5	0.001MJ	1min
Working temperature	-40°C~80°C			
Output signal	Default RS485 interface, ModbusRTU; Customizable SDI-12			
Max. output frequency	Passive mode: 1/S Active mode: 1/min			
Power supply	DC12-24V			
Adjustment disc of solar radiation meter	0-60 ° range adjustable (40 ° for general standard)			
Protection level	IP65			
Fixing method	Default fixed by sleeve (Flange fixing or bending plate fixing optional)			
Fixing bracket	None for standard products, 1.5m and 1.8m brackets are optional			
Cable	Default 3m cable (other length optional)			

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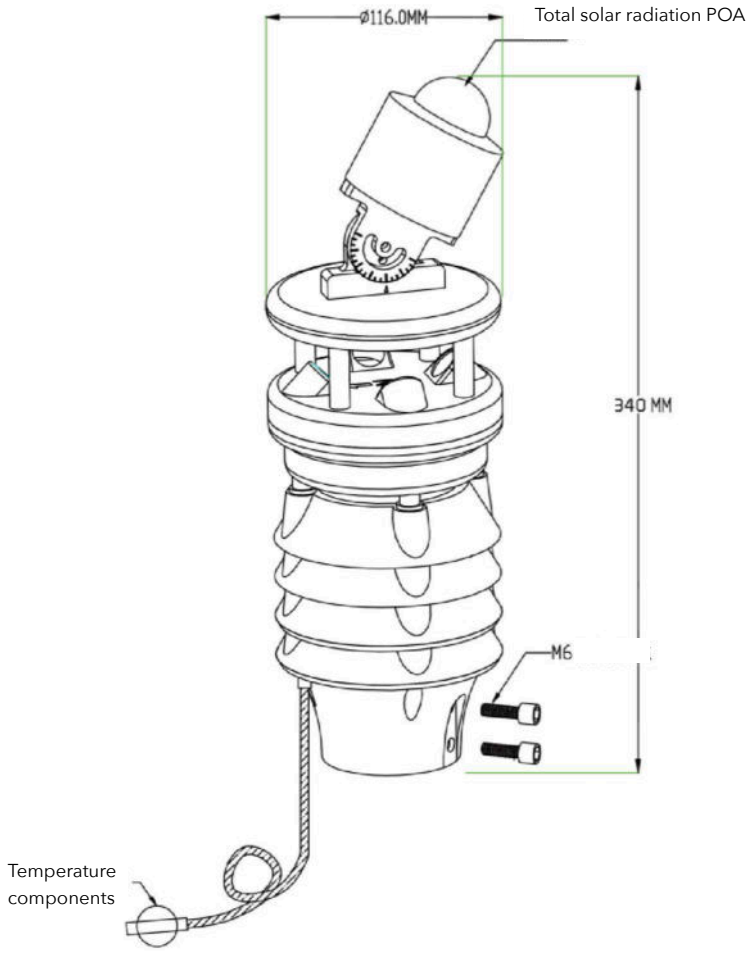
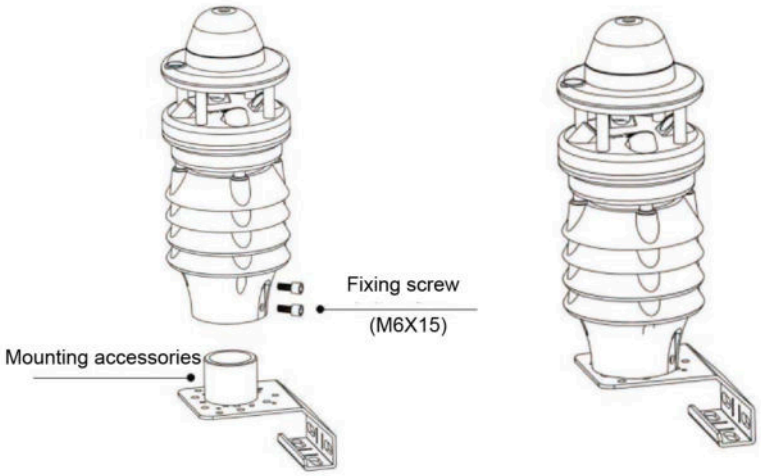
DIMENSION

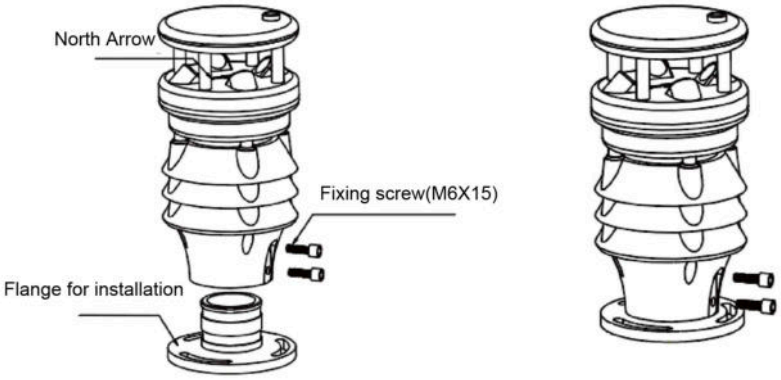


INSTALLATION

- *Fixing method of bending plate:*



- *Fixing method of flange plate:*



ORDER CODE

Name	Compact Weather Station	
Model	**Code**	Function
	SEM5046	Ambient temperature+Relative humidity+wind speed+wind direction+Atmospheric pressure+component temperature+solar radiation+Total radiation accumulation

Note:

The SEM5046 integrated photovoltaic environment monitor is equipped with a total radiation meter (secondary meter) based on the principle of thermal value as standard, and the user can choose EKO/MS-802 (Class A), MS-60 (Class B), MS-40 (Class C) total radiation meters;
Kipp&Zonen/CMP6 (Class B), CMP10 (Class A) total radiation meter
Definition:
Class A/B/C Grade standard determined according to ISO9060:2018 WMO global radiometer standard;
Level II meter: according to GBT19565-2017 national standard for total radiation meter