WEATHER STATION

Catalogue

Precautions

Safety Instructions

The installation and assembly of electrical equipment must be carried out by electrically qualified persons. The sensor may not be used with equipment whose direct or indirect purpose is to prevent human death or injury, or whose operation poses a risk to humans, animals or property.

Electrical Connection

The sensors are designed for safety extra-low voltage (SELV) operation. The cable shield shall be connected to the PE during installation. WARNING: Connecting the supply voltage to the signal lines will damage the device.

Sensors Specifications

Pyranometer Irradiance Sensor

Measurement of Solar Irradiance

Pyranometer is produced based on thermoelectric principle; sensing elements are made by winding - plated thermopiles with multi contacts. Its surface is coated by black coating with high absorption rate. Hot contacts on the sensors surface, while the cold junction is located within the body, temperature difference between the hot and cold junction generates electromotive force, the thermoelectric effect is proportional to the solar radiation. In order to reduce the ambient temperature effect, temperature compensation circuit designed here to reduce the effects to products properties.

Technical Data

Item	Specifications
Spectral range	300-3200nm
Supply	12-24VDC
Range	0 – 2000 W/m2
Output	0-20mV, 0-5V, 4-20mA, RS485
Sensitivity	7-14μV*W-1*m2
Internal resistance	350 Ω
Non-linearity	<±2%
Measuring angle	2π solid angle
Response time	≤35s (99%)
Stability	±2% / year
Cosine correction	≤± 7% (Solar elevation angle=10°)
Temperature effect	±2% (-10℃ to +40℃)
Operating temperature	-40℃ to +60℃
Weight	2.5kg
Dimension	ø165 *120 mm
Ingress Protection	IP65
Storage Condition	10℃ to 60℃ @ 20% to 90% RH

PV Module Temperature Sensor

Short Description

Our PV Module Temperature Sensor adopts high precision thermistor as the sensing component. It is with high accuracy, good stability. The signal conversion module can convert temperature to corresponding voltage, current or RS485 optionally. Our PV Module Temperature Sensor is compact, easy-to-install, with good linearity, strong load capacity, long transmission distance and good anti-interference ability.

Technical Data

Item	Specifications		
Range	-50 to +100℃		
Supply Voltage	5VDC,12VDC, 24VDC		
Accuracy	±0.5℃		
Output	4-20mA	0-2.5V	RS485
Load Capacity	≤250Ω	≥1K	
Ingress Protection	IP 65		
Operating Temperature	Probe: -50℃ to +120℃ Conversion module: -40℃ to +85℃		
Weight	Probe: 125g		
Storage Condition	10℃ to 60℃ @ 20% to 90% RH		

Ambient Temperature Sensor

Short Description

Our atmospheric/ambient temperature sensor is a professional measurement of air temperature. Sensors are built-in the water-proof and anti-UV shelter. It is widely used in agriculture, forestry, meteorology as well as a climate chamber, warehousing and other places.

Technical Data

Item	Specifications
Range	-40 to 120℃
Resolution	0.01℃
Accuracy	±0.5℃
Supply	12 - 24VDC
Output Signal	4 – 20mA
Current Consumption	< 20mA
Operating Temperature	-40℃ to +80℃
Ingress Protection	IP 65
Storage	10 to 60℃ @ 20% to 90%RH
Weight(unpacked)	400g
Shelter material	ABS

Wind Speed Sensor

Short Description

Our wind speed sensor is specifically designed to accurately and reliably measure wind velocity under the adverse environmental conditions. Shell is made of high-strength aluminium alloy, the wind cup is made of 304 stainless steel, the PCB board is painted with conformal coating.

Technical Data

Item	Specifications
Supply Voltage	12 - 24VDC
Load Capacity	< 500Ω (typ 250Ω)
Range	0 - 60m/s
Accuracy	±0.5m/s (<5m/s), ±3%FS (≥5m/s)
Starting Threshold	<0.5m/s
Ingress Protection	IP65
Operating Temperature	-30℃ to +70℃
Weight(unpacked)	240g
Dimension	Cup rotor: ø200mm, Height:125mm
Main material	Cup: 304 sstainless steel, Main Body: Aluminum alloy
Finishing	Polyester powder electrostatic spraying (black)
Storage Condition	10℃ to 60℃ @ 20% to 90%RH

EW38 CONTROLLER

Introduction

EW38 series product realizes the signal acquisition between sensor and host, to measure analogue signals. EW38 products can be applied to RS-232/485 bus industrial automation control system, monitoring and control and other small-signal measurement and signal isolation and long-term industrial transmission and so on.

Products include power supply isolation, signal isolation, linearization, A/D conversion and RS-485 serial communication. Each serial interface can connect up to 255 pieces EW38 Series modules, communication using ASCII code or RS485 communication protocol.

Technical Data

- 8-CH analogue signal acquisition, isolated RS-485/232 output
- 24-bit AD converter, testing accuracy > 0.05%
- Programmable modules accuracy via RS-485/232 interface
- Input/output: 3000VDC
- Wide power supply: 8~32VDC
- High reliability, easy programming, easy installation.
- Programmable module address, baud rate
- DIN35 Rail-mounted

Drawing

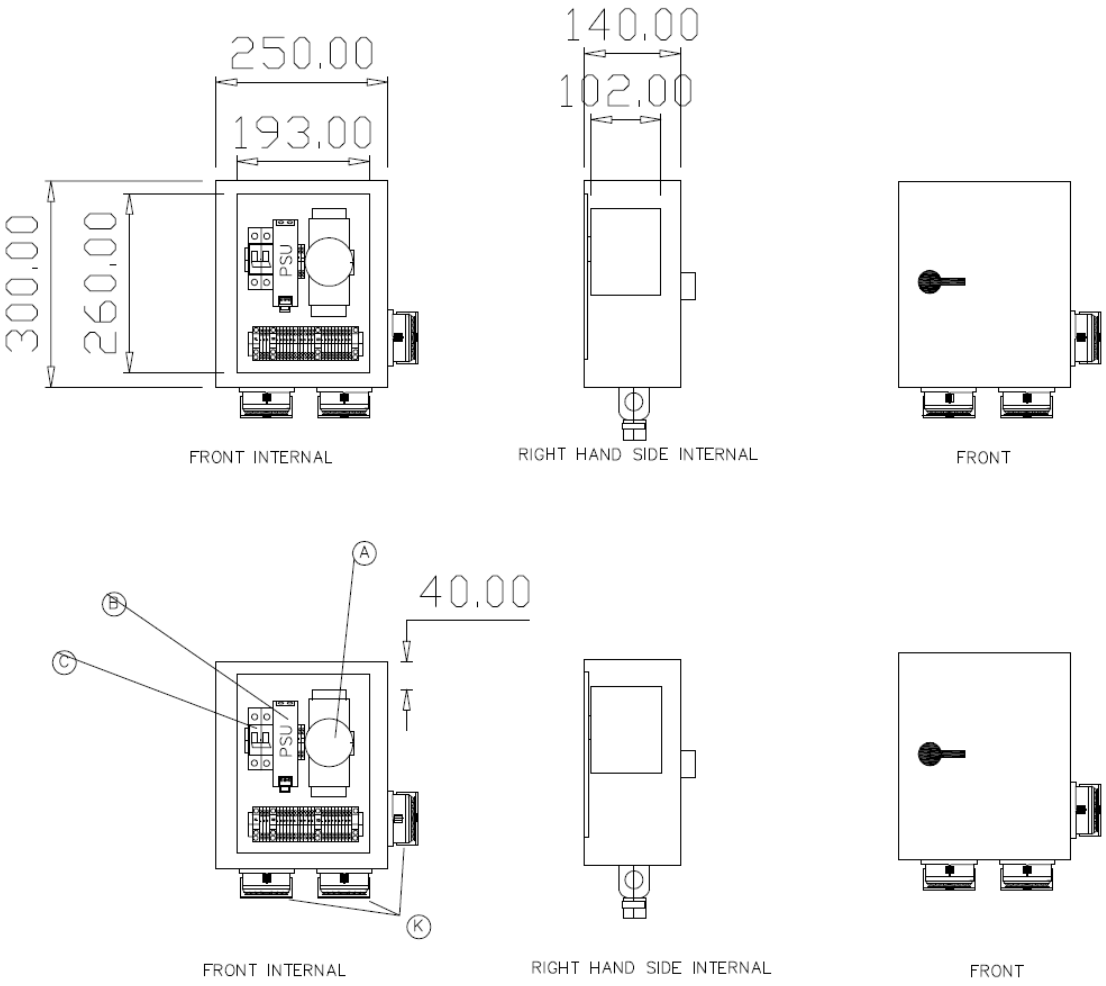

Figure 1: Physical Dimension of the weather station panel.

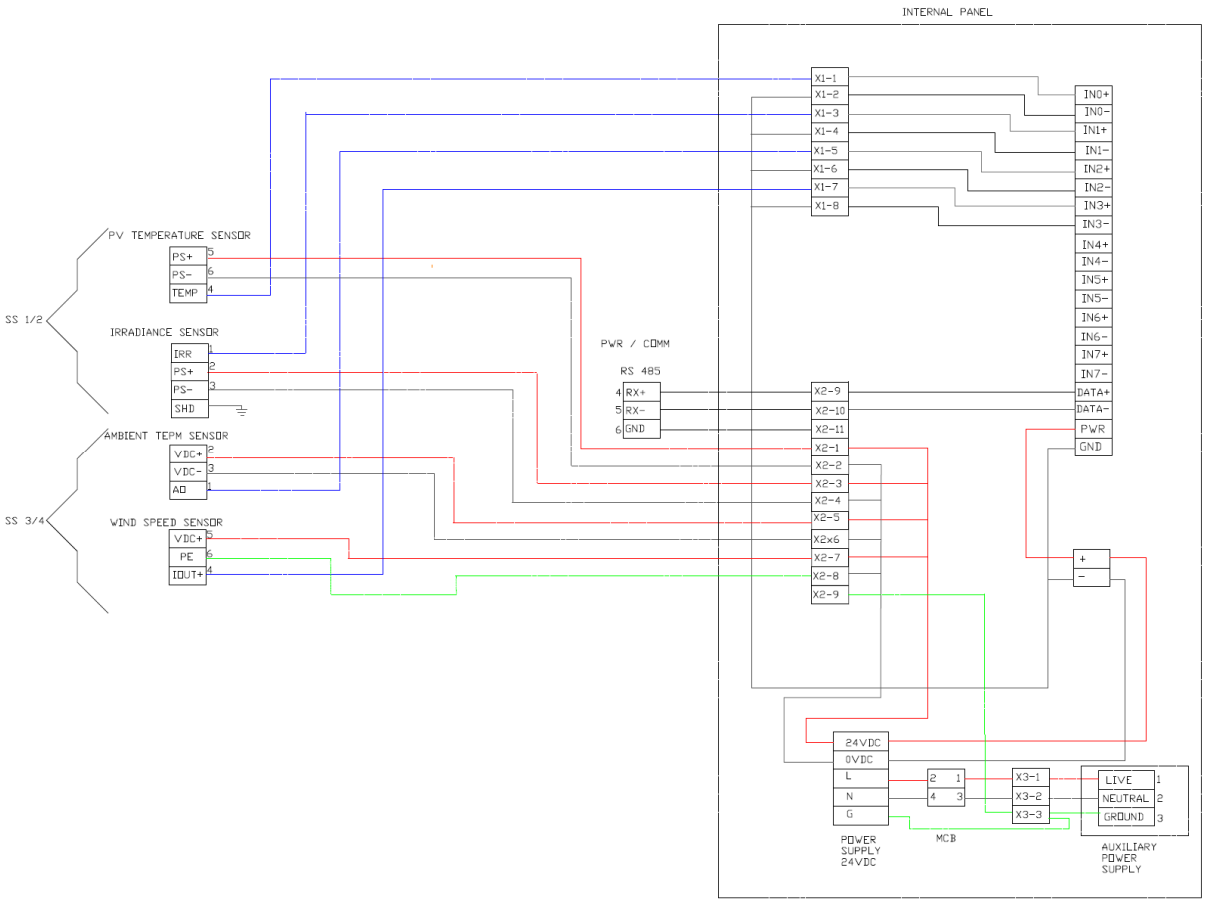

Figure 2: Wiring Schematics of the weather station panel.

Contact with us

Cat Minh Technology Equipment Co., Ltd
Tedi Building, No.15A Hoang Hoa Tham St
Ward 6, Binh Thanh Dist, Ho Chi Minh, Viet Nam
Phone: +84 (0) 28 6258 3341
Email: info@catminh.com
Website: www.catminh.com , www.catminh.net