

USER INSTRUCTION

CRS Firefighter safety switch

EN

General Notice

- 1.Changes or modifications in the product not explained/approved in this manual voids your authority to operate this equipment.
- 2.TELERGON shall not be held responsible for any damage caused due to incorrect installation of the product and/or the misunderstanding of this manual.
- 3.TELERGON reserves the right to make any modification to this manual or the information contained herein at any time without notice
- 4.No design data such as sample pictures provided in this manual may be modified or duplicated except for the purpose of personal use.
- 5.Check the system operation regularly (once per 3 months)on faults.

Important Safety Precautions

- Components in the installations are exposed to high voltages and currents. Follow these instructions carefully in order to reduce the risk of fire or electric shock.
- The following regulations and standards are considered applicable and mandatory to read prior to the installation of electrical equipment.
- International Standards: IEC 60364-7-712 Electrical installations of buildings- Requirements for special installations or locations-Solar Photovoltaic (PV) power supply systems.
- Electrical installation regulations.

Guidelines for lightning and overvoltage protection:

- It is essential to uphold the limits for voltage and current in all possible operating conditions. Also keep in mind the literature on correct dimensioning and sizing of cabling and components.
- The installation of these devices may only be performed by certified technical person.
- The wiring schematics of the Firefighter Safety Switch can be found at the end of this manual.
- All the installation works should be tested in accordance with relevant local legislation at the time of installation.

Intended Use of the Firefighter Safety Switch

The Firefighter Safety Switch (CRS) has been especially developed as a safety device for direct current (DC) photovoltaic installations.The DC disconnect switch is used to disconnect the connected strings of the installation in case of an emergency situation. Such emergency situation could be in case of fire.

Location of the Firefighter Safety Switch

The CRS needs to be placed as close to the solar panels as possible. Due to its enclosure, the switch is protected against external influences like dust and moisture. The whole set-up is conforms to IP66 which makes it suitable for outdoor usage when needed.

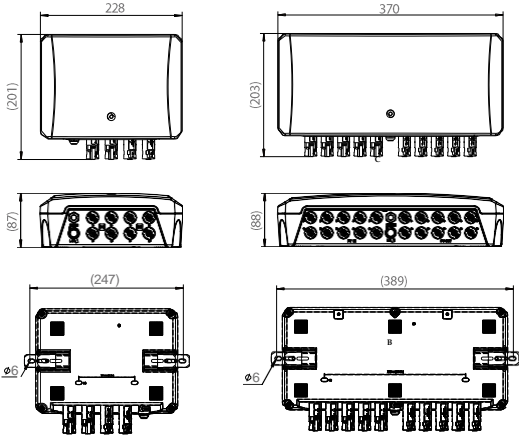
Normal operation:

The CRS will automatically switch to the off position, interrupting the DC connection between the solar panels and the inverter , after the AC power to the CRS is interrupted for longer than five seconds. The CRS will automatically switch to the ON position, restoring the DC connection between the solar panels and the inverter, once the AC power to the CRS is restored longer than five seconds.

Special Operation

If the temperature inside the CRS enclosure exceeds the 70 °C, the CRS will automatically switch to OFF to protect the internal components and create a safe situation. When the installation is checked and the CRS is not affected, the CRS can be switched ON again by removal and re-applying the AC voltage to the CRS. The CRS will also automatically switch to OFF if there is an internal failure.If this occurs, reset the CRS by removal and re-applying the AC power supply at least for 15 minutes.

DIMENSIONS



CONNECTION

Configuration: MC4 + AC triplex cable connector



IMPORTANT NOTIFICATION

When you need to connect the MC4 on our product, please use the MC4 in the accessory package provided by our company.

If you use other MC4 that are not provided by our company, it may result in failure to match with the MC4 on our product, causing electric sparks or even fire.

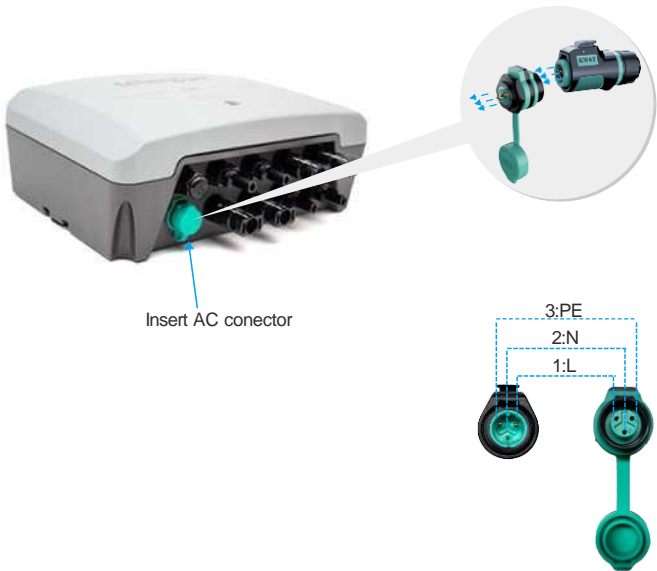


TECHNICAL INFORMATION

Standard		Data
String voltage	Vdc	up to 1500
String current	A	up to 38A
Thermal current	Ithe	38A up to 40°C
		32A 40-50°C
Working voltage	Vac	100 - 270
Rated voltage	Vac	230
Rated current	mA	30
Starting (loading) current	mA(AVG)	100
Action current	mA	300
Operating temperature	°C	-20°C - +50°C
Maximum temperature before automatic shutdown		>70°C
Storage temperature	°C	-40°C - +85°C
Protection rating		IP66
Overvoltage protection category		II
Mechanical life without load	cycles	10000
Number of loaded operations (PV1)	cycles	1500

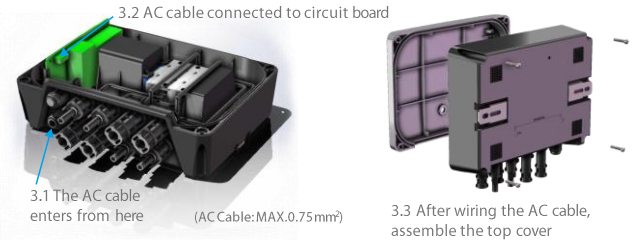
INSTALLATION

- 5 Take out the AC triplex cable contactor to wire the AC cable. Please distinguish the L,N, and PE.



INSTALLATION

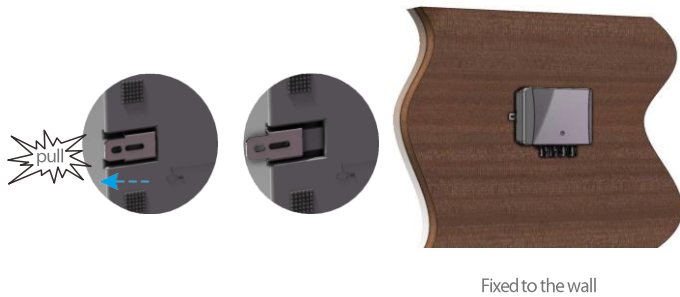
- 2 Wire the AC cable to the circuit board after entering the cable gland head following step 3.1 and 3.2 .Please distinguish the L,N, and PE poles.



Note: FB1, FB2 are used to remotely display the on and off states of the switch. When the switch is closed, FB1 is connected to FB2; when the switch is open, FB1 is disconnected from FB2.

INSTALLATION

- 3 Pull out the back mounting buckle from two sides, install the CRS device on the wall with M5 screws.



- 4 Take out the MC4 from packaging bag, press photovoltaic cable with MC4 by Crimp Tools. Please distinguish +/- (positive and negative).



Note: Please follow the marks (+/-) for PV wiring.

INSTALLATION

- 1 If CRS device with configuration 2 (MC4 + Cable Gland head) , Please back off 6 screws on the device bottom to remove the top cover.



TEST

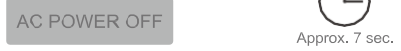
- 6 Step1. Activate AC power circuit .CRS switches on.



Step 2. Wait one minute. UPS is charging.



- Step 3. Deactivate AC power circuit. CRS will switch off in about 7 seconds. Red LED light off.



- Step 4. Activate AC power circuit. CRS switches on in 8 seconds. Red LED light on



Step 5. Test is completed.

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Email:

Note:
External power: +5~48V, 150mA~320mA
Resistance: metal shell, >10W

Resistor is selected according to supply voltage, to ensure circuit current less than the rated current of the Indicator light and < 320mA