



Keep moving forward

COMBINER BOX

There has been large scale development of solar energy projects all over the world and in recent year, safety-related system protection has played a very important role. Combiner Box is a singular protective unit that functions as the energy conduit between the power source (Solar unit) converting power into DC before transmitting it to Inverter.

Combiner box guarantees and improves the safety rating of a solar energy system doing these functions:

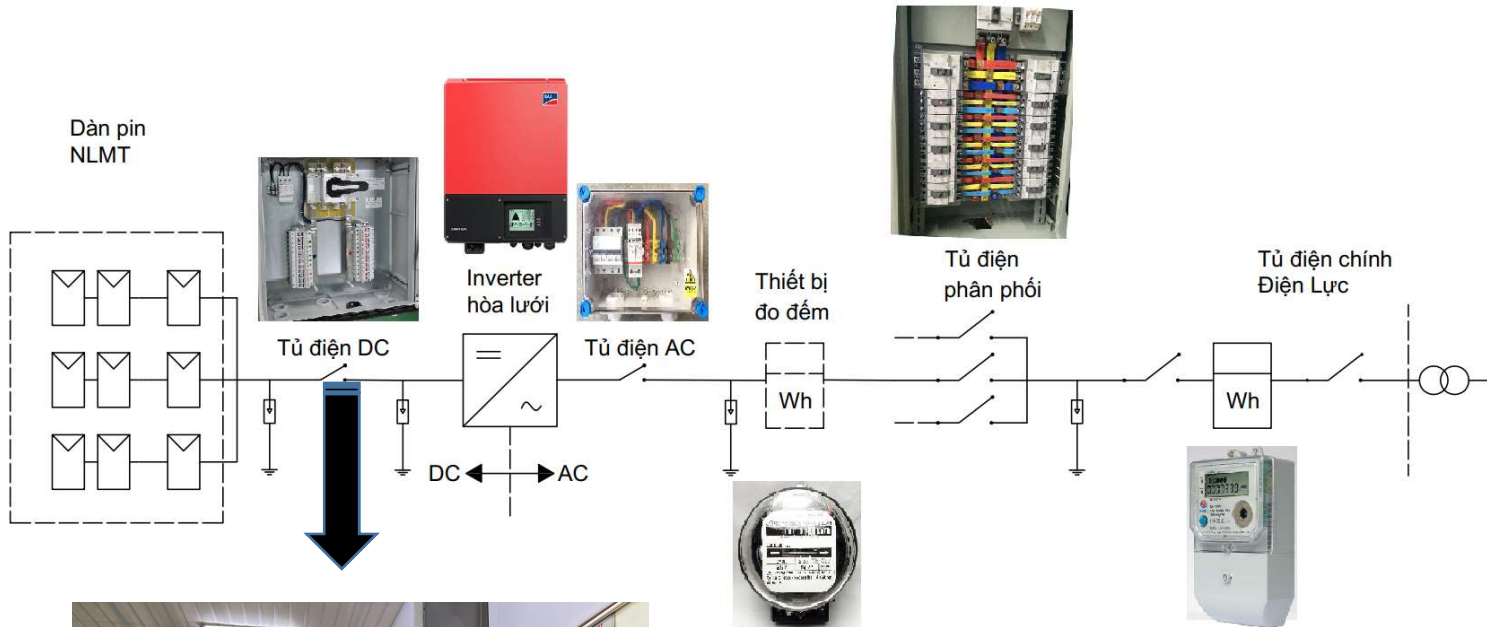
- + Monitoring and measuring power input and output
- + Doing periodic maintenance without stopping all the system.
- + Giving output signal to the remote-monitoring system.
- + The PV surge protection within the setup is the first line of defense against sudden power surges and has an overall impact on extending the lifespan of the inverter.
- + Economize electrical wire , especially in factory which has solar battery far away from the Inverter

The accessories inside the Combiner box are provided by SACOM attached with solar farm system using Solar KACO inverters (Siemens), SMA solar inverters... among Solar farm projects in domestic and international market such as Japan,...

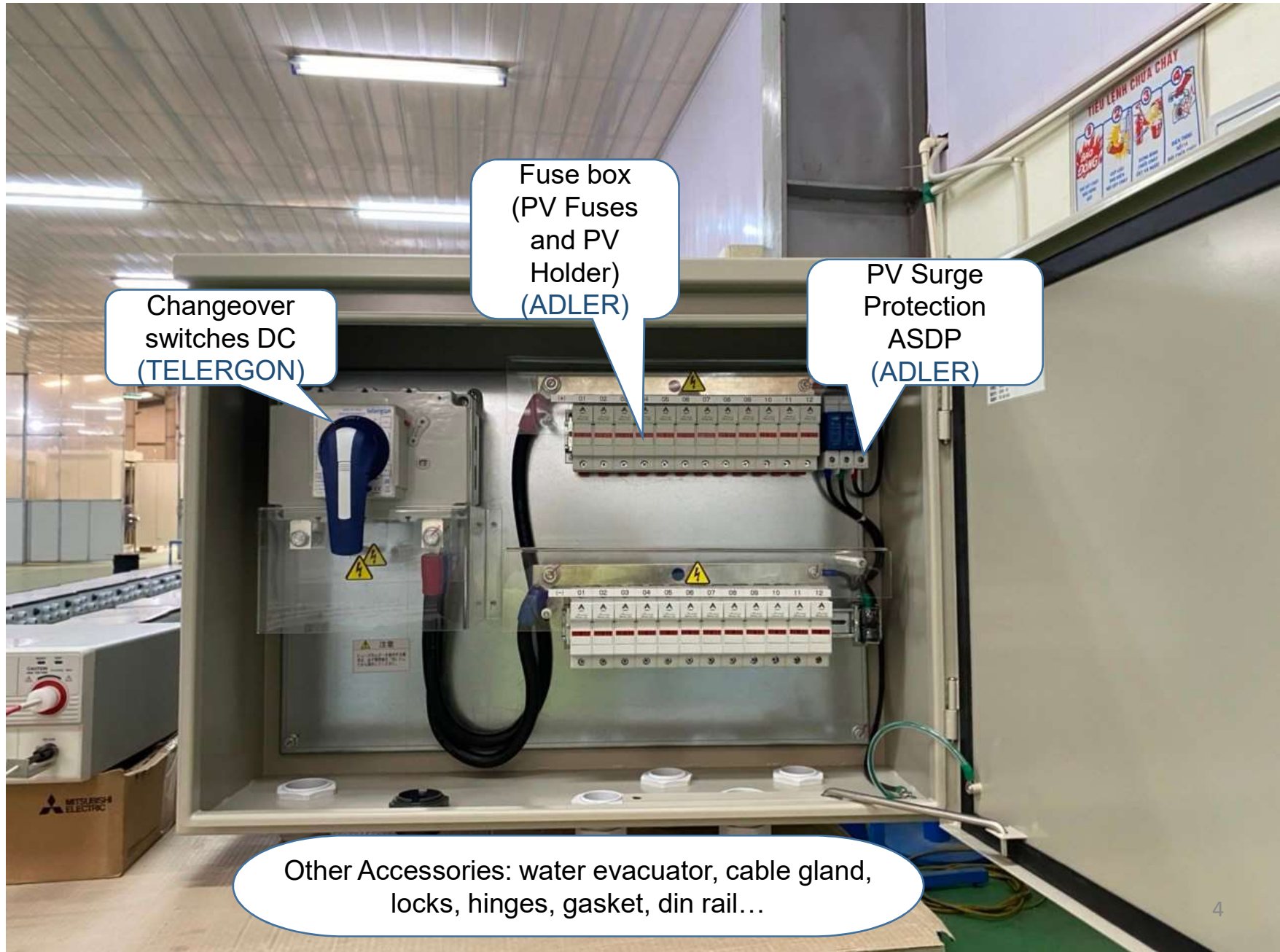
Grid-connected photovoltaic power system

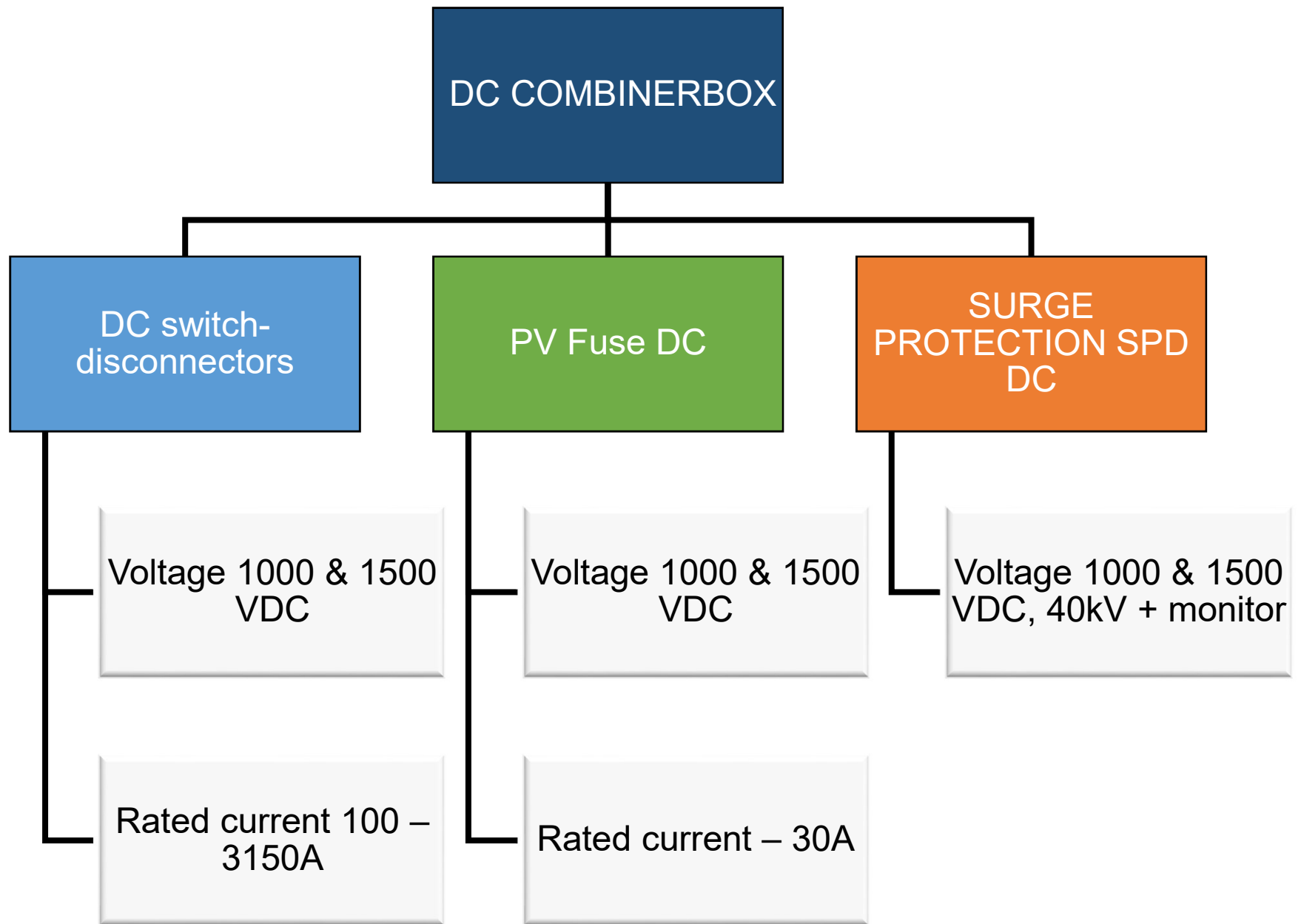


Grid-connected photovoltaic power system



Generalize accessories inside Combiner box





I. DC Switch Device TELERGON

1. ZFV / ZFC

DC switch-disconnectors which are compatible for current rated 16A - 55A with the range voltage from 600 VDC to 1500 VDC



2. S5 / S5M / S5N

Size 1-5 4P, compatible for 3150A - 1000VDC



3. S6 / S6N / S6R

compatible for 630A - 1000VDC and 500A - 1500VDC



4. S5 / S6 Isolation only

compatible for 3150A - 1500VDC



5. S7

compatible for 160 - 500A - 1500VDC

S5|S5M|S5N DC switch-disconnectors



S5 & S5N | 100A -3150A | 1000 VDC

DC switch-disconnectors available from 100A up to 2000A at 1000Vdc, in 4P version, and from 2000A up to 3150A (S5N series) in 4P+4P versions



S5 M & S5N | 500A -1800A | 1500 VDC

DC switch-disconnectors on load available from 500 up to 1000A 1500Vdc in 4P+4P versions

S6|S6R|S6N DC switch-disconnectors



S6 | 125A – 630A | 1000VDC



S6N | 125A – 400A | 1500VDC



S6R | 250A – 500A | 1500VDC

DC switch-disconnectors available in different combinations of contacts from 1500VDC in 1P +1P versions. 125A up to 630A and in 500-750-1000VDC in 1P and 2P versions.

To complete the code, the selected scheme code must be filled in the empty space.

DC switch-disconnectors available from 125A up to 400A

DC switch-disconnectors of high performance and energy efficiency According to IEC60947-1&3 1P – 2P versions available from 160A up to 500A

According to UL98B 1P – 2P versions available from 250A up to 400A

Patented technology **US 9,899,159 B2**

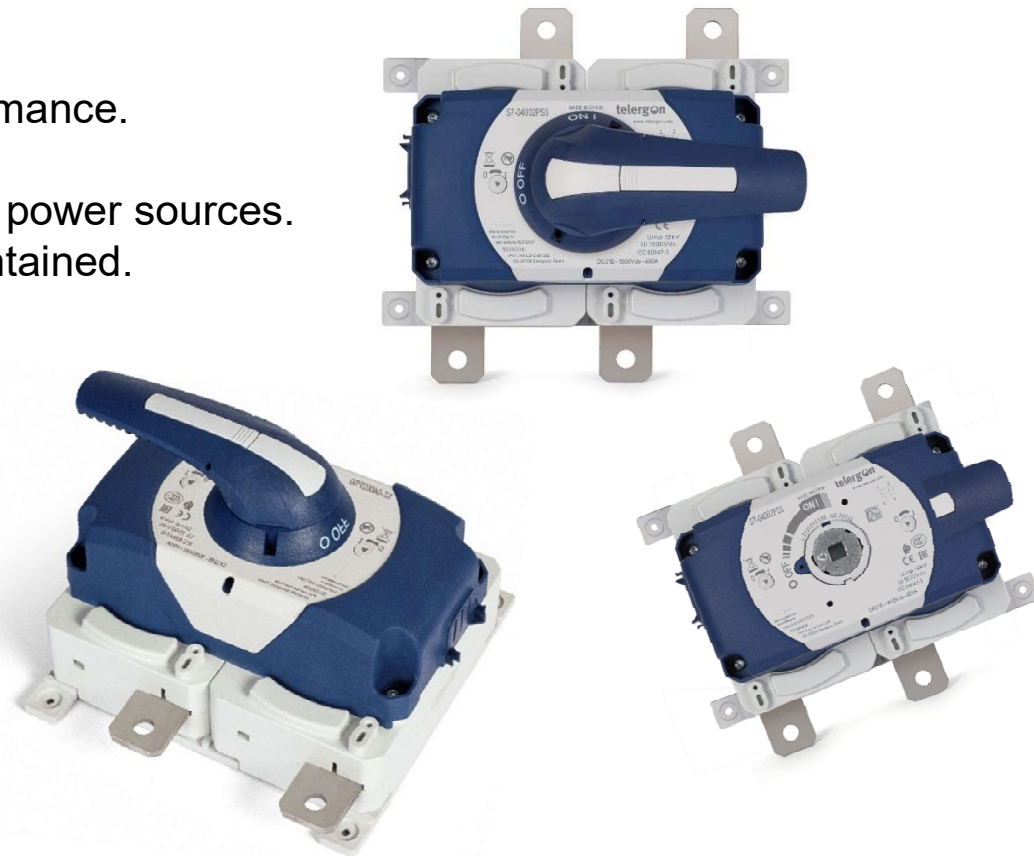
S7 DC switch-disconnectors

S7 | 125A – 500A | 1500VDC

S7 is the only switch device which has high electric performance that can reach the level of between 500 A - 1500 VDC, based on creative technology and was patented, S7 has been the achievement of R&D consultant group from **Telergon** after many years of research. **Telergon** is the supplier of changeover switches for DC and is widely applied in solar electric factories.

- **Advantages:**

- + Maximum electric performance.
- + High level of safety.
- + compatible with different power sources.
- + Easily-installed and maintained.
- + Higher longevity.
- + Compact design



II. Fuse Holder and fuse ADLER

Fuse boxes fully protect devices connected to voltage load of between 1000 –1500VDC with current rated at 1 – 30A. It is adapted to solar electric system.

Fuse

- Rated current: 1 – 30A
- Rated breaking capacity based on electrical breakdown: 30kA
- Time Constant: 1 – 3 ms
- Special Design for PV solar electric system.
- Standard: UL 248-19

A73 gPV 1000 VDC Fuse 10x38 mm

A83 gPV 1100 VDC Fuse 10x38 mm

A74 gPV 1500 VDC Fuse 14x51mm

A84 gPV 1500 VDC Fuse 14x51 mm

A75 / A78 aPV 1500 VDC Fuse 10x85 mm

A85 gPV 1500 VDC Fuse 10x85 mm

...



Fuse Holder

- Voltage rating: 1000VDC/1100VDC/1500VDC
- Current rating up to 30A / 32A
- Short circuit current Rating (SCCR):
DC 30kA @ 1000VDC / 20kA @ 1100VDC
- Standards: UL 4248-18, EN 60947-3
- Wire range: 18-8 AWG
- Operational temperature: -40 °C to + 130 °C
- Material flammability standard: UL 94-V0
- Mounting: DIN Rail mounting.



III. PV Surge Protection ADLER

PV Surge Protection transmit a photovoltaic of 40kA Class II to protect PV solar system.

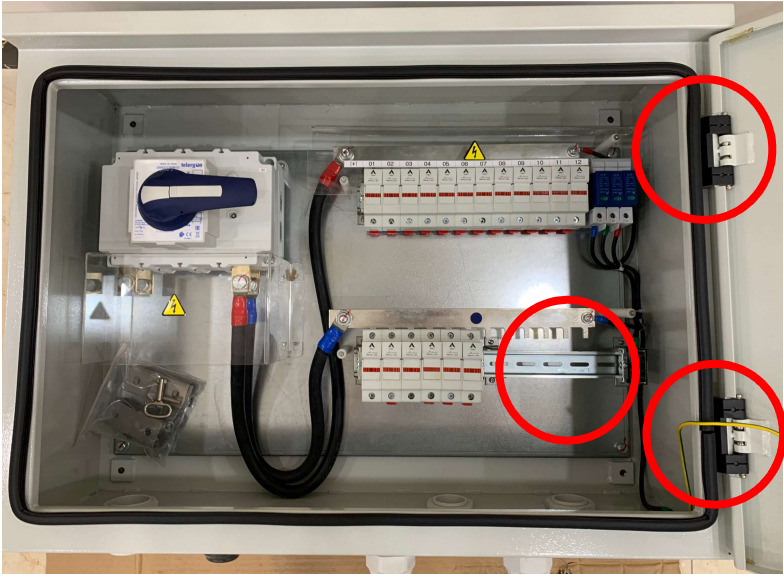
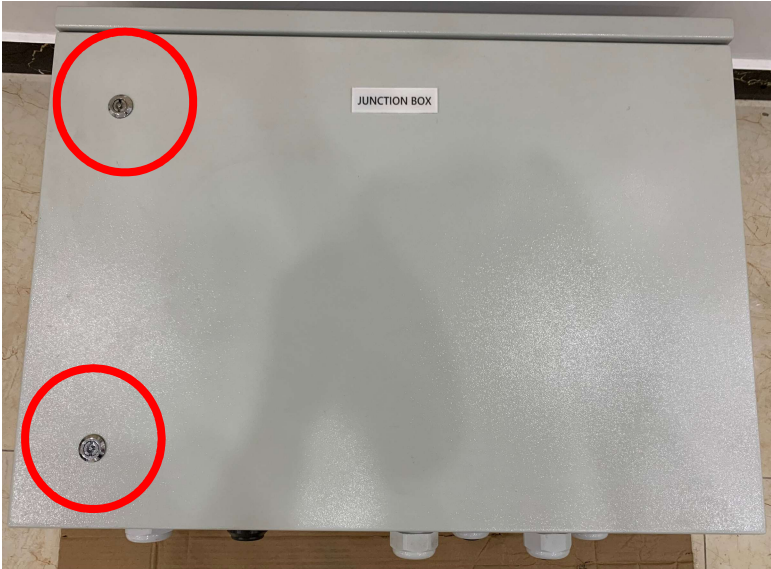
Appropriate to apply for all photovoltaic solar system.

Pre-wired and completely modular with coil, including base unit and protective modular plug-in.

- + Maintenance free, easily replacement.
- + High energy response time less than 25 nano seconds
- + Option transmit signal (FM) to monitoring equipment.
- + Din Rail Mouting TH35-7.5 / DIN35
- + Adapted to: EN 50539-11



III. Other Accessories



III. Other Accessories

1. Lock, hinge

Depending on customer's requirement about using environment such as stainless-steel cabinet, power coated cabinet against corrosion..... with compatible lock and hinge for each kind of cabinet cover.



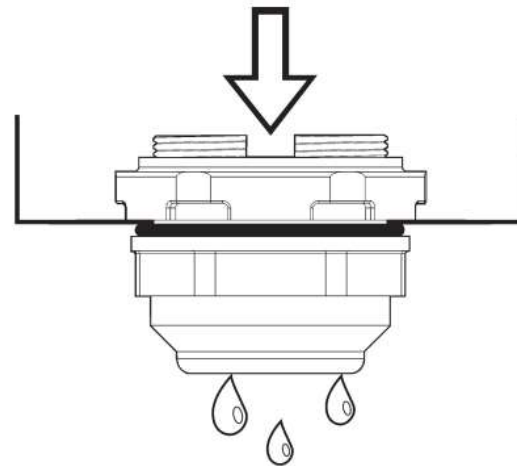
III. Other Accessories

2. Water evacuator

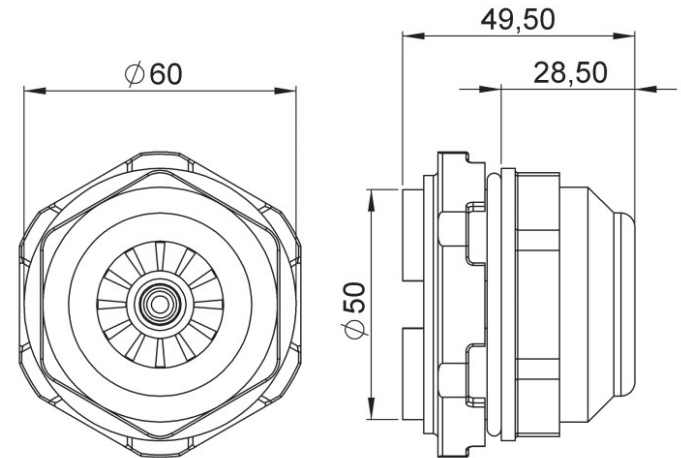


Feature:

- > High degree of protection
- > Good drainage performance
- > Easy to install
- > Robust, weather and UV-light protected housing

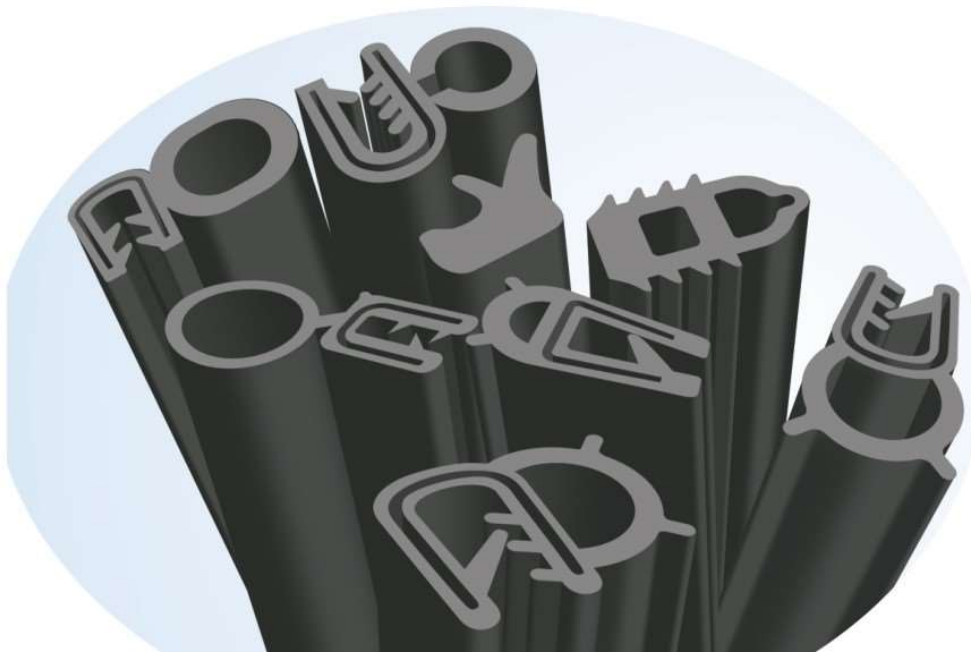


Fitting position



III. Other Accessories

4. Gasket



III. Other Accessories

5. Din rail



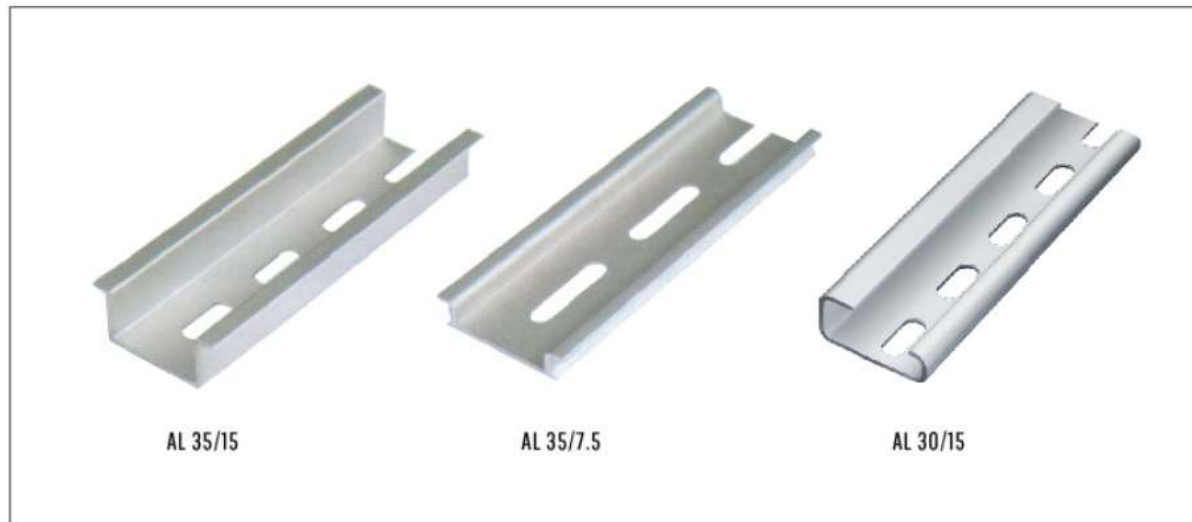
TS 15/5.5



TS 35/7.5



TS 35/15



AL 35/15

AL 35/7.5

AL 30/15

Some pictures of products for export projects



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- For further information about product, technical advice on Combiner box/Junction box. Please kindly contact our sales department or management team in our branches for convenient assistance.
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Respectfully wish customer/partner health, success in companion with SACOM into cooperation and development.

