



APPLICATION

- For photovoltaic farms and installations;
- protection of electrical equipment against the effects of short circuits and overloads;
- distribution and measurement of electricity sent for distribution;
- for DC (1000 V) and AC (500 V) networks.

EQUIPMENT

Enclosure

Thermosetting plastic

The housing is made of SMC plastic with IP 44 or 54. In the II protection class, with a flammability class from HB to V0, in RAL 7035 color, with the possibility of additional varnishing for temporary resistance to environmental effects and UV radiation.

Aluminum OU-1/OU-2 or Steel OU-1/OU-2

Housing made of aluminum sheet (joining by welding or riveting). Powder coated in any color. Dimensions adapted to the type, amount of equipment and individual customer needs. The housing has a high resistance to degradation, environmental impact and UV radiation.

The housing is made in protection class I or II. Class II protection is achieved by applying an additional insulating layer, permanently lined on the inner and outer surfaces. The thickness of the layer ensures the proper degree of insulation.

Ventilation allows constant air flow through the use of a ventilation labyrinth, while eliminating the ingress of dirt and the accumulation of water and moisture. Doors having internal hinges with anti-burglary catch and multi-point locking, basquill lock lockable with padlock or system cylinder.

Mounting components

- Mounting plate – made of plastic or galvanized steel, mounted on vertical mounting profiles made of galvanized sheet metal under the current track insulators;
- mounting profiles – steel, hole-punched, mounted to the housing structure;
- cable holders with mounting bar;
- masking plates – made of plastic plates or metal sheets, mounted to the housing structure.

Accessories

- wall bracket (for panel construction) - made of profiled sheet metal, allows the housing to be mounted on the solar panel structure or building wall (applies to: OU, OIP)).

Types available

- Solar panel switchgear – designed for PV generators mounted on the solar panel structure or building wall, equipped with overcurrent and overvoltage apparatus and letter plug connectors. Powered by direct current;
- Inverter switchgear – designed for DC/AC inverter, wall-mounted, equipped with overcurrent protection apparatus and letter plug connectors, supplied with AC power from the inverter;
- LV network switchgear, e.g. RM 630 – designed for distribution, measurement, protection and transmission of acquired energy to the distribution network.

Apparatus

We use equipment from many leading and proven manufacturers.

The switchboards are equipped with apparatus:

- **protection** – generator disconnects, line disconnects, inverter fuses, protectors and others;
- **distribution** – fasteners and current paths;
- **metering** – to analyze and collect information about the operation and the amount of generated energy returned to the grid;
- **control** – control and coordination of the operation of the photovoltaic system;
- **communication** – supporting remote control of all processes of the photovoltaic installation.



RATED PARAMETERS

Switchboard/ Enclosure	Solar panels	Inverters	LV distribution and transmission
Rated insulation voltage:	1000 V	500 V	500 V / 690 V
Current characteristics:	permanent	variable, 50 Hz	variable, 50 Hz
Rated continuous current:	30 A	up to 630 A	up to 630 A
Degree of protection:	IP 44 -66	IP 44 - 66	IP 40 - 66
Protection class:	I/II	I/II	I/II
Dimension of the supply/receiving terminals:	up to 35 mm ²	up to 35 mm ²	up to 240 mm ²



COMPLIANCE WITH STANDARDS

- **PN-EN 61439-1**
„Low-voltage switchgear and controlgear – Part 1: General provisions“;
- **PN-EN 61439-5**
„Low-voltage switchgear and controlgear – Part 5: Sets for power distribution in public networks“;
- **PN-E-05163**
„Shielded low-voltage switchgear and controlgear. Guidelines for testing under arc discharge conditions resulting from an internal short circuit“;
- **PN-EN 50274**
„Low-voltage switchgear and controlgear – Protection against electric shock – Protection against unintentional direct contact of hazardous live parts“;
- **PN-EN 60529**
„Degrees of protection provided by enclosures (IP Code)“;
- **PN-EN 62208**
„Empty enclosures for low-voltage switchgear and controlgear. General requirements“;
- **PN-EN 62262**
„Degrees of protection against external mechanical impact provided by enclosures of electrical equipment (IK code) (IDT PN-EN 50102:2001)“;
- **PN-EN ISO 4628**
„Paints and varnishes – Evaluation of deterioration of coatings – Determination of the amount and extent of damage and intensity of uniform changes in appearance – Part 6: Evaluation of the degree of chalking by the tape method“;
- **PN-EN ISO 2409**
„Paints and varnishes – Testing by the notch grid method.“