



## APPLICATION

- Control of street lighting systems.
- Metering and distribution of electricity and protection of lighting circuits for streets, traffic lanes, public use areas, motorways, industrial plants.
- For LV networks in TN-S, TN-C, TN-C-S types.

## EQUIPMENT

### Enclosure

#### Thermosetting plastic

SMC enclosure with IP 44 or 54 rating. Built to Class II protection standard, with HB to V0 flammability rating, painted in RAL 7035, with the possibility of additional painting to ensure temporary resistance to environmental factors and UV radiation.

### Aluminium OU-1S

The enclosure made of aluminium sheet (welded or riveted). Powder painted in any colour. The size matching the type and range of devices and individual needs of the Client. The enclosure is highly resistant to degradation, environmental factors and UV radiation. The enclosure is executed in the Class I and II appliance protection standard.

Class II appliance protection rating of the enclosure is achieved with an additional insulation layer permanently applied on the internal surfaces of the enclosure. The thickness of the layer ensures the required insulation. Labyrinth ventilation allows continuous flow of air with simultaneous elimination of penetration of pollutants and accumulation of water and moisture.

The door with internal hinges with anti-burglary lock and multiple bolts, an espag lock with a padlock or a system cylinder.

### Installation parts

- Installation profiles: steel, with openings, installed on the enclosure structure.
- Installation base: plastic or galvanised steel, installed on vertical installation profiles made of galvanised sheet for current circuit switches.
- Cable clamps with the cable management bar.
- Masking panels: made of plastic or sheet metal, installed on the enclosure structure.

### Accessories

#### A. Incoming and metering section

- Protection before the meter: fuse switches, overcurrent circuit breakers up to 63 A (1P, 3P) other protection devices compliant with the requirements of the Recipient.
- The incoming terminal block with the cross section up to 4/5 x 35 mm<sup>2</sup> (TN-S, TN-C), screw or Allen clamp.
- Protection against overvoltage.
- The metering board for installation of one- or three-phase active energy meters.
- Space for a modem, Tariff time switch.
- Covers ready for sealing.
- Document holder.
- V (VLM) or M (screw) type cable terminals for the incoming cable 2 x 4 x 240 mm<sup>2</sup>, for the outgoing cable 4 x 120 mm<sup>2</sup>.
- Cable clamps.

#### B. Control and outgoing section

- Fuse switch disconnecter as protection of the main control and outgoing section, which allows setting the break necessary for maintenance works.
- Low voltage current transformers: metering parameters (A, V, P, Q, S, cos), on the terminals of the controller.
- Real-time clock / controller / twilight switch.
- Control circuit overcurrent signalling and protection ensures visualisation of presence of voltage on the incoming side and correctness of control operations.
- Mode switch (automatic, manual, cascade).
- Service socket 230 V, overcurrent protection of the socket.
- Overvoltage protection: protection of the control part.
- Cabinet lighting: controlled with limit switches connected to the controller.
- Cabinet heating controlled with a thermostat with temperature setting.
- 1/3-pole contactor with the current rating matching the load, installed on each outgoing circuit or group of outgoing circuits for switching on and off the lighting circuits in various configurations.
- Outgoing circuits: fuse switches up to 160 A (D01, D02, 00) or overcurrent circuit breakers up to 63 A (1P, 3P).
- Outgoing terminals with the cross section up to 5 x 120 mm<sup>2</sup> with Allen / screw connection.
- Cable clamps.

The devices for SON cabinets are customised to meet the requirements of lighting administration entities and the expectations of the Client.

### Cabling

- Cabling of the cabinets is provided with flexible insulated cables (LgY) with cross section matching the required current load and types of devices.
- The PEN busbar with PE + N separation.

### Accessories

- **Pole clamp:** for any type of power poles.
- **Thermosetting foundation block:** matching the dimensions of the thermosetting enclosure.
- **FM aluminium foundation block:** matching the dimensions of the enclosure, fitted with removable front and back covers.
- **FB concrete foundation block:** built of reinforced concrete slabs, screwed with the aluminium or thermosetting enclosure.
- **Cable base.**





## BASIC TECHNICAL DATA

Rated operational voltage:	230 V / 400 V
Insulation rated voltage:	500 V
Rated frequency:	50 Hz
Impulse withstand voltage:	2,5 kV
Busbar rated continuous current:	do 910 A
Rated short-time withstand current:	20 kA (1 s.)
Rated peak withstand current:	40 kA
Internal arc short-circuit current:	16 kA
IP protection level:	44 - 54
IK level of protection against mechanical impact:	10
Appliance class:	I / II
Dimensions of incoming / outgoing terminals:	240 mm <sup>2</sup> / 16 mm <sup>2</sup>
Network arrangements:	TN-S, TN-C, TN-C-S
Height / width / depth:	without limitations for aluminium enclosures built to Class II protection standard



## COMPLIANCE WITH STANDARDS

- **PN-EN 61439-1**  
„Low-voltage switchgear and controlgear assemblies. Part 1: General rules.”;
- **PN-EN 61439-2**  
„Low-voltage switchgear and controlgear assemblies - Part 2: Power switchgear and controlgear assemblies.”;
- **PN-E-05163**  
„Enclosed low-voltage switchgear and controlgear assemblies. Guide for testing under conditions of arcing due to internal fault.”;
- **PN-EN 50274**  
„Low-voltage switchgear and controlgear assemblies - Protection against electric shock - Protection against unintentional direct contact with hazardous live parts.”;
- **PN-EN 62208**  
„Empty enclosures for low-voltage switchgear and controlgear assemblies - General requirements.”;
- **PN-EN 60529**  
„Degrees of protection provided by enclosures (IP Code)”;
- **PN-EN ISO 4628**  
„Paints and varnishes - Evaluation of degradation of coatings - Designation of quantity and size of defects, and of intensity of uniform changes in appearance - Part 6: Assessment of degree of chalking by tape method.”;
- **PN-EN ISO 2409**  
„Paints and varnishes - Cross-cut test.”;
- **PN-EN 62262**  
„Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code) (IDT PN-EN 50102:2001)”.

