



EQUIPMENT

Well

Made as a segment, quick to install, does not require any concreting. Made of plastic in a modular system that allows any change in the depth and width of the manhole. It has high resistance to dynamic loads. Does not have any protruding elements above the surface. The service life far exceeds that of concrete wells. The manhole has high elasticity, allowing 25 mm of deflection of the structure with the road surface, which significantly increases its service life.

The manhole is made of refractory material. The manhole is resistant to erosion, vibration, low temperature, fire, water, road salt, smaller oil, fuel and corrosive spills and exposure to strong light. The manhole segment system is made of polymers. The manhole can withstand loads of up to 40 tons. Complementing the manholes are cable channels and drainage. Holes can be made in the manhole for the introduction of cabling anywhere in the full size range.

Cover

Manhole cover made as concrete, steel, cast iron or plastic. Filling of the cover selected according to the type, shape and color of the pavement (cube, concrete slab, asphalt).

Platform

The manhole is equipped with an elevator together with a platform on which the inner casing is installed. The elevator allows lowering and raising the switchgear installed in the center of the manhole, using a hand crank or an automatic motor mechanism.

Internal enclosure

Aluminum OU-1S/OU-2S

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 high resistance to degradation, environmental impact and UV radiation. The housing is made in protection class I or II. Protection class II of the housing is achieved by applying an additional insulating layer, permanently lined on the inner and outer surfaces of the housing. 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.

The bottom of the enclosure has high IP-rated glands, allowing the introduction of wiring without unsealing the enclosure. The housing is placed at a certain level in the sump to avoid possible flooding. It is possible to install a water level sensor along with a high water level alarm system. The enclosures provide high tightness from IP 55 to IP 66, mechanical resistance from IK 06 to IK 10 and Class II protection.

The use of an additional cover for the internal housing allows the switchgear to be completely submerged in water, with no time limit.

APPLICATION

- Low-voltage electrical switchgear, signaling and telecommunications cabinets embedded below ground level;
- Collective catenary return points;
- Masking and protection from devastation or for landscape aesthetic reasons.

Equipment

The well and the internal casing are adapted to the assembly of any switchgear: ZK, W, ZPP, ZPP-P, ZZZ, SZR, SSA, RB, SON, SON-R and others, depending on the needs.

Wiring

The design of the well allows the introduction of a cable with any cross-sectional characteristics, core and type of insulation.

RATED PARAMETERS

Rated switching voltage:	230 V / 400 V
Rated insulation voltage:	500 V
Rated frequency:	50 Hz
Surge voltage withstanding:	2,5 kV
Rated continuous current of the main rails:	up to 910A
IP rating:	55 - 66 or total immersion
IK degree of mechanical resistance:	10
Protection class:	I/II
Dimensions of the supply/receiving terminals:	2x240 mm ² / 120 mm ²
Network layouts:	TN-S, TN-C, TN-C-S, TT, IT
Height/Width/Depth:	unbound
Load capacity of the manhole structure:	40 tones (D400)

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 assemblies - Part 5: Assemblies for power distribution in public networks“.
- **PN-EN 124**
„Tops of inlets and sewage manholes for pavements for pedestrian and vehicular traffic - Principles of construction, type tests, marking, quality control“.
- **PN-EN 60529**
„Degrees of Protection Provided by Enclosures (IP Code)“.
- **PN-EN 50274**
„Low-voltage switchgear and controlgear – Protection against electric shock – Protection against unintentional direct contact of hazardous live parts“.
- **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“.

