

RWTz - MV/LV transformer station switchgears for indoor installation with external access



APPLICATION

- For indoor installation and container MV/LV transformer stations with external access.
- For industrial and construction sites with limited space, with the possibility of wall or rack installation.
- Providing power supply, distribution and metering of electricity as well as protection of electrical devices against consequences of shortings and overloads on the low voltage side.

EQUIPMENT

Design

- Compact, framework design made of galvanised steel sheet, powder coated in any colour, up to 2 mm thick, ready for installation in any station or on the wall.
- All active elements fully covered.
- The switchgear can be built to any dimensions, to meet the specific needs of the Client.
- The marking of the switchgear with permanent engraved plastic plates to enable identification of all key elements.

Current circuits

- The current circuits of the incoming and outgoing modules made of screwed copper flat bars with the cross section adjusted to current load, fitted with pressed rivet nuts to enable installation of rail components when energised.
- The connection strip for the terminal of portable earthing devices.

Configuration

MZ: the incoming module

- The power supply for the module is provided with busbars or cables with brass terminals ZLM-2x300 to the current circuit strips.
- The incoming busbar bridge fully covered.
- The insulator switch (fuse) or power switch up to 2500 A.
- The earthing clamps for connection of earthing devices.
- The module may be optionally fitted with PK/EQ.

MO: the outgoing module

- Disconnecting switches or fuse bases (strip-mounted or moulded-case types).
- The module is optionally fitted with additional elements, e.g. generator terminals.
- Covered redundancy circuits.
- Cable clamps.

MP: the metering and balancing module compliant with the guidelines of the energy distributor and seller.

SON: the lighting module, the control circuit for street lighting of the

traffic route in the vicinity of the station.

OPW: auxiliaries circuits, station lighting (16A/D01), 230 V socket (16A/A01).

PK/EQ: monitoring, analysis of quality of electricity, metering voltage transformers, grid parameters meter (analogue or digital), analyser of electricity quality parameters, communication.

BK: a capacitor to compensate idle running of the transformer / a battery of capacitors.

BASIC TECHNICAL DATA

Rated operational voltage:	230/400 V
Insulation rated voltage:	500/690 V
Rated frequency:	50 Hz
Impulse withstand voltage:	8 kV
Busbar rated continuous current:	1250/1600/2500 A
Outgoing busbar rated continuous current:	160/250/400/630 A
Rated short-time withstand current:	40 kA (1 s.)
Rated peak withstand current:	80 kA
Internal arc short-circuit current:	20 kA
IP protection level:	2X
IK level of protection against mechanical impact:	10
Appliance class:	I
Dimensions of incoming / outgoing terminals:	2 x 4 x 240 mm ² / 4 x 240 mm ²
Network arrangements:	TN-S, TN-C, TN-C-S, TT, IT
Height / width / depth:	without limitations

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)”.

