

Data Sheet no. 1.15/3

MV Switchgear, Type SMV

The medium voltage (MV) switchgear connects the HV test system directly to the MV power net feeding the HV test system.

The MV switchgear comprises the MV switching cubicle and the associated control cabinet.

MV Switching Cubicle (Fig. 1):

The stand-alone cubicle is made of steel sheets and contains mainly the following elements:

- hand-operated 2-phase switch disconnecter with load break;
- hand-operated earthing switch;
- 2 medium voltage vacuum contactors;
- overcurrent protection, shunt releases and undervoltage release in the power circuit;
- low voltage compartment to connect with the control cabinet and to install protection devices;
- basically at the front: emergency-stop-button, switch position and voltage indications.

Subject to construction of the regulating transformer additional items might be arranged in the MV switching cubicle:

- voltage transformer
- current transformer

Technical Data MV Switching cubicle:

Dimensions (HxWxD): approx. 2150x1800x750 mm
Weight: approx. 640 kg
Rated voltage: 24 kV (higher on request)
Rated current (for busbar): 630 A
Frequency: 50/60 Hz
Maximum ambient temperature: 40 °C
Duty cycle: continuous operation

Control Cabinet (Fig. 2):

The control cabinet is mounted on the wall close to the switching cubicle. It mainly contains:

- transducers for the measurement of feeding voltage and current;
- programmable logic controller of the type SIMATIC S7 of the control and measuring system (see Catalog Sheet 1.52);
- isolating amplifiers, coupling relays, fuses for the control, overvoltage protection of all inputs and outputs of control and measuring cables; contactors for drives;
- PROFIBUS coupling for connection to an operator device and/or ETHERNET connection (only with controls type CMS22/23) to the control computer;

Additional optional items might be arranged in the control cabinet dependent on test system type and arrangement:

- peak voltmeter (see Data Sheet 5.56), without own display (display on operator device or control computer),
- components of the breakdown detection unit, type BDC (see Data Sheet 1.57), of the secondary current measurement (see Data Sheet 1.58) and of the fast switch-off circuit (see Data Sheet 1.59) as far as applicable.

Technical Data Control cabinet:

Dimensions (HxWxD): approx. 1000x800x300 mm
Weight: approx. 75 kg
Rated voltage: 400 V
Frequency: 50/60 Hz
Maximum ambient temperature: 40 °C
Duty cycle: continuous operation

Remark: The feeding voltage can be adapted to the local conditions!



Fig. 1: MV switching cubicle / frontal view

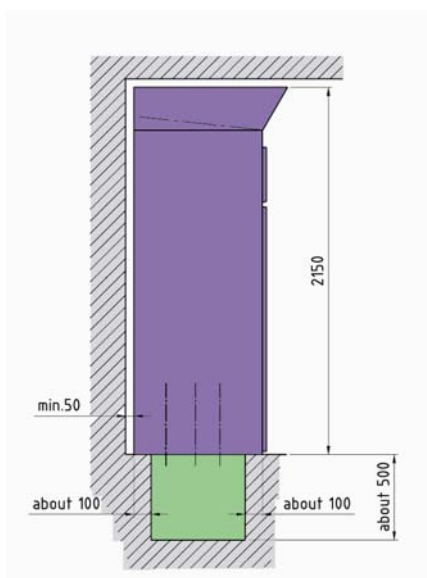


Fig. 3: MV switching cubicle / lateral view

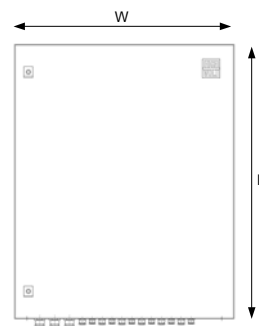


Fig. 2: Control cabinet for fixing to a wall

Installation information:

- see Fig. 1 and Fig. 3
- the green area is the cable duct for the installation of MV cables

Type designation:

SMV stands for switchgear cubicle for medium voltage "figure" means the Rated voltage in kV

SMV ... T HV AC test system based on HV transformer and HV DC test systems

SMV ... R HV AC test system based on HV resonant reactor

Examples:

SMV12T is a 12 kV switchgear of a HV test system based on a HV transformer

SMV24R is a 24 kV switchgear of a HV resonant test system

For further information please contact:

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