



## APPLICATION

An example of new solutions can be any modern field of double-member switchgear in air insulation. The number of operating apparatuses has been reduced (there are only two: a circuit breaker or a disconnector and an earthing switch), and the whole is connected by a system of mechanical and electrical interlocks, so that an employee operating the apparatuses cannot perform a forbidden operation (e.g. closing the earthing switch while the circuit breaker is closed in the "operation" position).

It is possible to use a withdrawable module with a circuit breaker or contactor, instead of a stationary device.

It is possible to use fixed members for withdrawable circuit breakers.

The members are available in two versions:

- Fully enclosed and enclosed cassette with front door closure.
- Support frame (consisting only of a back plate with insulating grommets and bottom guides for the withdrawable member).



## BASIC INFORMATION

The issue of "retrofitting" MV switchgear is one of the most current topics in the power industry. Every year, groups of users face the problem of using old switchgear, and everyone is faced with a decision: replacing apparatus or buying new switchgear.

We are confident that with the proposal presented, the existing alternative of solutions will expand, so that everyone will be able to better match an individual solution to their own technical and economic conditions.



## COMPLIANCE WITH STANDARDS

- **PN-EN 62271-1**

High-voltage switchgear and controlgear – Part 1: Common provisions.

- **PN-EN 62271-200**

High-voltage switchgear and controlgear. Part 200: A.C. switchgear in metal sheaths for rated voltages above 1 kV up to 52 kV.

## FEATURES

In addition to increasing the reliability of the field, the use of a cassette or support frame also brings additional benefits:

- Protects the operator from performing an incorrect operation (cannot enter and leave the field closed by the circuit breaker without first closing the earthing switch, it is not possible to move the retractable module from the "work" position to the "test" position, it is not possible to close the earthing switch before the circuit breaker is opened).
- The structures are equipped with curtains of isolation grommets, i.e., when they are closed and locked, the staff cannot touch the fixed contacts in the grommets.
- By extending the withdrawable module to the "test" position and covering the insulating grommets with curtains, the operator can see that there is a visible insulating gap in the circuit from the supply and outflow side; The extension of the module acts as two disconnectors in the old system.
- Any necessary apparatus can be installed on the withdrawable module: vacuum circuit breaker, SF gas circuit breaker or contactor.
- In the event that in the future the user decides to buy a modern two-member hooded switchgear, he can use his existing extension apparatus without modifications.
- An additional advantage of cassettes and support frames is the speed of their installation in the field. This significantly reduces the time required to work on a single field in case you decide to replace all fixed apparatuses with new ones in the traditional way – "one for one".

## RATING PARAMETERS

<b>Rated voltage:</b>	7,2; 12; 17,5 [kV]
<b>Rated current:</b>	630; 1250; 1600; 2000; 2500; 3150 [A]
<b>Rated short-term withstand current:</b>	20; 31,5 [kA/3s]
<b>Lightning surge test voltage:</b>	125 kV
<b>Rated continuous current:</b>	630 A
<b>Rated withstand current:</b>	16 kA
<b>Rated peak withstand current:</b>	40 kA

