# Air-insulated medium voltage switchgear MSA-L up to 24 kV compact measuring field





# Description

The compact measuring panel type MSA-L is type-tested in compliance with the valid standard DIN EN 62271-200 and therefore meets the requirements for a safe and reliable operation in the energy supply system. The arc fault resistance of the measuring panel was successfully proven in a certified test panel in compliance with IAC-AFL 20 kA/1s. The switchgear has been developed and constructed for the use under normal operating conditions in compliance with DIN EN 60694 and can be used in compact stations due to its design.

#### Design

The measuring panel consists of a steel sheet construction in modular design. The individual elements are connected via steel rivets.

A pressure-resistant steel sheet snap-on panel constitutes the frontal panel closure. Both side walls as well as the rear wall also consist of steel sheet. The busbars are flat copper 40\*6 mm. Cables to be connected are guided into the switching panels from the bottom and there, they can safely be mounted via variable cable holding irons.

#### **Technical equipment**

The measuring panel enables the installation of standardised current and voltage transformers.

### Optional supplementary equipment

Optional: the installation of a second voltage transformer set or self-supply transducers (e.g.  $2 \times GSZ20$ or  $1 \times TGZ20$  - make Ritz) is possible.

The separate equipment compartment can be equipped with various measuring devices, safety elements etc.

Additional switching / equipment options are available on request.

## **Technical data**

Rated voltage	U <sub>r</sub>	24 kV
Rated short-duration power freq. withstand voltage	U <sub>d</sub>	50 kV
Rated lightning impulse withstand voltage	Up	125 kV
Rated frequency	f <sub>r</sub>	50 Hz
Rated current	l <sub>r</sub>	630 A
Rated short-time withstand current (1s)	I,	20 kA
Rated peak withstand current	l ma	50 kA
Ambient temperature	T	-25°C bis +40°C
Arc qualification	IAC AFL	20 kA/1s
Degree of protection		IP 2XC