



Switchgear type SF-1 for rated voltage 500V or 690V



Switchgear SF-1 (with frequency converter) is an electrical device designed for use in underground mining, with no explosion hazard present and on the ground, with no explosion hazard present.

Switchgear SF-1 (with frequency converter) is used for connecting and switching receivers (especially mining driver-gear that requires speed control, for example fans, pumps, belt conveyors) to the mine 3-phase power grid with isolated star point of the transformer (IT system) for 500V rated voltage. The receiver is connected to the switchgear via a terminal by cable gland. Switchgear SF-1 is equipped with a power protections against short-circuits, overloads, lowering of earth resistance and continuity of the earthing control system.

TECHNICAL DATA:

ingress protection	IP54
rated power supply voltage	500V, 50 Hz
rated power	(75, 90, 110, 132, 160) kW
rated current	(115, 145, 163, 220, 254) A
rated output voltage	(0÷500) V or (0÷690) V ±10%
output frequency	(0÷300) Hz
control circuit voltage	24V, 50 Hz
number of 500 V outlets	1
dimensions (height x width x depth)/weight - (without a protective cage)	1800 x 1300 x 650mm/450kg
- (in a protective cage)	1900 x 1500 x 800mm/550kg

CONSTRUCTION

The switchgear housing is made of sheet steel. The unit is placed on a steel support base enabling the switchgear to be placed directly on the ground.

MODE OF OPERATION

The switchgear can be operated in two modes: LOCAL, REMOTE. In the LOCAL mode, the outlet of 500V is turned on with a button on the front wall of the switchgear. LOCAL control mode selection is performed by pressing the buttons to switch on SZ or off SW. In REMOTE mode, the outlet is turned on with an external control system via modem and controller according to the programmed algorithm. Selection of the REMOTE mode outlet 500V control is realized by the software module M3/WY8 of the controller from an external control system. Messages of the status of the frequency converter can be read on the panel, built on the face wall of the switchgear. Communication of the switchgear with an external control system is carried out via a modem, cooperating with the controller.

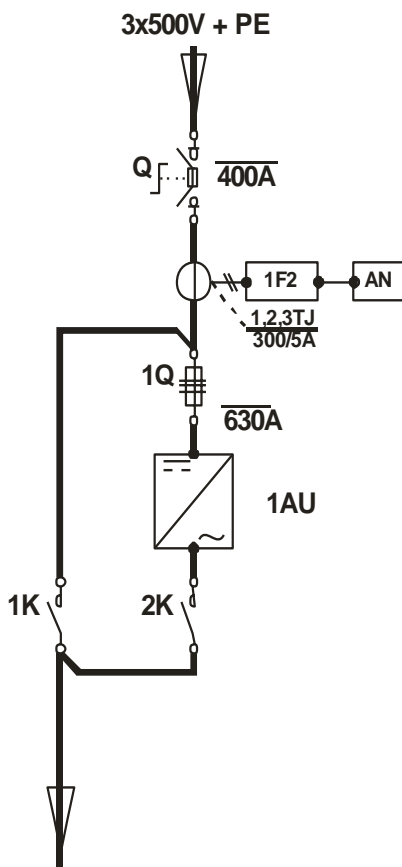
AIR CONDITIONING

The switchgear is equipped with a air conditioning unit KL, ensuring the internal temperature not to exceed 40°C, which ensures optimum operating temperature for the frequency converter 1AU. The internal and external circuit of the air conditioner are totally separated providing the switchgear protection degree of IP 54.

SCHEMATIC DIAGRAM

Legend:

- Q – fuse disconnector
- 1AU – frequency converter
- 1K,2K – contactors



Orders should be placed in writing or by fax to the address:

 **Instal-Service PL**

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