

Change over unit ZA 3.1

System philosophy

Change over unit is dedicated to automatic switching supply networks. Standard version is produced to switching transformer – transformer, transformer – generator or for these configurations equipped with longitudinal power junction. All units are equipped with potential-free contact for starting a diesel generator.

There are no limitations for “special versions units” in number of supply lines, outgoing sections or method for its control.

Whole unit can be separated up for two parts – power section and control element. Power section can be different for each appliance. Wattage is the main difference, power item can be represented by contactor (with one control coil) or deion (with two control coils).

Control element is unified, independent on wattage of power section.

Programmable logic controller is collecting information on individual relays, circuit-breakers, contractors and deions. On the basis of this information the PLC switches individual components on or off.

External signals

It is necessary to have information on each supply network for right PLC function. Each supply line is monitored by a relay for network checking that guards presence of all of three phases and their sequence. Line status is reported to the PLC by relay's contact.

Other necessary signal is information on status of each power item – on or off. This information is led to the connecting block of breaker by potential-free contact and than to terminals of PLC.

Control element

Standard produced type of change over unit is controlled by programmable relay EASY.

More complicated systems are equipped by modular PLC XC101 or XC201, depending on application complicity.

The principle of controlling stays always the same – to turn on output breakers on the basis of status of supply networks.

Manual controlling

Individual power elements can be hand controlled by operator. The PLC is not in order in this mode. Change-over to the manual mode has no effect to the breakers. After change to the automatic mode the breakers are turned in consonance with PLC program.

Visualization

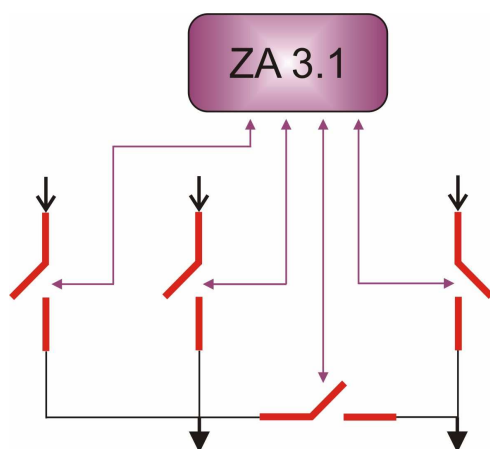
Change over unit can be equipped with touch panel for displaying technological scheme and for controlling some parameters of leading program.

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Type ZA 3.1 serves to controlling two supply lines, each supplying independent load. The third line is energized by back-up generator. The unit is equipped with longitudinal power junction. If one supply line drops out, its power breaker will be turned off. After that the breaker of junction will be turned on. Both of the loads are supplied by one supply line in this case. If the second supply line drops out too, the generator will be switched on in the same way as written higher

When the power supply voltage is restored the breaker of generator will be turned off and than will be turned on the breaker of the supply line. If it is restored both of supply lines, the breaker of power junction will be turned out and the second supply line will be turned on.

Block diagram



Technical parameters

Main version		
U_{supply}	230 V	24 V
I_{supply}	< 5 A	< 5 A
f_{supply}	50 Hz	DC
Logic inputs	6 (230 V AC/5 A)	
Logic outputs	12 (24V)	
Working temperature	0 to 40°C	
Mounting plate size	345 x 500 mm	
Mounting holes spacing	300 x 450mm	
Mounting hole	M6	
Maximal depth	115 mm	
Weight	4,2 kg	
Protection	IP 20	
Optional equipment		
Touch panel		
GSM module		

With detailed technical and commercial queries refer – PEG – s.r.o. employees, who will be glad to provide you with detailed information.