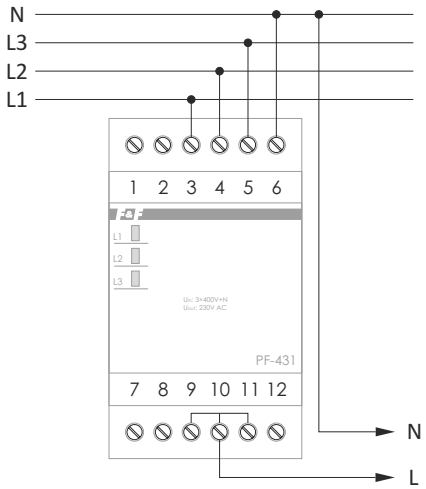
PF-431/PF-431i automatic phase switch with priority phase

FUNCTIONING

A three-phase voltage (3×230V+N) is applied to the input of the switch. The switch output is supplied with single-phase voltage (230 V AC), i.e. phase voltage of one of the phases. The electronic circuit of the switch controls the values of the voltages of the applied phases so that the output voltage is not less than 195 V. The phase with the correct parameters is directed to the switch output. The L1 phase is a priority phase, i.e. if its parameters are correct, then this phase will always be switched on to the output. In case of voltage drop in phase L1 below 190 V or its loss, the electronic system will switch phase L2 to the output (if its parameters are correct). In case of simultaneous lack of correct voltages in phases L1 and L2, the L3 phase will be applied to the output. In case of return of the correct supply voltage in phase L1 (above 195 V), the system will switch on this phase to the output.



input voltage	3×230V+N
output voltage	230V AC
maximum load current (AC-1)*	
PF-431	16A
PF-431i	16A (160A/20ms)
activation threshold (L1,L2)	<195V
activation threshold (L3)	<190V
hysteresis	5V
voltage measurement error	±1%
switching time	0,3s
indication of input voltages	3×LED
working temperature	-25÷50°C
terminal	4.0 mm² screw terminals
tightening torque	0,5Nm
dimensions	3 modules (52,5mm)
mounting	on TH-35 rail
protection level	IP20

* The actual permissible load depends on the nature of the receivers. In the case of powering large appliances, heating or a large number of, for example, LED lamps, it is recommended to use the PF-441 switch with additional contactors.

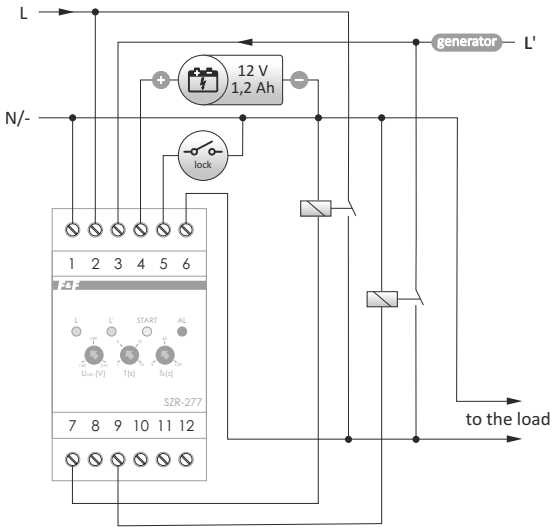
NOTE!

The "i" version of the device is equipped with a contact adapted to work with receivers with a large starting current, such as: LED lamps, ESL fluorescent lamps, electronic transformers, discharge lamps, etc.

SZR-277 single-phase backup switching controller

PURPOSE

The SZR-277 single-phase controller of backup switching is used to control the voltage of the single-phase power supply network and to switch the receiving line to the power supply from the generator in case of incorrect parameters of the main power supply line.



rated supply voltage	
main line and generator (1-3 terminals)	230 V/50 Hz
battery (1-4 terminals)	10÷12 V DC*
maximum permissible voltage (1-2, 1-3 terminals)	400 V AC
maximum switching current of internal contacts	
AC-1	16 A /250 V AC
AC-15	3 A /250 V AC
contacts	3×NO
voltage threshold**	
lower (adjustable)	150÷210 V
upper	270 V
hysteresis	5 V
switch-off time	
lower threshold (adjustable)	1÷15 s
upper threshold	0.3 s
switching time	0.3 s
time to qualify the line as a good	10 s
generator start time (adjustable)	5÷120 s
power consumption	1.5 W
terminal	4.0 mm² screw terminals
tightening torque	0.5 Nm
working temperature	-25÷50°C
dimensions	3 modules (52.5 mm)
mounting	on TH-35 rail
protection level	IP20

* recommended battery type: URLA, voltage 12 V, capacity 1.2 Ah
** at voltage over 300 V, the load is disconnected in no more than 0.1 seconds

FEATURES

* control of supply line parameters;
* generator start up control;
* emergency, external safety switch;
* protection of receivers against too high or too low voltage;
* backup power supply of the controller from the battery together with the battery charging system
* control of the relay contacts and protection against short-circuit of the generator with the main line;