



RPZ-1

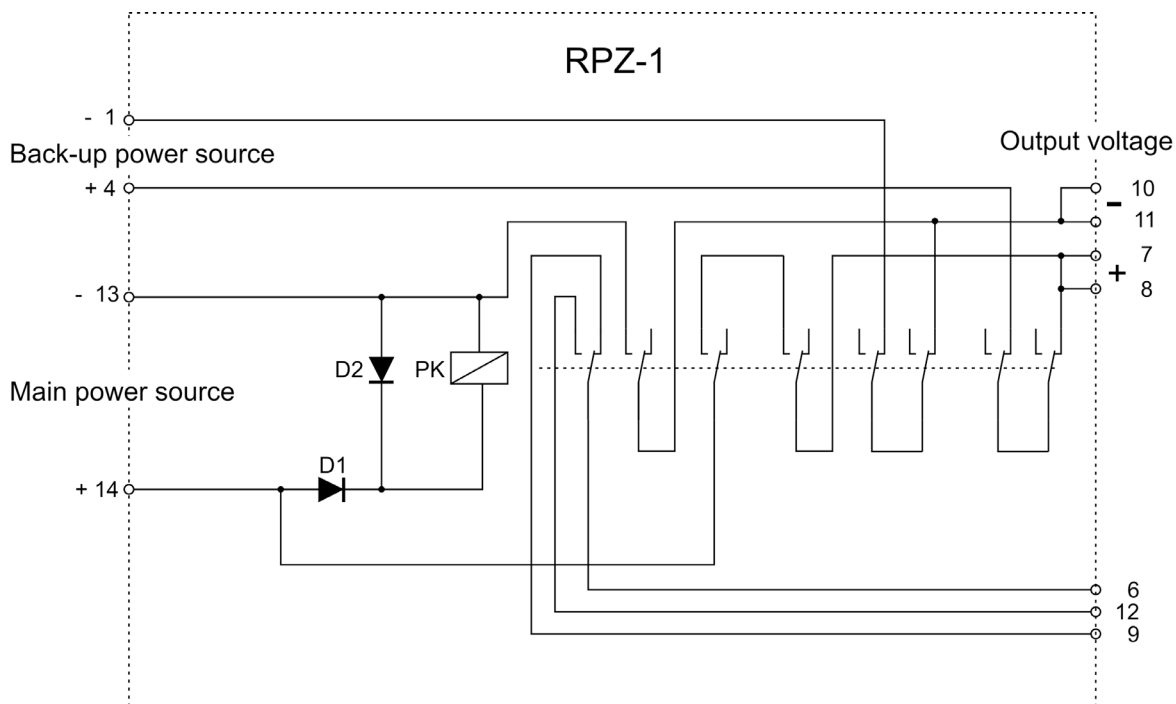
SUPPLY SOURCE SWITCHING

APPLICATION

The RPZ-1 relays are designed for use in control and protection circuits. They are meant for automatically switch the powered circuit for backup power supply in case of loss of main power supply. After reapplication of the main supply voltage a return switch is made. The RPZ-1 relay has two supply inputs (main and backup) and one output. Additionally the relay is equipped with an auxiliary change-over contact, informing about actual supplying source. The terminations of this contact are led out to the plug of the relay.

CONSTRUCTION

The relay is mounted in a typical housing size 110 × 55 × 77 mm, with 14 terminations in a form of a plug, suitable to be mounted in a GZ-14 socket (plate-mounting), GZ-14U (bus-mounting) or GZ14Z - to be mounted in a relay chassis type R8614Z. The scheme of connections (terminals) is presented on Picture 1.



Picture 1. RPZ-1 relay – functional scheme of connections.

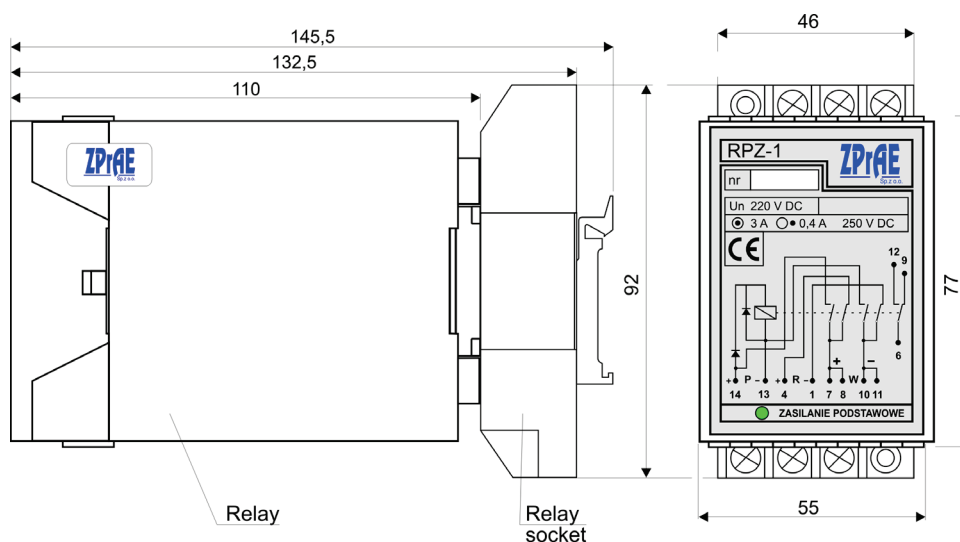
The relay is equipped with a LED signalling application of main supply voltage. Dimensions of the relay are presented on picture 2.

OPERATION

Supplying voltage should be applied to the main and backup supplying circuits constantly. During regular work of the relay, when both supplying circuits are functional, the coil of the relay is energised, its contacts are made, and the LED is on. The main supply voltage is passed through to the output terminal. In case of loss of main supply voltage the LED goes off, all contacts drop off to their passive status and a backup supply voltage is passed through to the output terminal. After reapplication of the main supply voltage the relay switches over the contacts, and the main supply voltage is passed through to the output terminal through active contacts.

TECHNICAL INFORMATION (for $U_n = 220 \text{ V DC}$)

Basic and backup power supply inputs	
Rated voltage	$U_N = 220 \text{ V}$
Operate range	$0,8 \dots 1,15 U_N$
Power consumption (coil of the basic input)	$P \leq 2 \text{ W}$
Output	
Duration of the voltage gap during switching the supply source.	$\leq 15 \text{ ms}$ (from U_{BASIC} to $U_{\text{BACKUP}} \sim 14\text{ms}$; from U_{BACKUP} to $U_{\text{BASIC}} \sim 9\text{ms}$)
Maximal switchable power	100 W
Maximal breaking capacity	$0,4 \text{ A (L/R=40ms)}$
Maximal continuous current	$I = 3 \text{ A}$
Auxiliary contact	
Type	Changeover
Capacity	$0,15 \text{ A; } 220 \text{ V DC; L/R=40 ms}$
Insulation	
Rated insulation voltage	250 V
Rated impulse voltage between the circuit and the auxiliary contact	4000 V
Overvoltage category	III
Proof voltage between the circuit and the auxiliary contact	$2 \text{ kV; } 50 \text{ Hz; } 1 \text{ min}$
Proof voltage between inputs	$1 \text{ kV; } 50 \text{ Hz; } 1 \text{ min}$
General Data	
Enclosure protection degree	IP40
Ambient temperature	od $-5 \text{ }^\circ\text{C}$ do $+40 \text{ }^\circ\text{C}$
Ambient protection	RT II
Terminations (socket/plug)	as R15 4P
Signalling of the basic supply voltage	green LED diode
Dimensions	$77 \times 55 \times 110 \text{ mm (W}\times\text{S}\times\text{G)}$
Mounting	as R15 4P to the mounting socket



Picture 2. The Dimensions of the RPZ-1 relay

Attention:

We have prepared a vast offer of auxiliary equipment in order to support mounting of our relays (cases, sockets, plugs). The auxiliary equipment is designed based on our clients suggestions and many years of our own experience. More information can be found in catalogue: "GZ-14/GZ-14Z, R-8614/R8614Z, ZAS-55, ZAS-70, plugs, sockets and relay-chassis" available at www.zprae.pl

RPZ-1



OFFER



RSH-3, RSH-3S - tripping

RS-6, RPD-2, RPP-4, RPP-6 - interposing

RMS-2 - signalling

RCW-3, RCDW-1 - circuit continuity monitoring

RKO-3 - power supply circuit
continuity monitoring

RB-1, RBS-1, RBS-2 - bistable

RT-22 - time

RUT-2, RUT-3 - time-voltage

RJT-1, RJT-3 - time-current

RKU-1, RKS-1 - final controlling

LZ-1, LZ-2 - operation counters

RPZ-1 - supply source switching

GPS-1 - time synchronisation

MDD-6, MDS-12 - Diode modules

PH-XX, PS-XX - Modules of switches,
pushbuttons and control lamps

Relay racks

Busbar protections and breaker failure
protections type TSL-9r, TSL-11

Auxiliary and signalization
relays

Reserve Central Signalling System
type MSA-9, MSA-12, MSA-24

Protection relays
type AZT-9, APP-9

Disturbance recorder RZS-9

Energy measurement system
and event recorder ZRZ-28

Load Resistors
for measuring transformers

DC and AC auxiliary
power supply switchgears

Cubicle-contained sets of control
and supervision protections

Modular power supplies, measuring suitcases,
measuring and registering system RFQ-8

PROFIL-L cubicles

Periodical and post-failure tests,
as well as repairs and overhauls
of busbar protections TSL

Servicing, strting-up
and post assembly tests



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