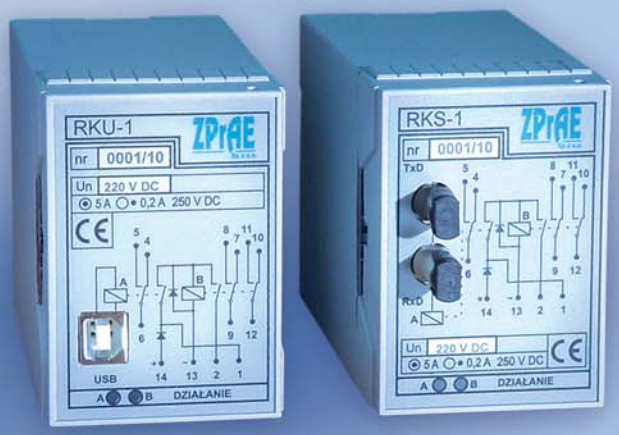
ZPrAE Sp.z o.o.

REline® ENERGETIC STANDARDS



RKU-1 & RKS-1

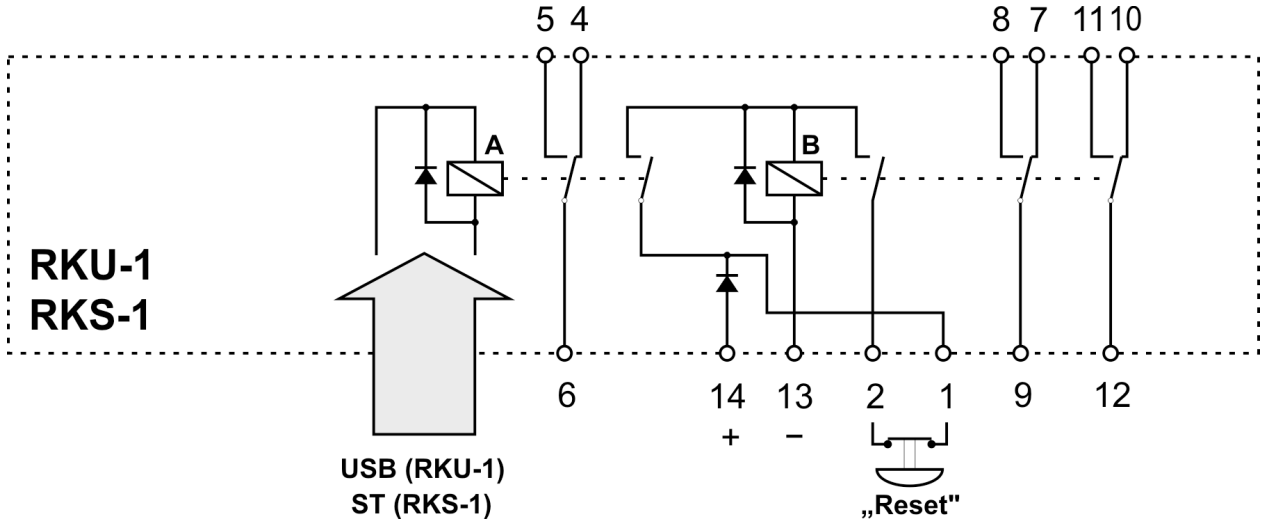
FINAL CONTROLLING

APPLICATION

The final controlling relays RKU-1 and RKS-1 are meant for use in control, signalling and protection circuits as final controlling elements activated directly from a computer USB or an optical ST-type link. The relays are controlled with a ZP-6 software delivered along with our devices or may be controlled with software of other producers. A sample application of the relay may be steering of the acoustic signalisation panel used in MSA signalling system, placed away from the computer controlling stand.

CONSTRUCTION

The relays are mounted in a typical housing, sizes 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 or GZ14Z - to be mounted in a relay chassis type R8614Z. The USB or ST link is located on the front panel of the relay. The scheme of connections (terminals) is presented on picture 1.



Picture 1. Functional scheme of terminations.

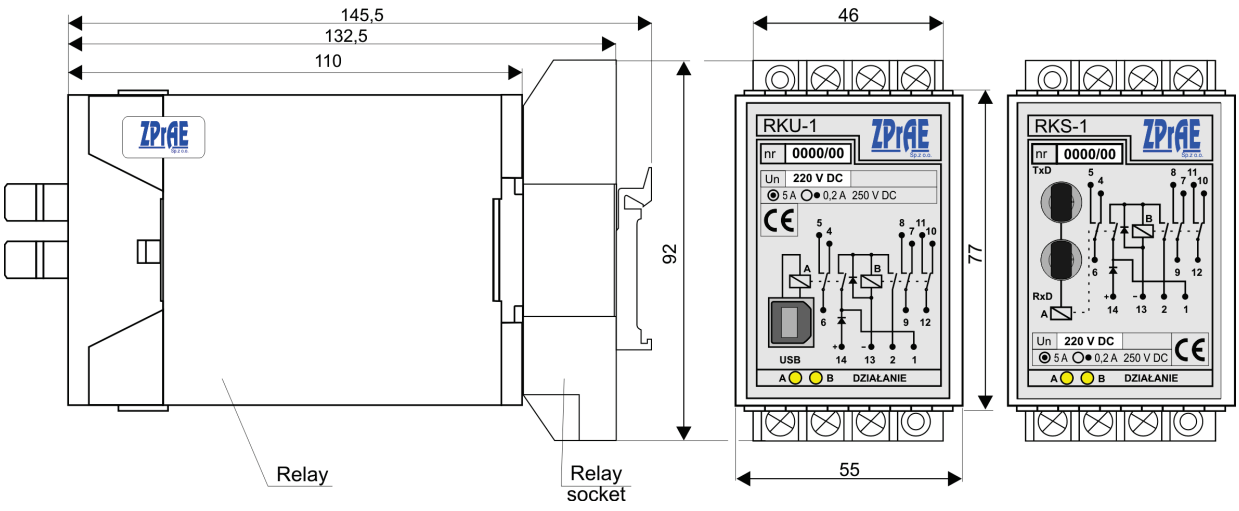
OPERATION

Input of the relay is activated with communication protocol over USB or ST (fibre optic cable). Software enabling controlling the relay is delivered along with the relay. Following commands are available “Załącz”, “Wyłącz” and “Impuls”. In the last case it is possible to set duration time of the steering impulse. If the relay is to operate with software of other producers, we can deliver a special protocol enabling control of the relay. Two auxiliary relays “A” and “B” are placed inside the housing of the relay. USB and ST inputs directly control the relay “A”. Activation of this relay lasts as long, as long the input is activated. The contacts of the “A” relay control the ”B” relay. The relay “B” can operate with and without hold-up. For operation without hold-up terminals 1 and 2 of the RKU-1 and RKS-1 should be left not shorted. In situation when a binary contact of an external pushbutton is placed between terminal 1 and 2 operation of the “B” relay is with hold-up until reset with this external button.

Operation of the “A” relay in RKU-1 is independent from auxiliary voltage applied to terminals 13 – 14, as it is powered via USB link. The relay “A” in RKS, as well as operation of “B” relay in both types demands application of supply voltage to terminals 13 – 14. Operation of “A” and “B” relays is signalised with a diode.

TECHNICAL INFORMATION (for Un = 220 V DC)

Auxiliary Voltage	
Rated voltage	UN = 220 V DC, 110 V DC, or other as ordered
Operate range of the input voltage	0,8 ... 1,1 UN
Power consumption RKU	≤1W USB inputs and ≤2 W auxiliary voltage Un=220 V DC
Power consumption RKs	≤3 W auxiliary voltage Un=220 V DC
Steering	
USB	Accordingly with USB 1.1 and USB 2.0 standards
Optical fibre cable ST	62,5/125 µm, wave length 850 nm
Contacts of the relay	
Maximal breaking capacity DC	I = 0,2 A for U = 220 V; L/R = 40 ms
Maximal continuous current	I = 5 A
Insulation	
Rated insulation voltage	250 V
Rated impulse voltage (1,2/50 µs) between the coil and the contacts	4000 V
Overvoltage category	III
Proof voltage between the coil and the contacts	2 kV; 50 Hz; 1 min
Proof voltage of the contact gap	1 kV 50 Hz 1 min
General Data	
Enclosure protection degree	IP40
Ambient temperature	From -5 °C to +40 °C
Ambient protection	RT II
Signalisation of Operation	LED diode
Terminations (socket / plug)	As for R15 4P
Dimensions (without socket)	77 × 55 × 110 mm (H×W×D)
Mounting	As for R15 4P to a mounting socket



Picture 2. Dimensions of the RKU-1, RKS-1 final controlling 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

RKU-1
RKS-1

OFFER

RE line® ENERGETIC STANDARDS

- 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

ZPrAE Sp.z o.o.

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