



RSH-3S

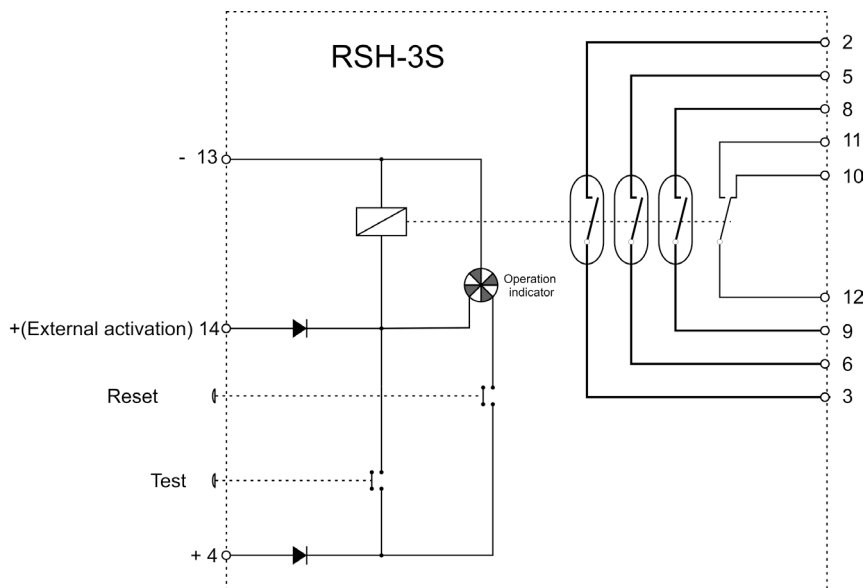
**HIGH SPEED
TRIPPING**

APPLICATION

The RSH-3S relay is a very fast ($t \leq 3\text{ms}$) interposing relay intended mainly for controlling the power breaker coil. The relay has a high switching capability and therefore it can frequently interrupt current in the power breaker coil operating in a 220V DC circuit. For instance number of operations for current of 3,2 A exceeds 5 000 times, and for current of 1,2 A exceeds 25 000 times. The RSH-3S relay is suitable to control typical power breakers used in 110 ÷ 400 kV substations. The relay is equipped with an operation indicator (signal with latching) and a pushbutton, enabling manual pick-up.

CONSTRUCION

The relay has 3 main contacts designed to control the power breaker coil. They are reed make contacts. Additionally the relay is equipped with an auxiliary signalling change-over contact and a light emitting diode signalling application of voltage on the relay's coil, operation indicator and the "PRÓBA" button. The scheme of connections (terminals) is described on picture 1.



Picture 1. RSH-3S breaking relay. Functional scheme of terminations.

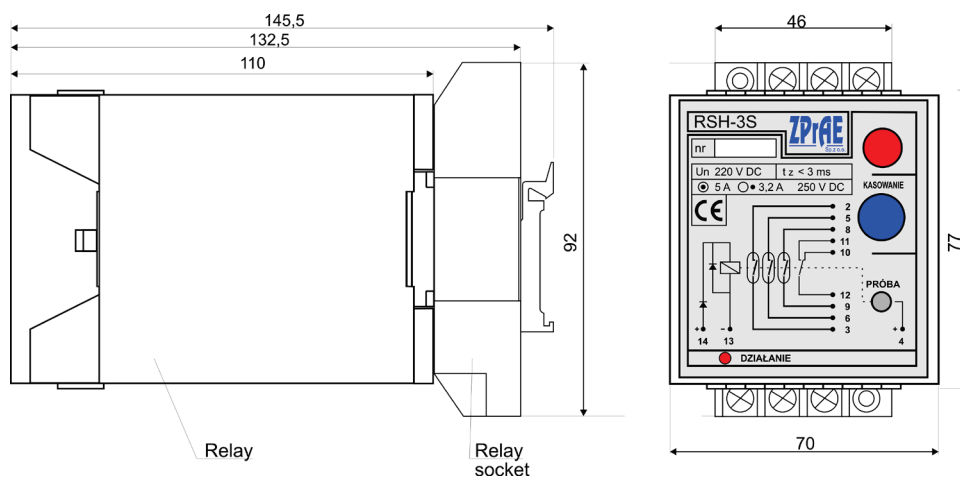
The relay is mounted in a typical housing sizes 110 × 55 × 77 mm, with 14 terminations in a form of a plug, suitable to be mounted in a GZ-14 socket (plate-mounting), GZ-14U (bus-mounting) or GZ14Z - to be mounted in a relay chassis type R8614Z. Dimensions of the relay are presented on Picture 2.

OPERATION

When voltage is applied to the input terminal (13-14) the reed make contacts are engaged (operating time $\leq 3\text{ms}$) and the LED diode lights up. At the same time the internal auxiliary relays become energized, and after few milliseconds an auxiliary contact switches over. When the input voltage is removed the LED diode goes off, and all contacts return to their primary position. The relay may be activated manually with the "PRÓBA" button. For proper functioning of the indicator of operation and the manual reset button it is essential that the "+" of the steering voltage is connected to the terminal 4.

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

Contacts of the main breaking circuits (2/3, 5/6, 8/9)	
Operate time (pick up)	$t_o \leq 3 \text{ ms}$
Maximal breaking capacity	$I = 3,2 \text{ A}$ for $U = 220 \text{ V}$; $L/R = 40 \text{ ms}$
Maximal continuous current	$I = 5 \text{ A}$
Auxiliary contact, changeover (10,11,12)	
Operate (pick-up) time	$t_o \leq 20 \text{ ms}$
Maximal breaking capacity	$I = 0,1 \text{ A}$ for $U = 220 \text{ V}$; $L/R = 40 \text{ ms}$
Maximal continuous current	$I = 5 \text{ A}$
Release (drop off) time of the relay	
	$t \leq 20 \text{ ms}$
Rated voltage of the coil	
	$U = 220 \text{ V DC}$
Power consumption	
	$P \leq 5 \text{ W}$
Proof voltage of insulation	
- between the coil and the contacts	$2 \text{ kV } 50 \text{ Hz } 1 \text{ min V}$
- of the contact gap	800 V DC
Enclosure protection degree	
	IP40
Ambient temperature	
	From $-10 \text{ }^\circ\text{C}$ to $+55 \text{ }^\circ\text{C}$
Contacts (socket / plug)	
	As for R15 4P
Signalisation of Operation	
	LED diode a rotating indicator with magnetic memory
Dimensions	
	$77 \times 70 \times 110 \text{ mm (H}\times\text{W}\times\text{D)}$
Mounting	
	Mounting socket as R15 4p
Weight	
	$< 0,33 \text{ kg}$



Picture 2. Dimensions of the RSH-3S 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

RSH-3S



OFFER

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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

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