



LZ-1, LZ-2

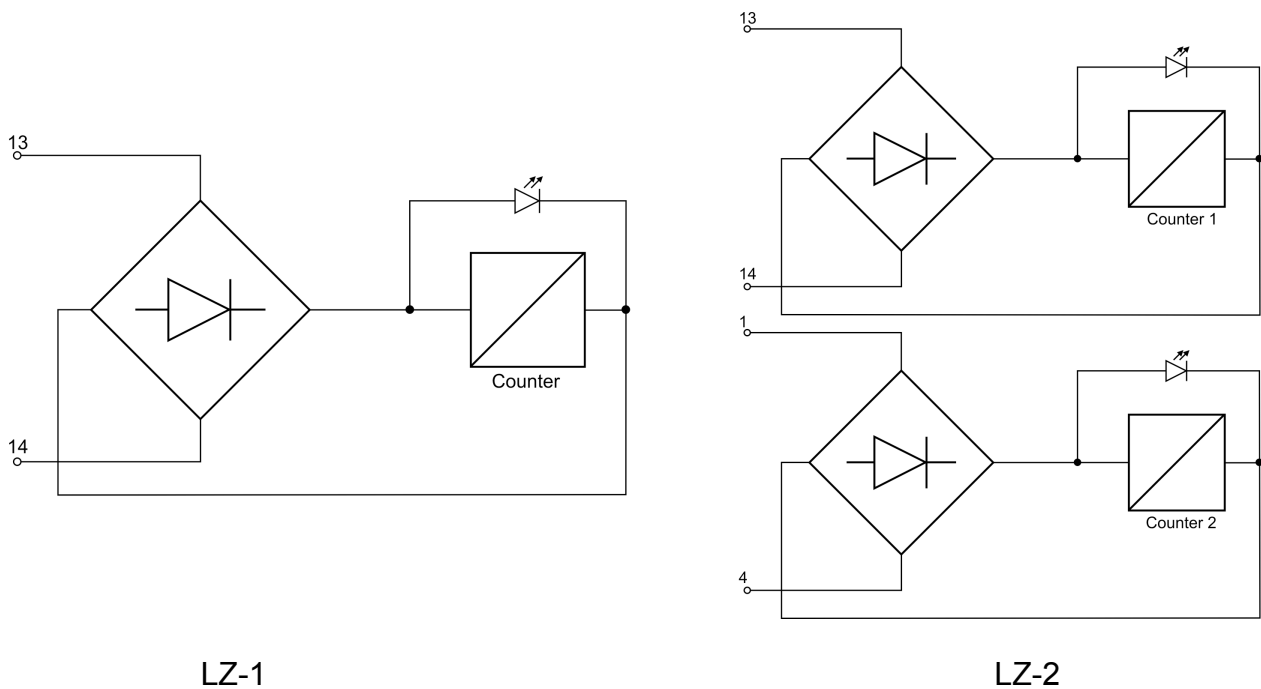
**OPERATION
COUNTERS**

APPLICATION

The LZ-1 operation counter, and LZ-2 set of operation counters are meant for recording and counting number of electric impulses (for example circuit breaker tripping impulses).

CONSTRUCTION

Depending on the version, the operation counter may have one or two independent, inerasable electro mechanic counters, where successive tripping impulses are recorded by counting mechanism (application of the impulse on counter's input). Additionally each tripping impulse is signalled with a LED.



Picture. 1. Operation counter – functional scheme.

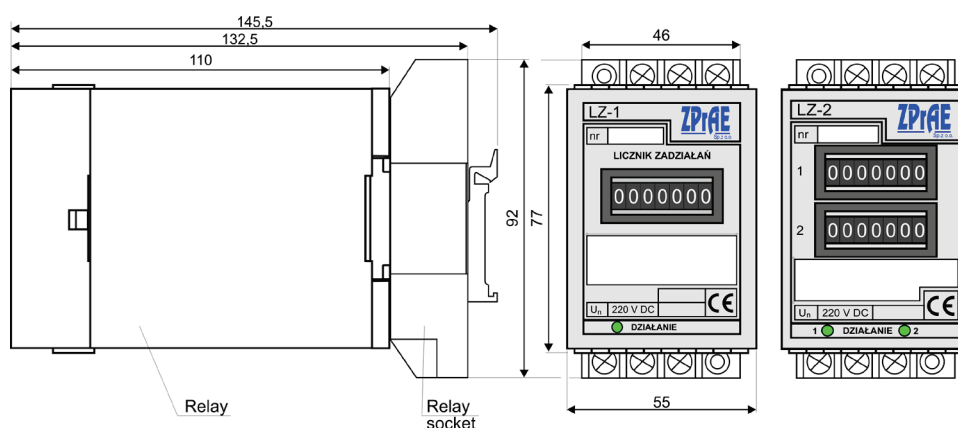
The counter is mounted in a typical housing sizes 110 × 55 × 77 mm, with 14 terminations in a form of a plug, suitable to be mounted in a GZ-14 socket (plate-mounting), GZ-14U (bus-mounting) or GZ14Z - to be mounted in a relay chassis type R8614Z. Dimensions of the counter are presented on Picture 2.

OPERATION

Upon application of supply voltage to input terminals (13/14 – LZ-1, 13/14 or 1/4 – LZ-2) the electromechanical counter operates, resulting with increase of register indication by 1. At the same time a green LED lights up. Upon voltage decay the diode goes off, and the counter is ready to register another impulse.

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

Data of the coil	
Rated voltage	$U_N = 220 \text{ V DC}$ or 220 V AC ,
Operate range	$0,8 \dots 1,1 U_N$
Minimal duration of the input impulse	$t = 100 \text{ ms}$
Minimal duration of break between following impulses	$t = 200 \text{ ms}$
Power consumption	$< 3 \text{ W}$
Insulation	
Rated insulation voltage	250 V
Overtoltage category	III
Proof voltage between the coil and the contacts	$2 \text{ kV}; 50 \text{ Hz}; 1 \text{ min}$
General Data	
Enclosure protection degree	IP40
Ambient temperature	From $-5 \text{ }^\circ\text{C}$ to $+40 \text{ }^\circ\text{C}$
Terminations (socket / plug)	As for R15 4P
Dimensions	$77 \times 55 \times 110 \text{ mm (H}\times\text{W}\times\text{D)}$
Mounting	Mounting socket
Weight	$< 0,3 \text{ kg}$



Picture 2. Dimensions of the operation counter.

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

LZ-1 LZ-2



OFFER

REline
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.

ZAKŁAD PRODUKCYJNY APARATURY ELEKTRYCZNEJ

Sp. z o.o. 41-100 Siemianowice Śląskie, ul. Marii Konopnickiej 13
tel: 32 22 00 120; fax: 32 22 00 125; e-mail: biuro@zprae.pl