ELR-1E / ELR-2 / ELR-2M

EARTH LEAKAGE RELAY

FLUSH MOUNTING VERSION DIN 96X96 mm WITH REDUCED DEPTH ENCLOSURES.

MICROENER

GENERALITY

MODELS	
ELR-1E	110 Vac/dc - 230 - 400 Vac
ELR-1E	12 Vac/dc
ELR-1E / ELR-2 / ELR-2M	24-48 Vac/dc
ELR-2 / ELR-2M	110 - 230 - 400 Vac
ELR-2 / ELR-2M	110 Vdc

OPTIONS	
F	built - in filter for 3rd harmonic (only for ELR-2 ELR- 2M)
T	tropicalisation

This new series of relays, for flush mounting according to DIN 96x96 mm, on top of granting a high reliability level, like the previous models, have evolved the technical and mechanical characteristics.

ELR-1E

This is the basic unit of the new series, is particularly advised in those cases, in which it's required to use a reduced flush mounting ELR's option, without other particular options. One of its main novelties is the reduced depth (60mm including terminals). It may be coupled to any of our Toroidal Transformers of the CT-1(close core) and CTA-1 (split core) families.

There are various versions, in order to meet different auxiliary supply requirements. Their wide time and current setting ranges, allows to easily select the tripping characteristics, in order to maintain the contact values below 50 V, as required by the IEC standards.

This is also the suitable answer for a proper selectivity, whenever there are other ELRís or/and RCDís downstream or upstream in the line to be protected.

The instrument , fitted with filters at the input circuits, is practically immune to external disturbances, so as the pulse currents with dc components, complying with the requirements of VDE 0664 and project IEC 23 Standards.

ELR-2

The present model, on top of the previous basic unit characteristics, it's fitted with following features:

a. a double output changeover contact, one can be used for disconnection and the other for an alarm function at 70% of the set current (the selection of the working type of the second contact is being made by means of a dipswitch);

b. selectable negative or positive safety (fail safe) by means of a dipswitch

ELR-2M

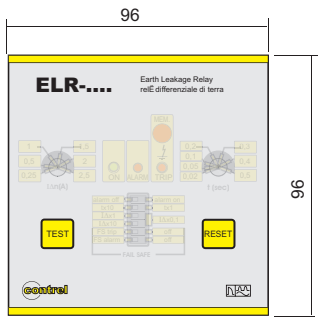
In this case the ELR is also fitted with the mechanical signalisation, which enables to keep the information of a tripped relay, without auxiliary supply even. This avoids the dangerous inconvenience of having an energised panel with the door open.

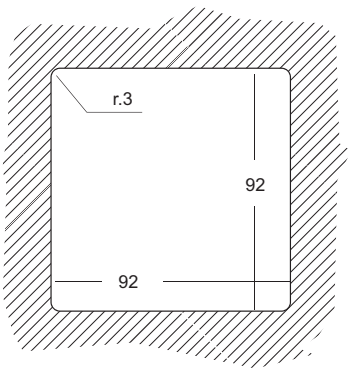
ELECTRICAL CHARACTERISTICS

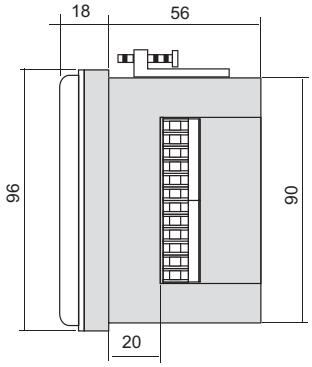
models and value	ELR-1E	ELR-2	ELR-2M
Auxiliary voltage supply	110Vac/dc-230-400Vac (standard) or 24-48Vac/dc or 12Vac/dc	110 - 230 - 400 Vac ± 20% (standard) or 110 Vdc or 24-48 Vac/dc	
Frequency	50 ÷ 60 Hz		
Maximum consumption	4 VA		
Tripping current setting range IΔN	0,025÷0,25A K=0,1 - 0,25÷2,5A K=1 - 2,5÷25A K=10 25÷250A*		
Alarm current setting range	-	70% IΔN	
Tripping time setting range	0,02 ÷ 0,5 sec. K=1 - 0,2 ÷ 5 sec. K=10		
Mechanical signalisation	-	-	•
Output: changeover contacts	Nr.1 5A 250V	Nr.2 5A 250V	Nr.2 5A 250V
Working temperature	-10 + 60°C		
Storing temperature	-20 + 80°C		
Relative humidity	90%		
Insulation test	2,5 kV 60 sec.		
Standards of reference	CEI 41-1/IEC 255/VDE 0664/IEC 755/CEI 64.8/ EN 61008-1(1999-11)/EN 62020 (1999-09) / EN 61543 (1996-09) /EN61326-1(1998-04) / EN 61326/A1 (1999-05)-IEC 60947-2 ANNEX M		
Wiring type	Screw terminals / cross section cables 2,5 mm2		
Terminal protection degree according with DIN 40050	IP20		
Frontal protection degree	IP52 (optional IP65)		
Selectable fail safe for each output relay	-	•	•

* By means of external multiplier(see pag. 40)

DIMENSIONS



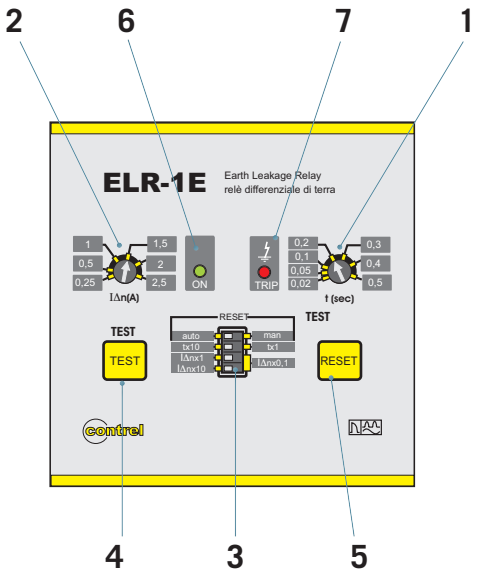




EARTH LEAKAGE RELAY

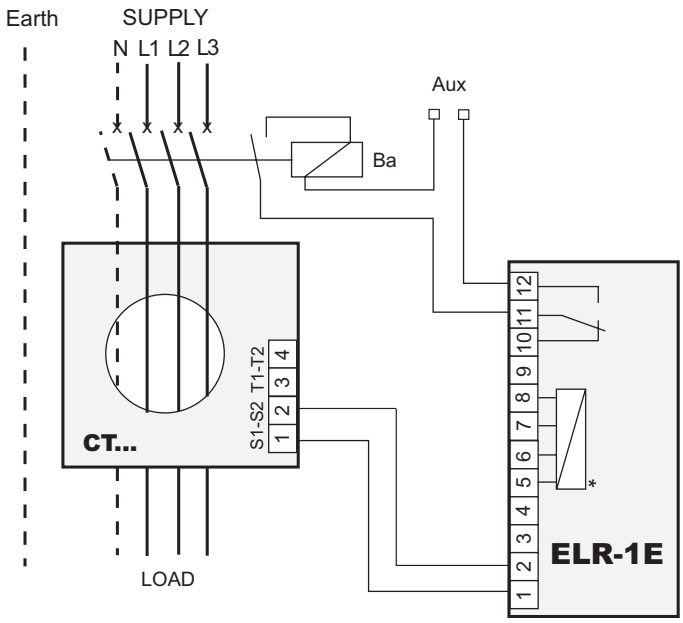
FLUSH MOUNTING VERSION DIN 96X96 mm WITH REDUCED DEPTH ENCLOSURES.

LEGEND - ELR-1E



1	Potentiometer for tripping time setting.
2	Potentiometer for tripping current setting.
3	4 ways of dipswitches: • On/Off he automatic reset . • Konstant selection for time setting. • Konstant selection for current setting.
4	Push button for test.
5	Push button for manual reset.
6	Green Led for auxiliary supply signalling.
7	Red Led for tripped relay signalling.

WIRING DIAGRAM - ELR-1E



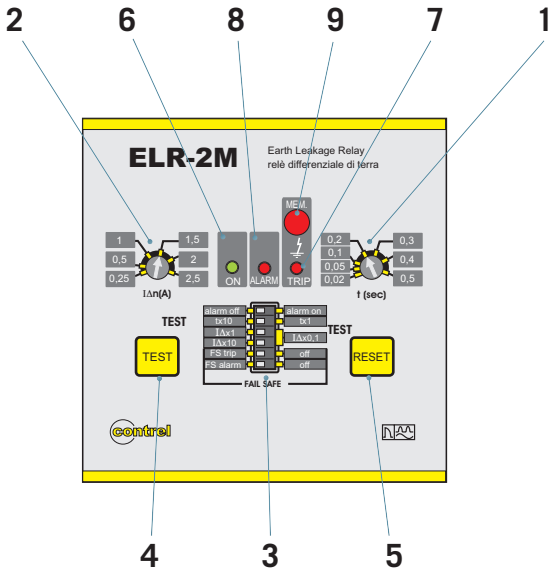
* Auxiliary supply Uaux

110-400 V
5 - 6 = 115 Vac/dc
5 - 7 = 230 Vac
5 - 8 = 400 Vac

24/48 V
5 - 7 = 48 Vac / Vdc
5 - 6 = 24 Vac / Vdc

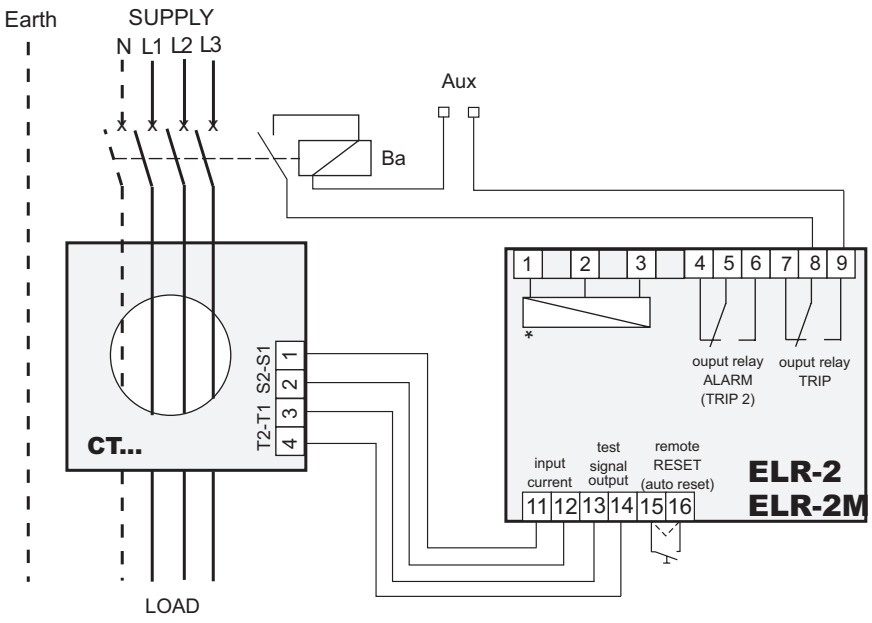
12 V
5 - 6 = 12 Vac / Vdc

LEGEND - ELR-2 / ELR-2M



1	Potentiometer for tripping time setting.
2	Potentiometer for tripping current setting.
3	6 ways of dipswitches: • On/Off he automatic reset . • Konstant selection for time setting. • Konstant selection for current setting. • On/Off the fail safe of the tripped relay. • On/Off the fail safe of the tripped alarm.
4	Push button for test.
5	Push button for manual reset.
6	Green Led for auxiliary supply signalling.
7	Red Led for tripped relay signalling.
8	Red Led for tripped alarm signalling.
9	Mechanical signalling of tripped relay (only per ELR-2M)

WIRING DIAGRAM - ELR-2 / ELR-2M



* Auxiliary supply Uaux

LEGEND

230 Vca
1 - 2 = 100-125 Vac
2 - 3 = 220-240 Vac
1 - 3 = 380-415 Vac

115 V
1 - 2 = 100-125 Vdc

24 V
1 - 2 = 24 Vac/dc
1 - 3 = 48 Vac/dc