

## GENERAL

This new series of relays，for flush mounting according to DIN $96 \times 96 \mathrm{~mm}$ ，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（ 60 mm 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 ELR＇s or／and RCD＇s 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．

## MODELS

ELR－1E $=110 \mathrm{Vac} / \mathrm{dc}-230-400 \mathrm{Vac}$
ELR－2 $/$ ELR－2M $=110-230-400 \mathrm{Vac}$
ELR－1E／ELR－2／ELR－2M $=24-48 \mathrm{Vac} / \mathrm{dc}$
ELR－1E $=12 \mathrm{Vac} / \mathrm{dc}$
ELR－2／ELR－2M $=110 \mathrm{Vdc}$

## Options：

F＝built in third harmonic filter（only for ELR－2 and ELR－2M） $\mathrm{T}=$ tropicalisation

## DESCRIPTION

## 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．

## ELR－2／ELR－2M

1）Potentiometer for tripping time setting．
2）Potentiometer for tripping current setting，
3） 6 ways of dipswitches：
－On／Off he alarm feature．
－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）


## 官 5 園亘 $\rightarrow$ R官 $L$ R $2 \pi N$ <br> Earth Leakage Relays <br> TECHNICAL CHARACTERISTICS

| TYPE | ELR－1E | ELR－2 | ELR－2M |
| :---: | :---: | :---: | :---: |
| Auxiliary voltage supply | $12 \mathrm{Vca} / \mathrm{cc}$ or $24-48 \mathrm{Vca} / \mathrm{cc}$ or $110 \mathrm{Vca} / \mathrm{cc}-230-400 \mathrm{Vca}$ | $110-230-400 \text { Vac } \pm 20 \%$ <br> or 110 Vdc or $24-48 \mathrm{Vac} / \mathrm{dc}$ |  |
| Frequency | $50 \div 60 \mathrm{~Hz}$ |  |  |
| Maximum consumption | 4 VA |  |  |
| Tripping current setting range I N | 0，025 $\div 0,25$ A $\quad \mathrm{K}=0,1-0,25 \div 2,5 A . \mathrm{K}=1-2,5 \div 25$ A $\mathrm{K}=10-25 \div 250 \mathrm{~A}^{*}$ |  |  |
| Alarm current setting range： | － | $70 \%$ I N |  |
| Tripping time setting range | $0,02 \div 0,5$ sec． $\mathrm{K}=1-0,2 \div 5 \mathrm{sec} . \mathrm{K}=10$ |  |  |
| Mechanical signalisation | － | － | － |
| Output：changeover contacts | Nr． 1 5A 250V | Nr． 25 A 250V | Nr． 2 5A 250V |
| Working temperature | $-10+60^{\circ} \mathrm{C}$ |  |  |
| Storing temperature | $-20+80^{\circ} \mathrm{C}$ |  |  |
| Relative humidity | 90\％ |  |  |
| Insulation test | $2,5 \mathrm{kV} 60 \mathrm{sec}$ ． |  |  |
| 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） |  |  |
| Wiring type | Screw terminals／cross section cables $2,5 \mathrm{~mm} 2$ |  |  |
| 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

## WIRING DIAGRAM



ELR－1E


ELR－2／ELR－2M

## DIMENSIONS



