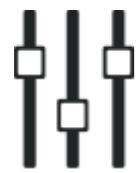




Device to safeguard life



Measure



Control



Record



Analyze



Voltage Relay



Line Monitoring Relay



Current Relay



Earth Leakage Relay



Voltage Relay



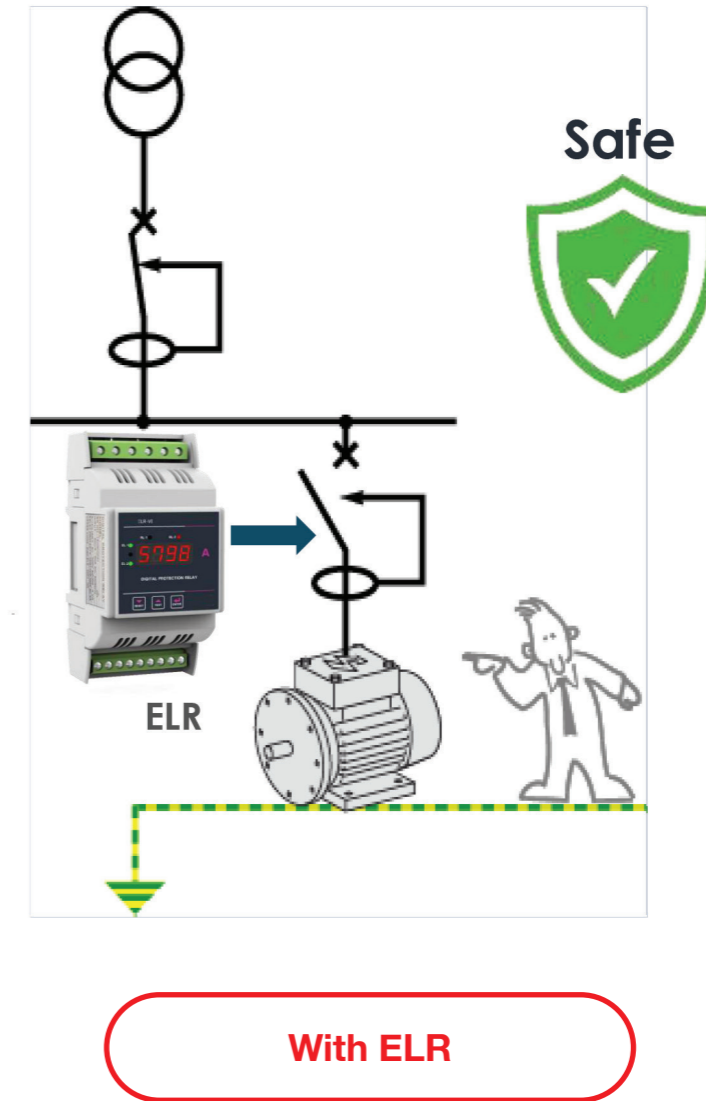
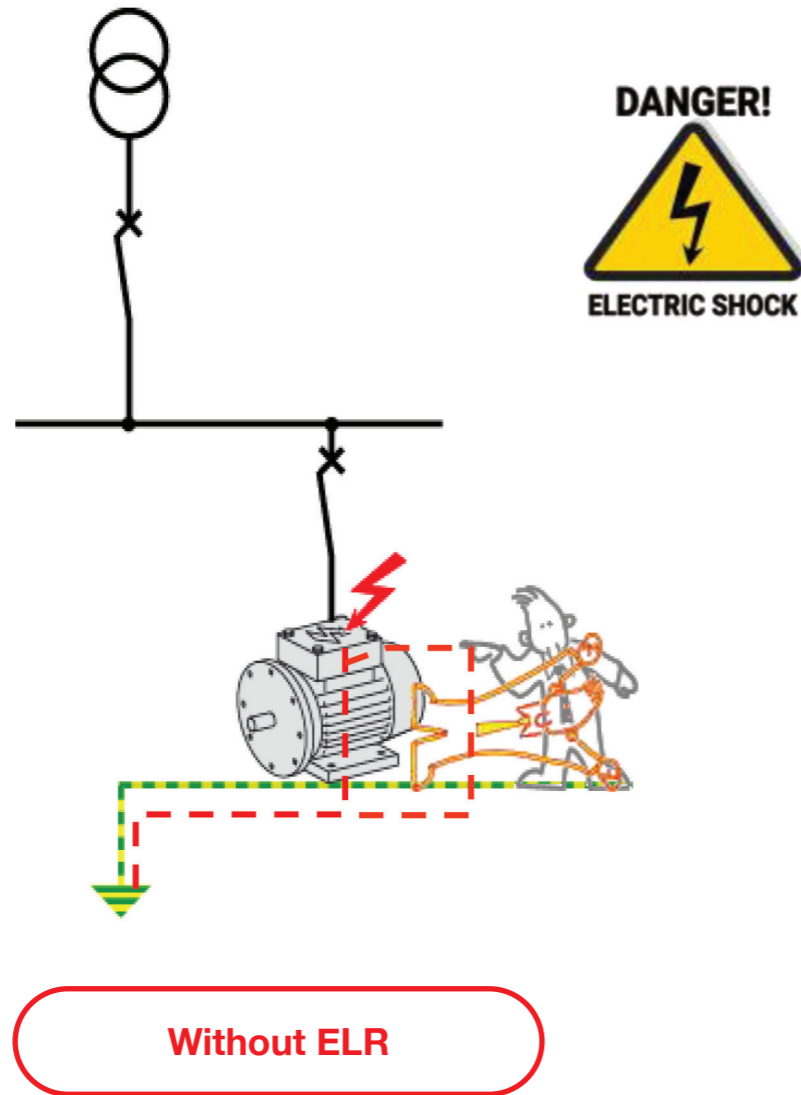
Current Relay



Phase Failure Relay



Earth Leakage Relay





Selec
ELRA2M

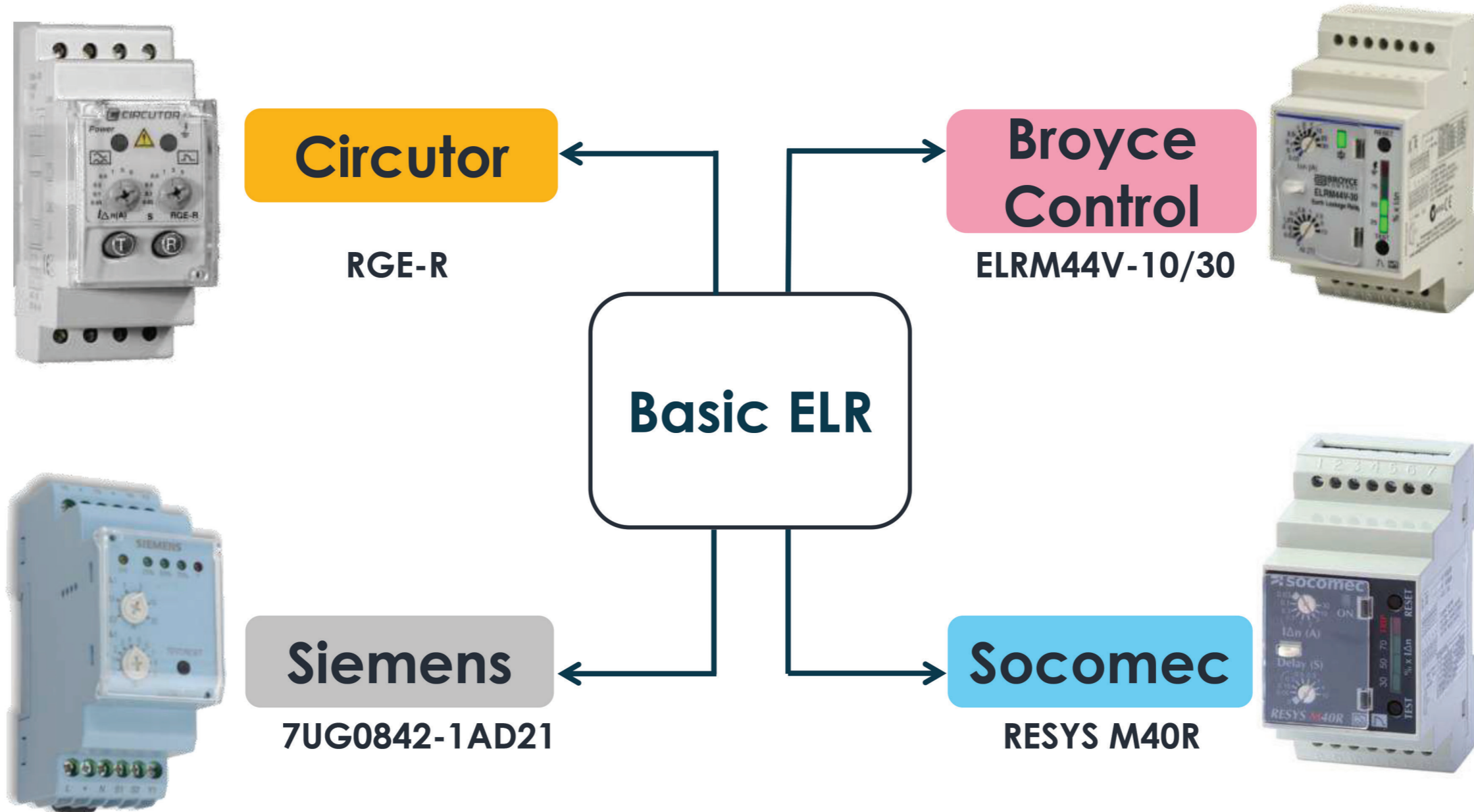
Minilec
S2 ELR2

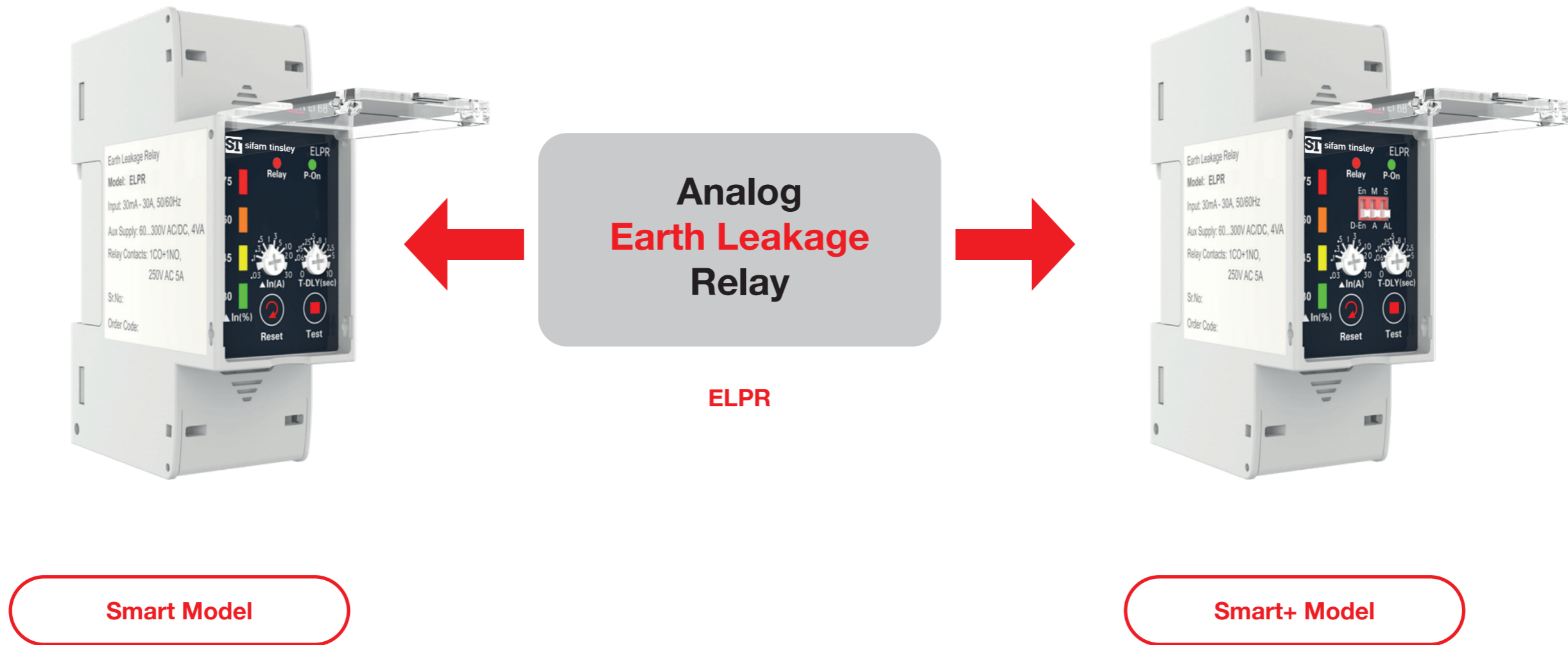


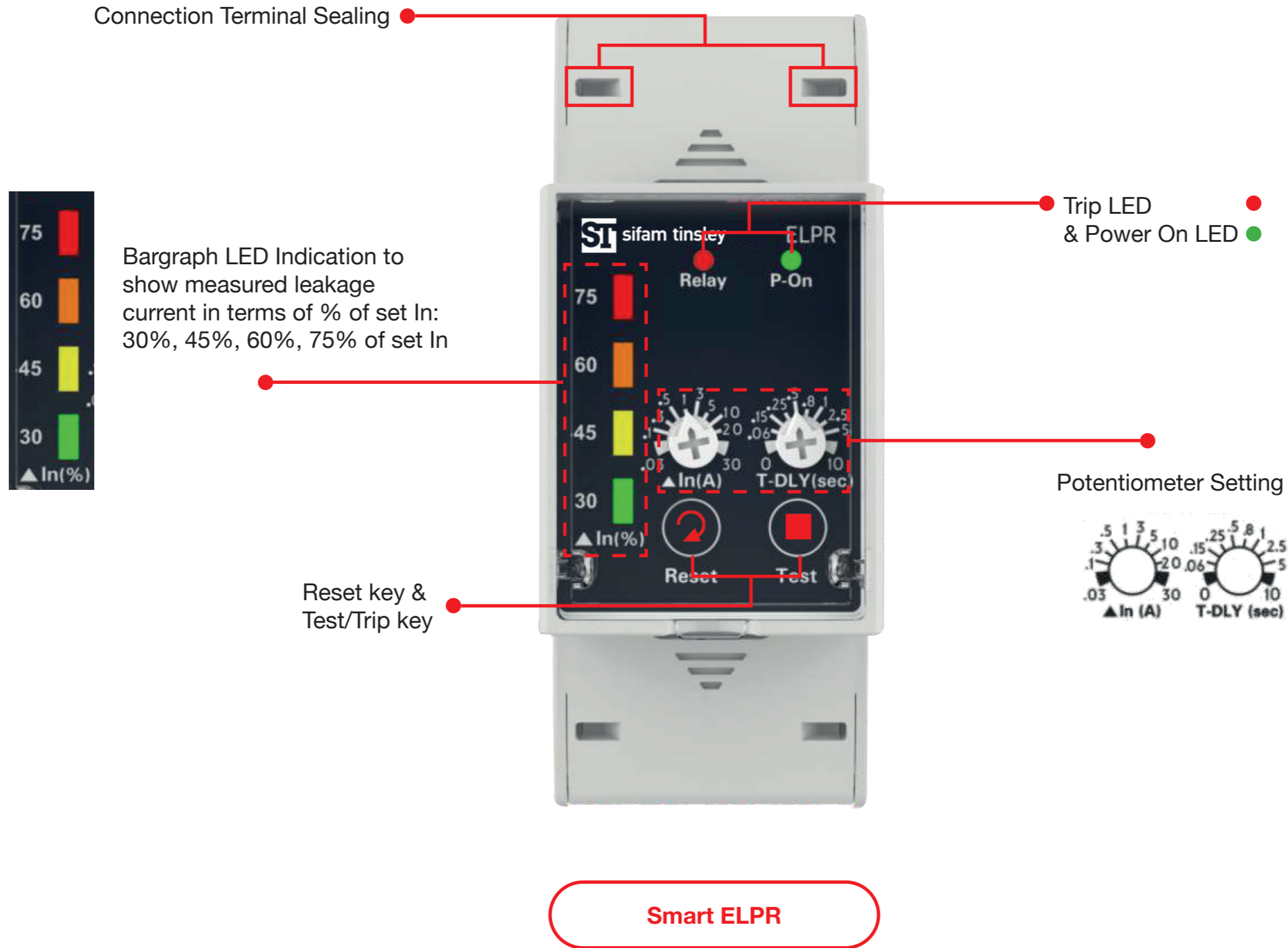
GIC
17G715GF2

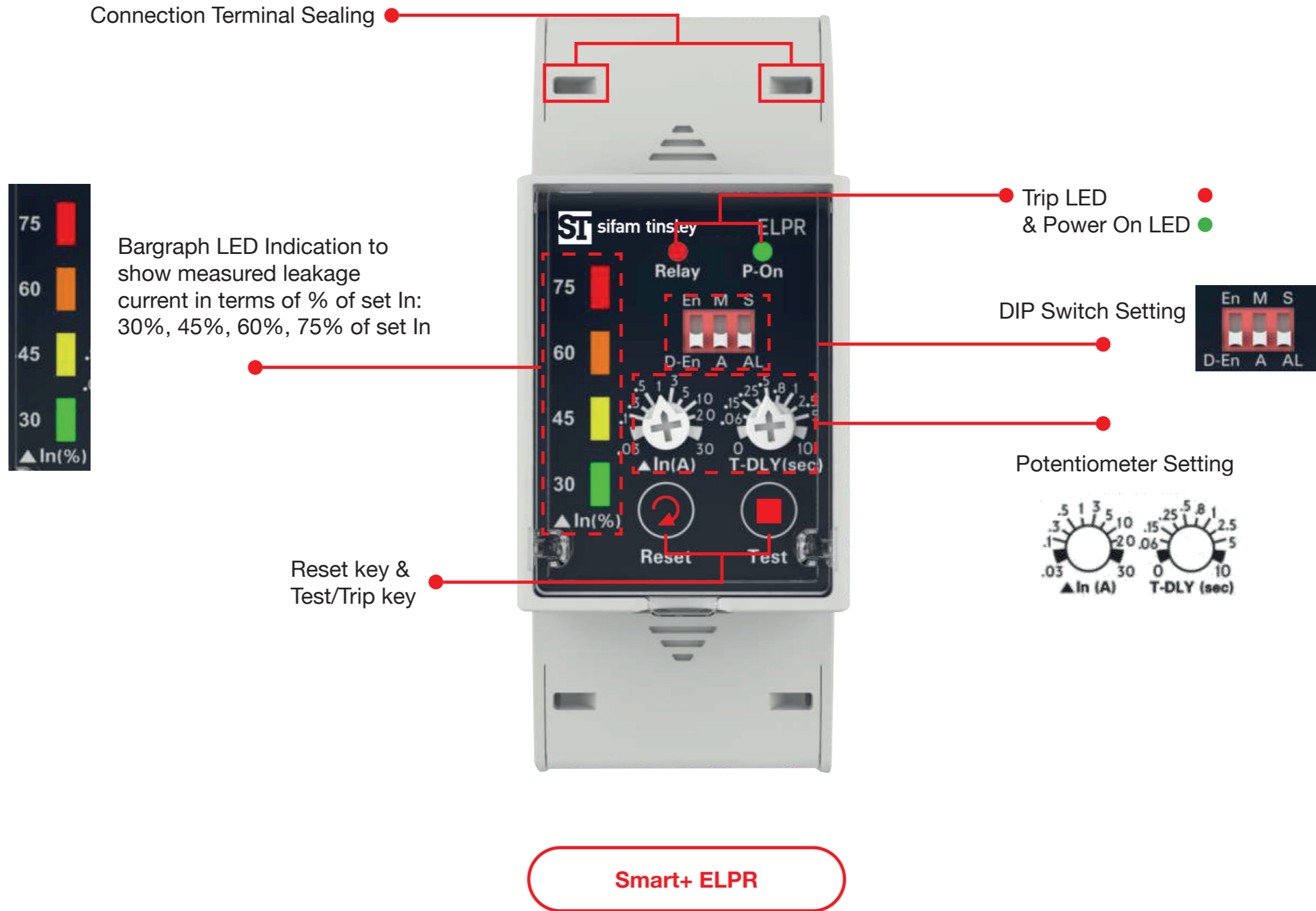
Veritek
VIPS 98P













Onsite Programmable

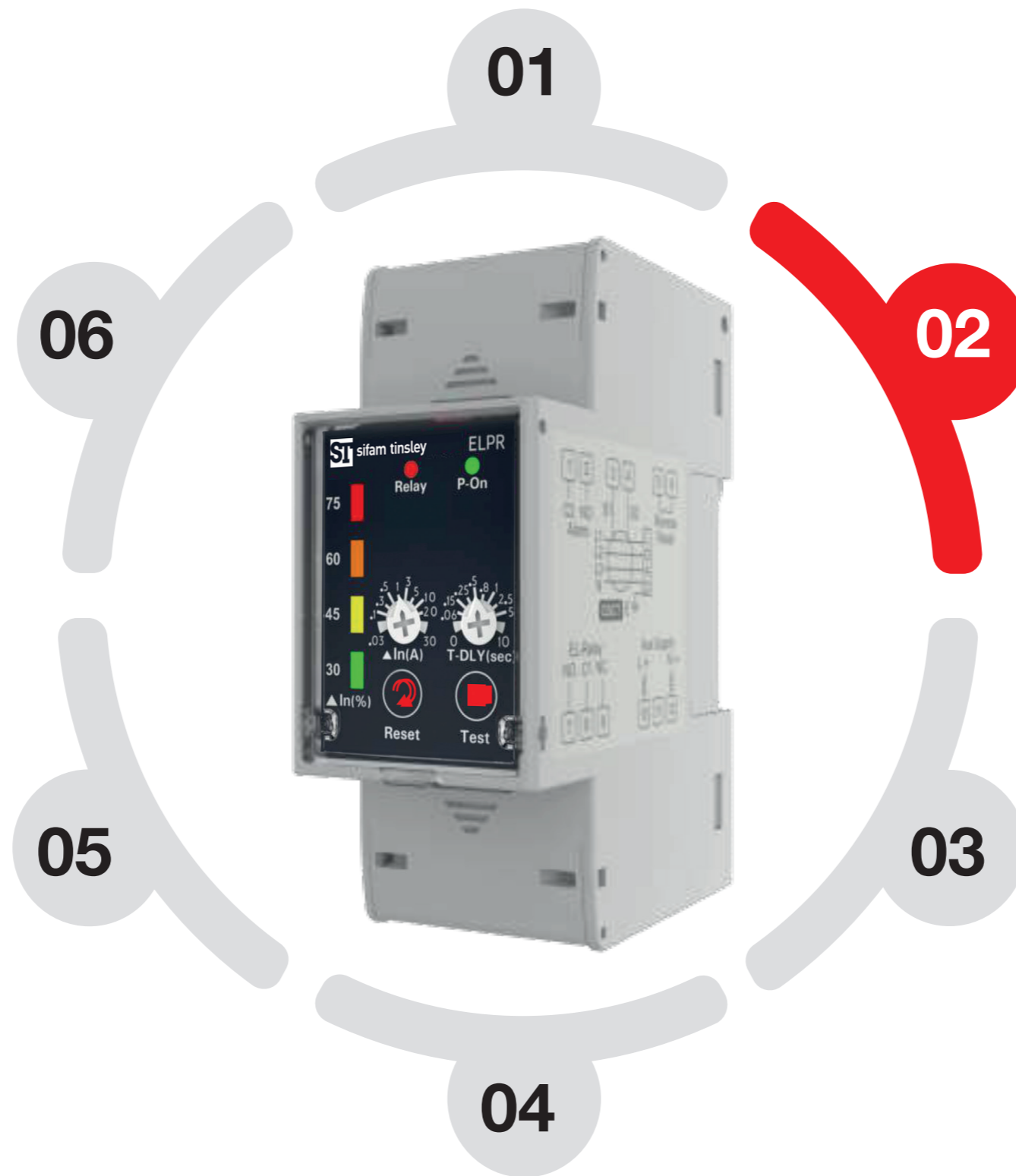
Can be programmed through potentiometer
 1 Leakage current 30mA to 30A
 2 Trip Time 0 to 10 sec



Leakage current trip limit can be set from 30mA to 30A



Trip Delay can be set from 0 to 10 sec



Bargraph Indication

Bargraph LED Indication to show measured leakage current in terms of % of set In
30% 45% 60% 75% of set In



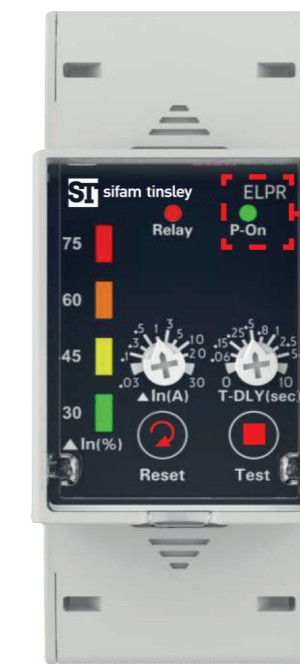
For example:
Set Current In = **1A**

When measured leakage current reaches to

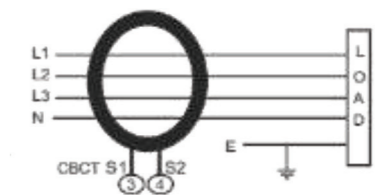
30% of 1A = **0.3A** 45% of 1A = **0.45A** 60% of 1A = **0.60A** 75% of 1A = **0.75A**



Status of Bargraph LED



P On LED
1) Continuous: **Power ON**
2) Blinking: **CBCT Open condition detected**



CBCT Fault Detection

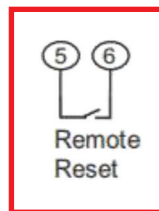
CBCT connections are monitored by ELR, so that leakage current detection is always accurate.

PON LED Blinking CBCT Open condition detected.



Remote Reset

A separate relay contact is provided at terminal block which can be used for remote resetting of Relay.

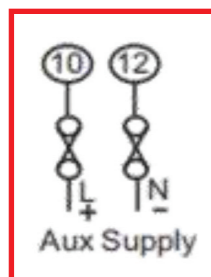




Wide Auxiliary Supply

To suit all grid conditions

1. Higher:- 60V - 300V AC/DC
2. Lower:- 20 - 60V DC / 20-40 VAC

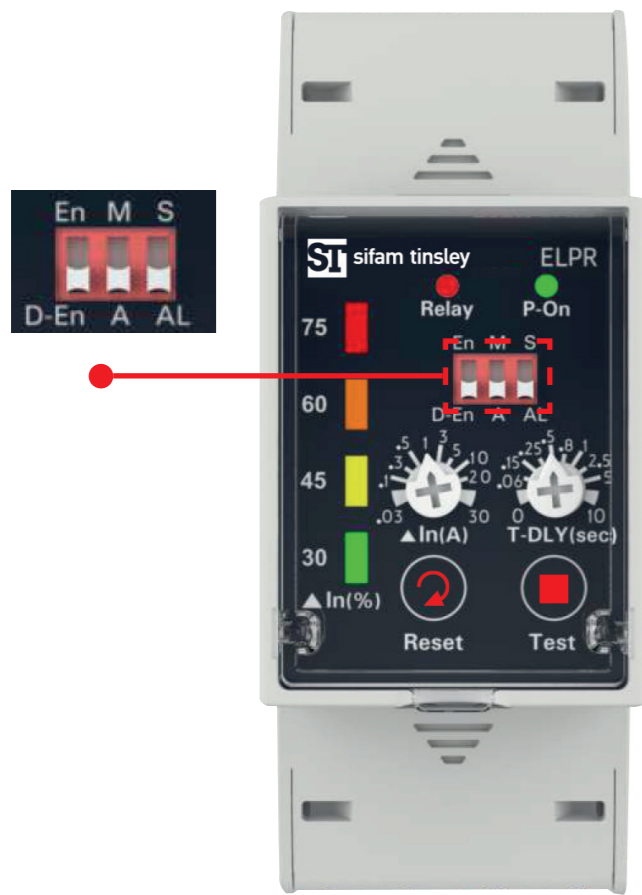




DIP Switch

In Smart+ Version Only

1. Main Relay (1CO) Configuration Energized / De-energized
2. Auto Re-closure (Reset) / Manual Reset
3. Additional Relay (1NO) Configuration Fail safe or Alarm Relay



Smart+





DIP Switch

In Smart+ Version Only

1. Main Relay (1CO) Configuration Energized / De-energized
2. Auto Re-closure (Reset) / Manual Reset
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A separate relay contact is provided at terminal block which can be used for remote resetting of Relay.



Onsite Programmable

Can be programmed through potentiometer

- 1 Leakage current 30mA to 30A
- 2 Trip Time 0 to 10 sec

Bargraph Indication

Bargraph LED Indication to show measured leakage current in terms of % of set In 30% 45% 60% 75% of set In

CBCT Fault Detection

CBCT connections are monitored by ELR, so that leakage current detection is always accurate.

PON LED Blinking CBCT Open condition detected.



Leakage Current :- 30mA to 30A through CBCT

Leakage current :- 5% of FS
Trip Delay :- 5% of set trip time or 50ms

Main Relay :- 1 NO + 1 NC (1 CO)
Additional Relay:- 1 NO
Remote Reset Relay :- Non potential free
(Voltage:- 12VDC)
Rating:- 5A / 250 VAC or 30VDC

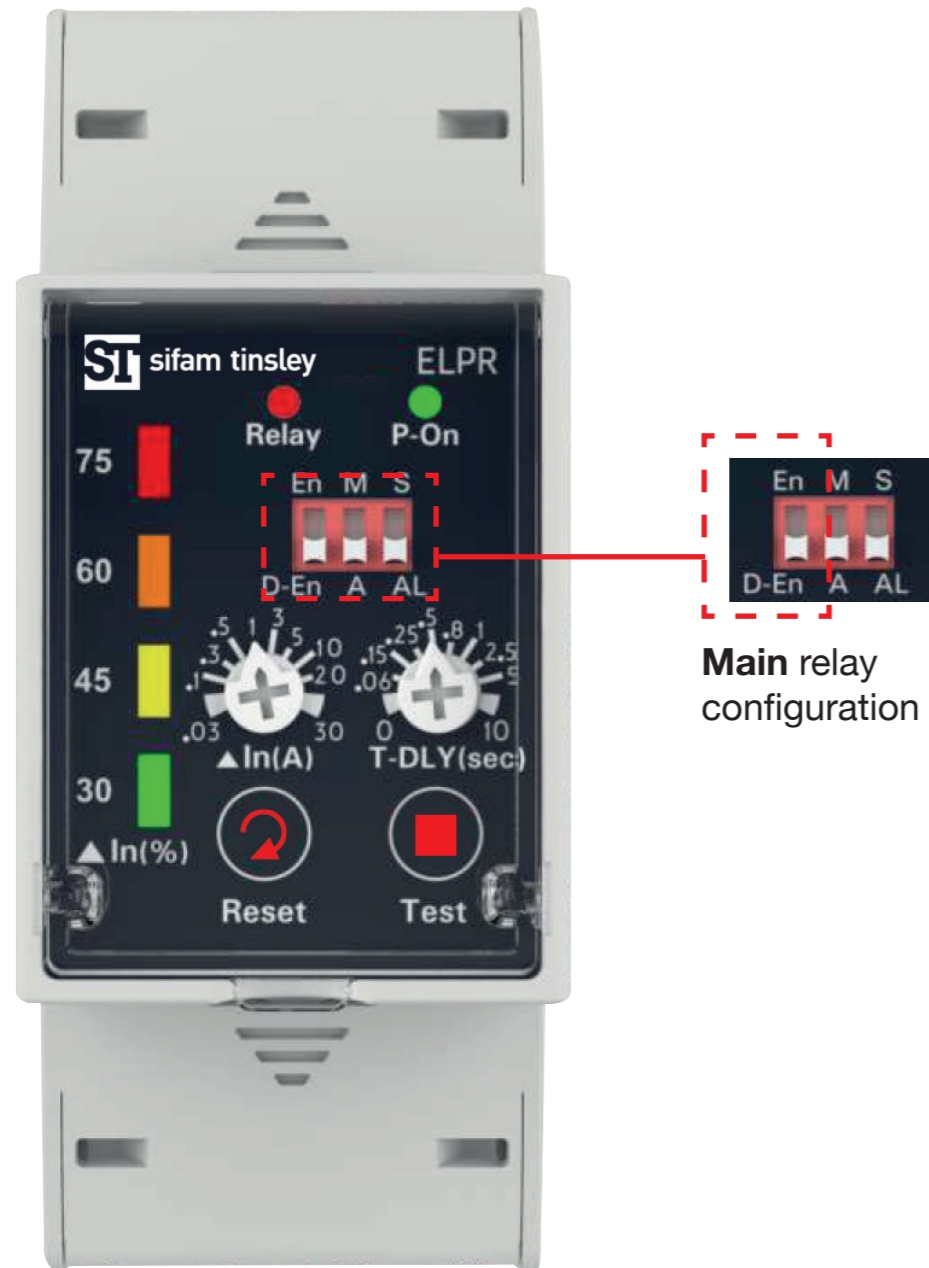


Higher :- 60 to 300V AC/DC
Lower :- 20 to 60V DC / 20 to 40V AC

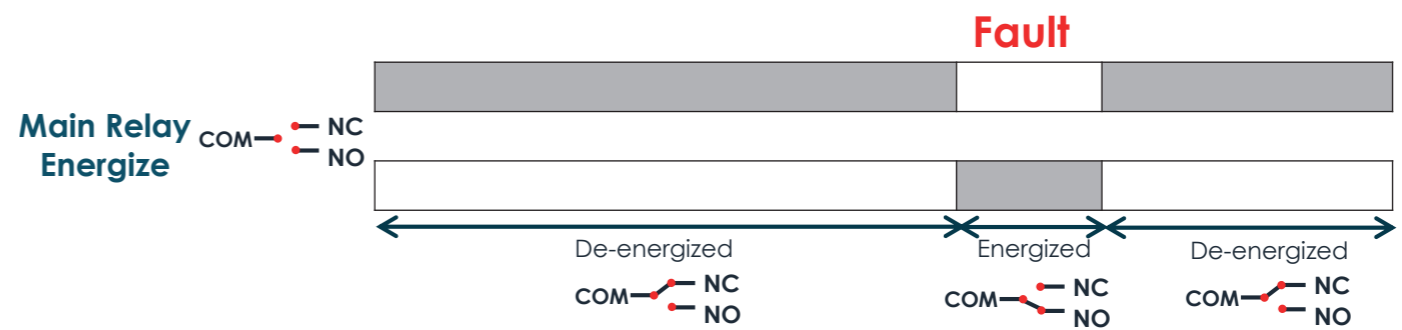
Product standard :- IEC 60947-2
EMI EMC :- IEC 61326-1:2012
Safety :- IEC 61010-1-2001



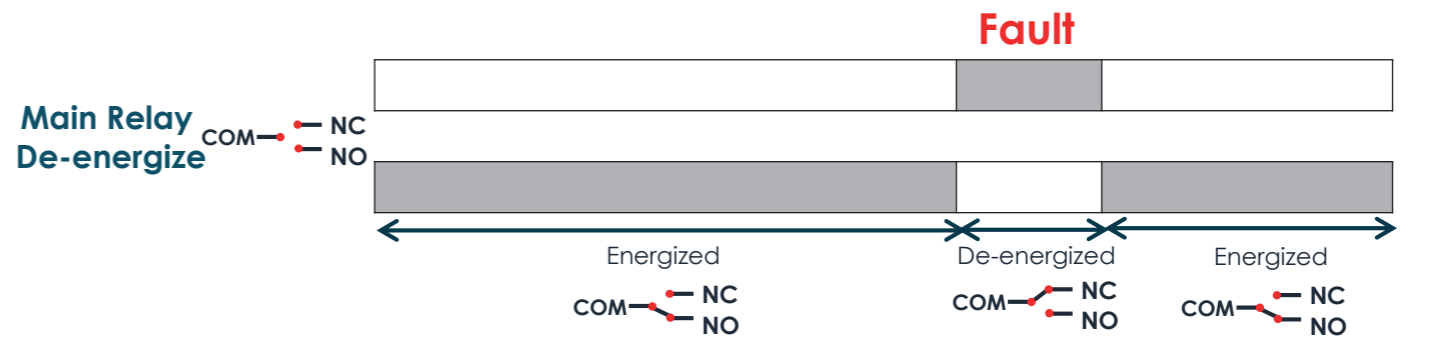
1. Energized / De-energized



Energized Configuration :- In fault condition main relay contacts will get energized (COM & NO contacts are shorted)



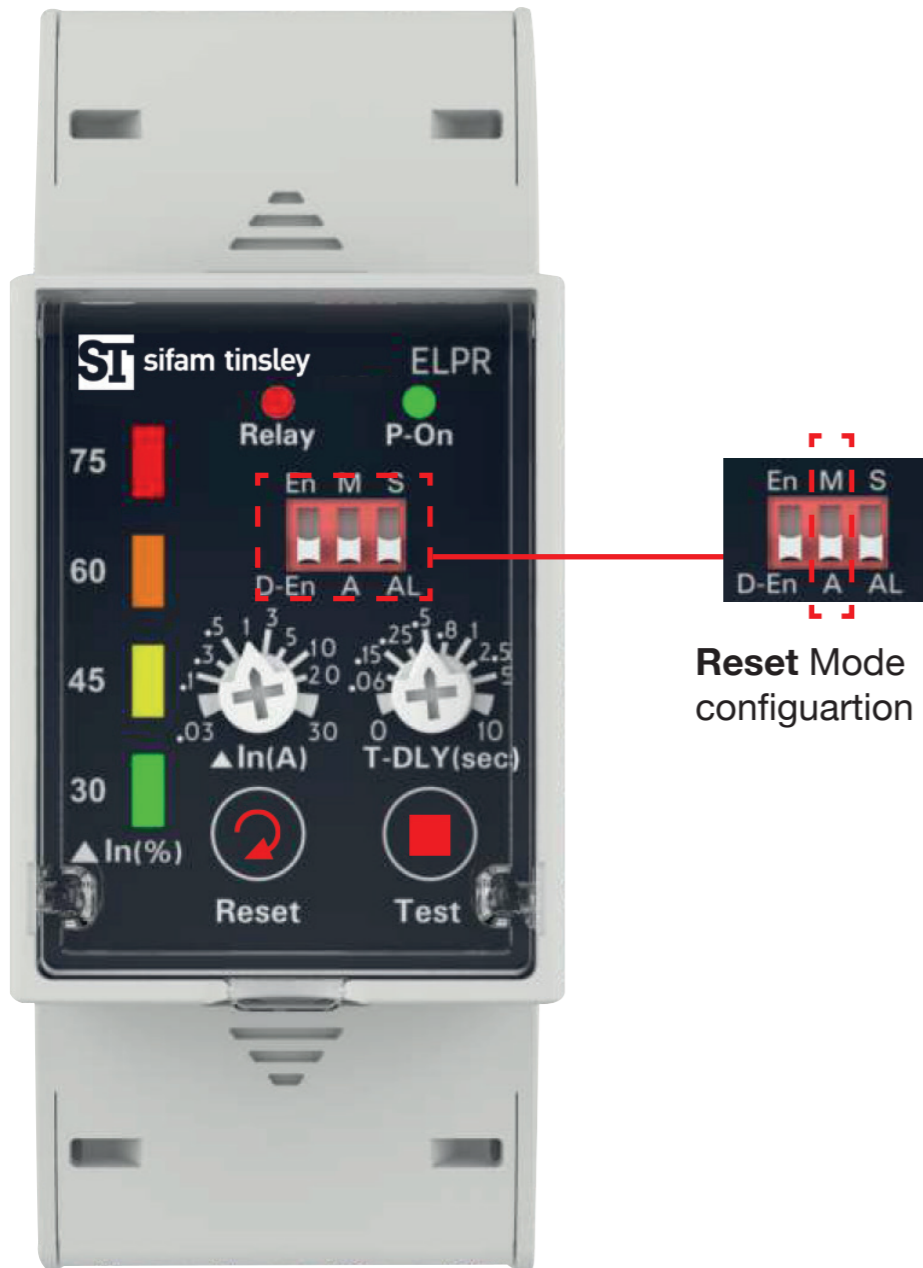
De-energized Configuration :- In fault condition main relay contacts will get De-energized (COM & NO contacts are open)



Note :- OFF (open) - ON (shorted) -



2. Auto / Manual Reset

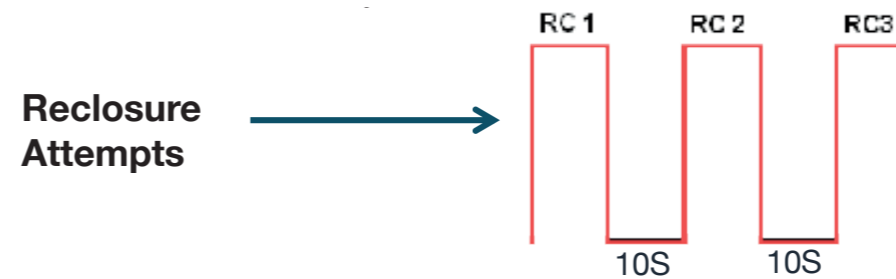


Manual Reset :- If the ELR is set to manual mode, then the relay must be reset manually by using Reset Key after clearing the fault condition.



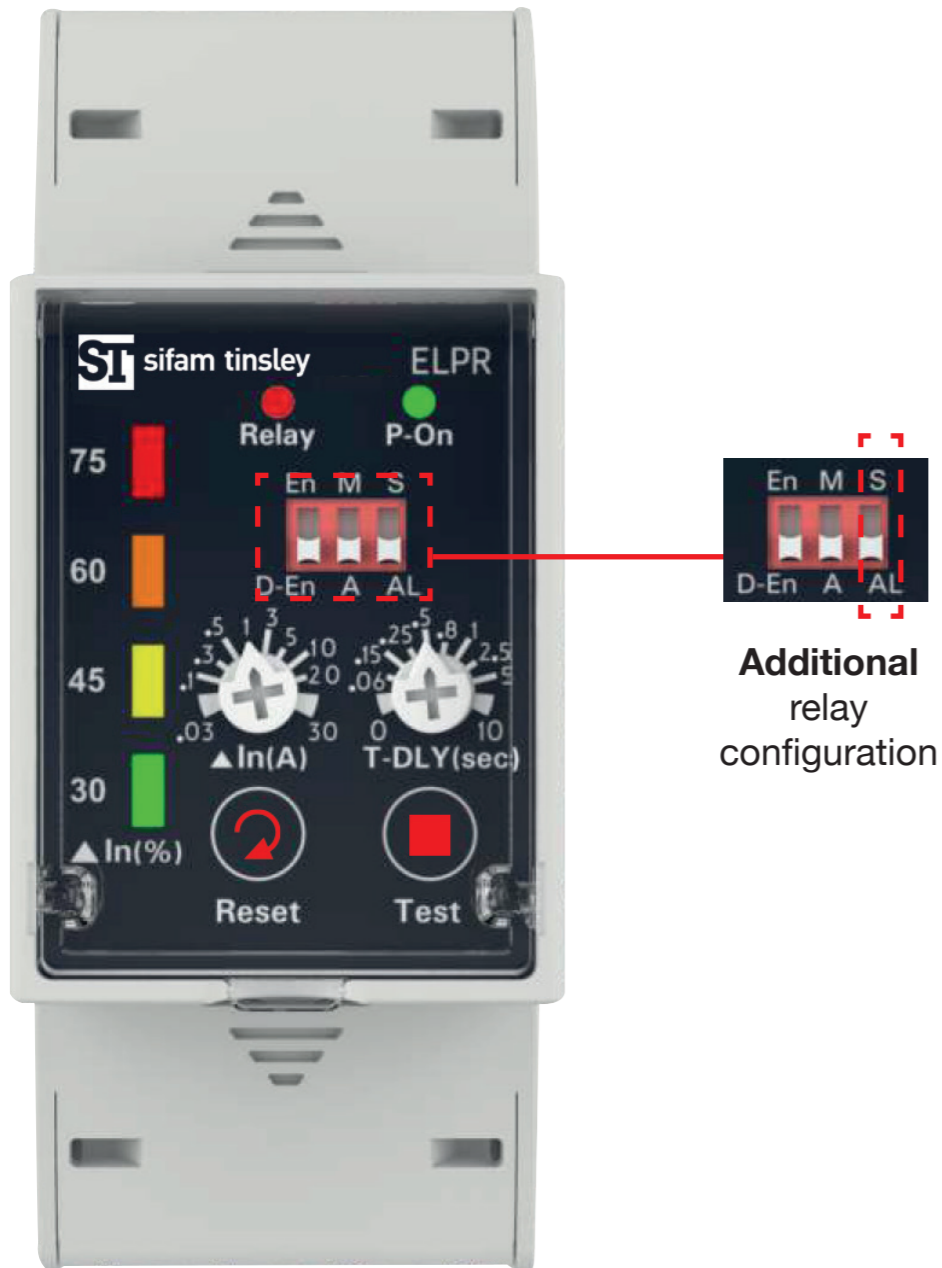
Auto Reset :- In auto reset mode ELR automatically tries to re-connect load to system by making 3 reclosure attempts (10 sec fixed interval between two attempts) after occurrence of fault.

- 1) During this if fault is cleared then relay resets automatically.
- 2) If the fault still continues after 3 attempts, then relay is tripped permanently. In that case relay has to reset manually for further operation.



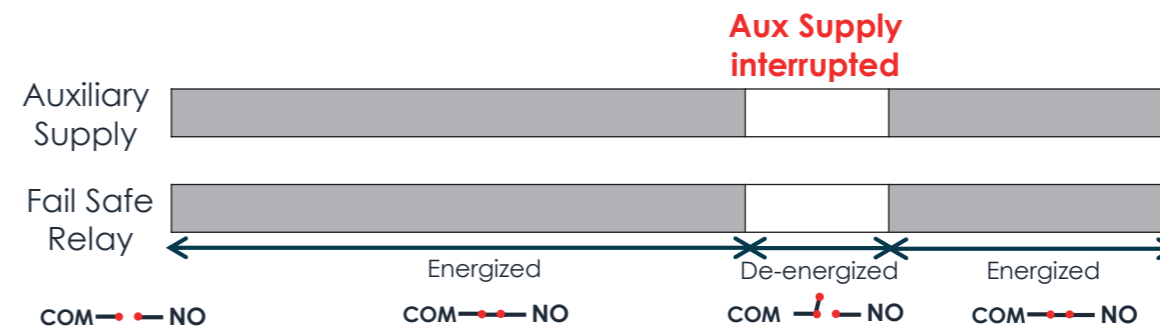


3. Fail safe or Alarm Relay

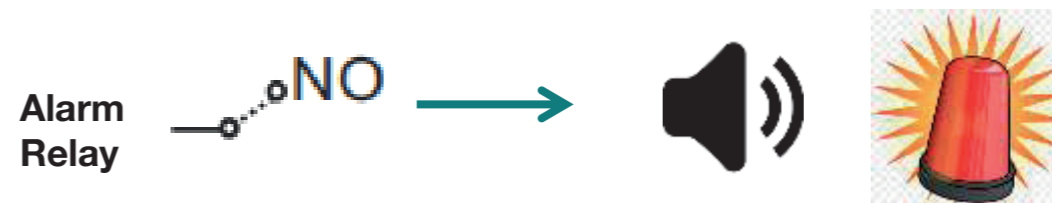


Additional
relay
configuration

Fail Safe Relay :- Relay represents the state of auxiliary supply condition. It trips when auxiliary supply to the ELR interrupts.



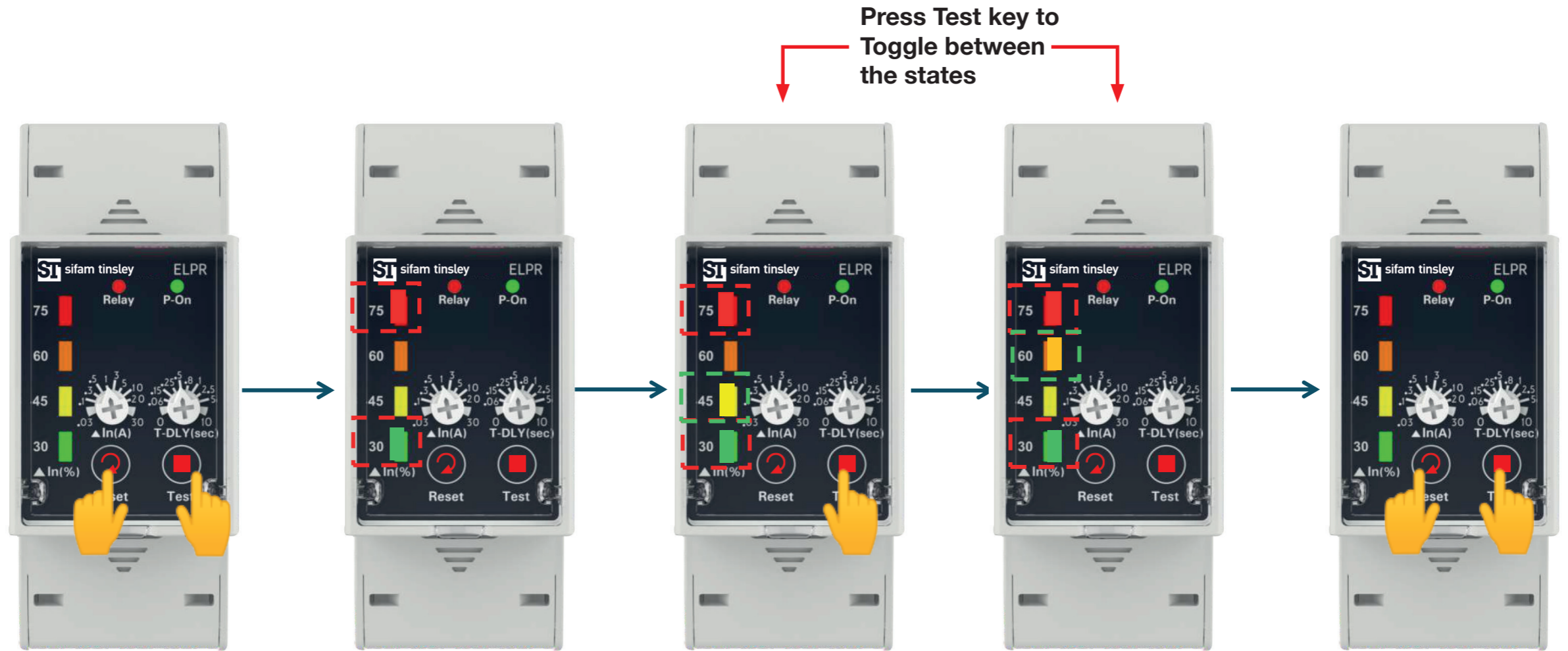
Alarm Relay :- If leakage current exceeds 50% of set value, alarm relay is activated in order to trigger suitable indications connected (Alarm / Buzzer)



Note :-OFF (open) - ON (shorted) -



Smart ELPR - Main Relay Configuration



Press Test key to
Toggle between
the states

Press both keys simultaneously for more than 3 seconds

Setting is activated is indicated by blinking of Bargraph 75% & 30% LED (at rate of 0.5 sec)

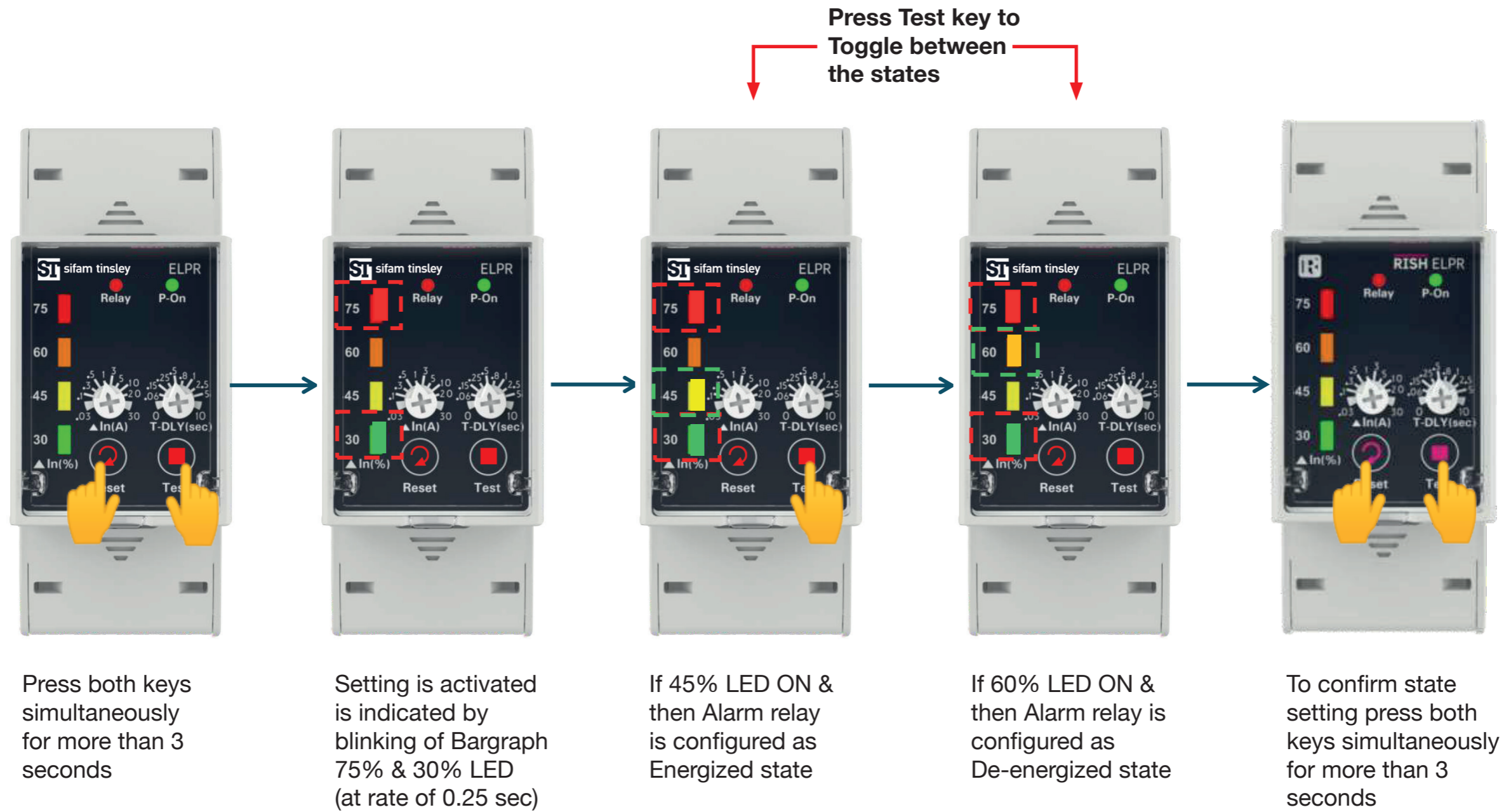
If 45% LED ON & then relay is configured as Energized state

If 60% LED ON & then relay is configured as De-energized state

To confirm state setting press both keys simultaneously for more than 3 seconds

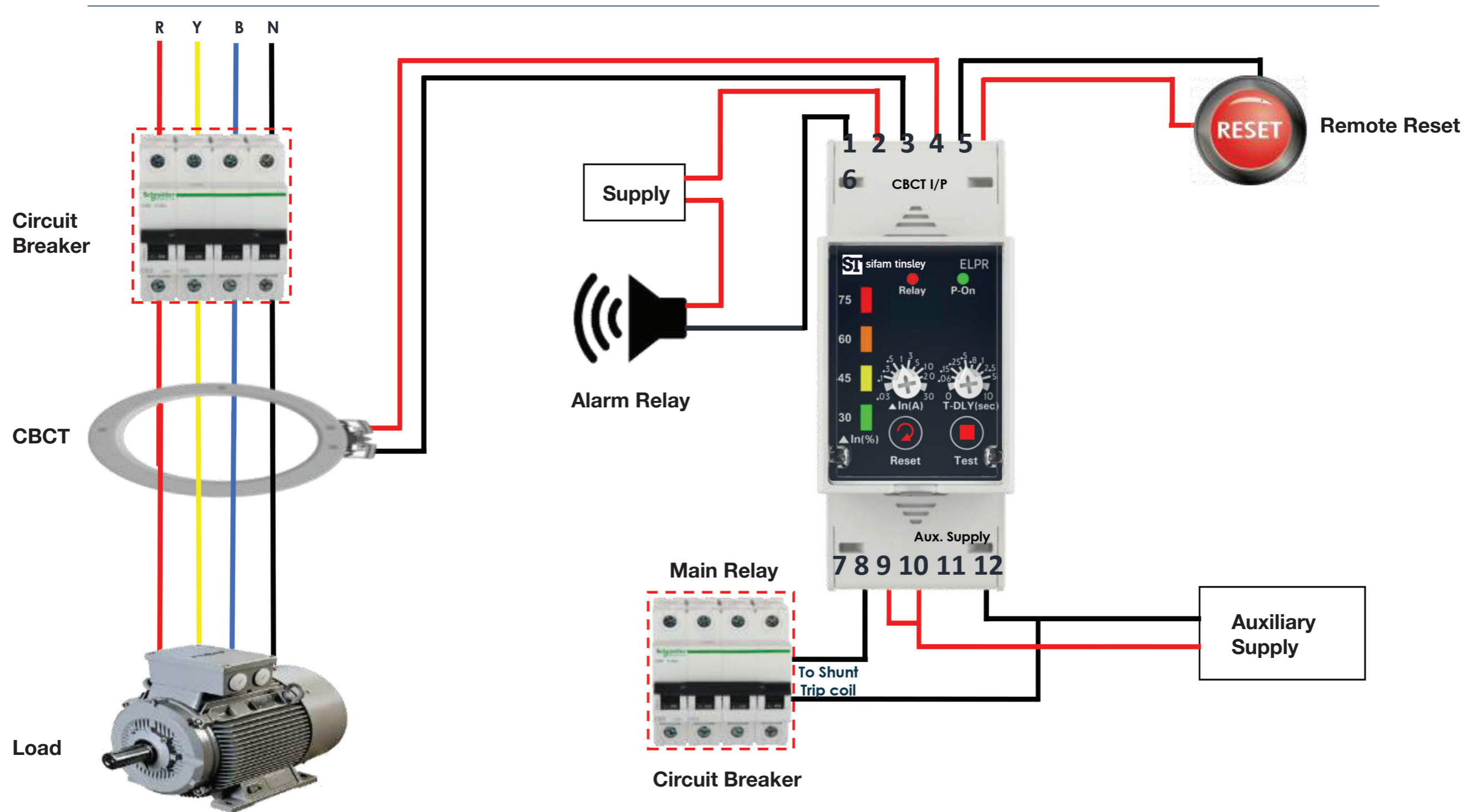


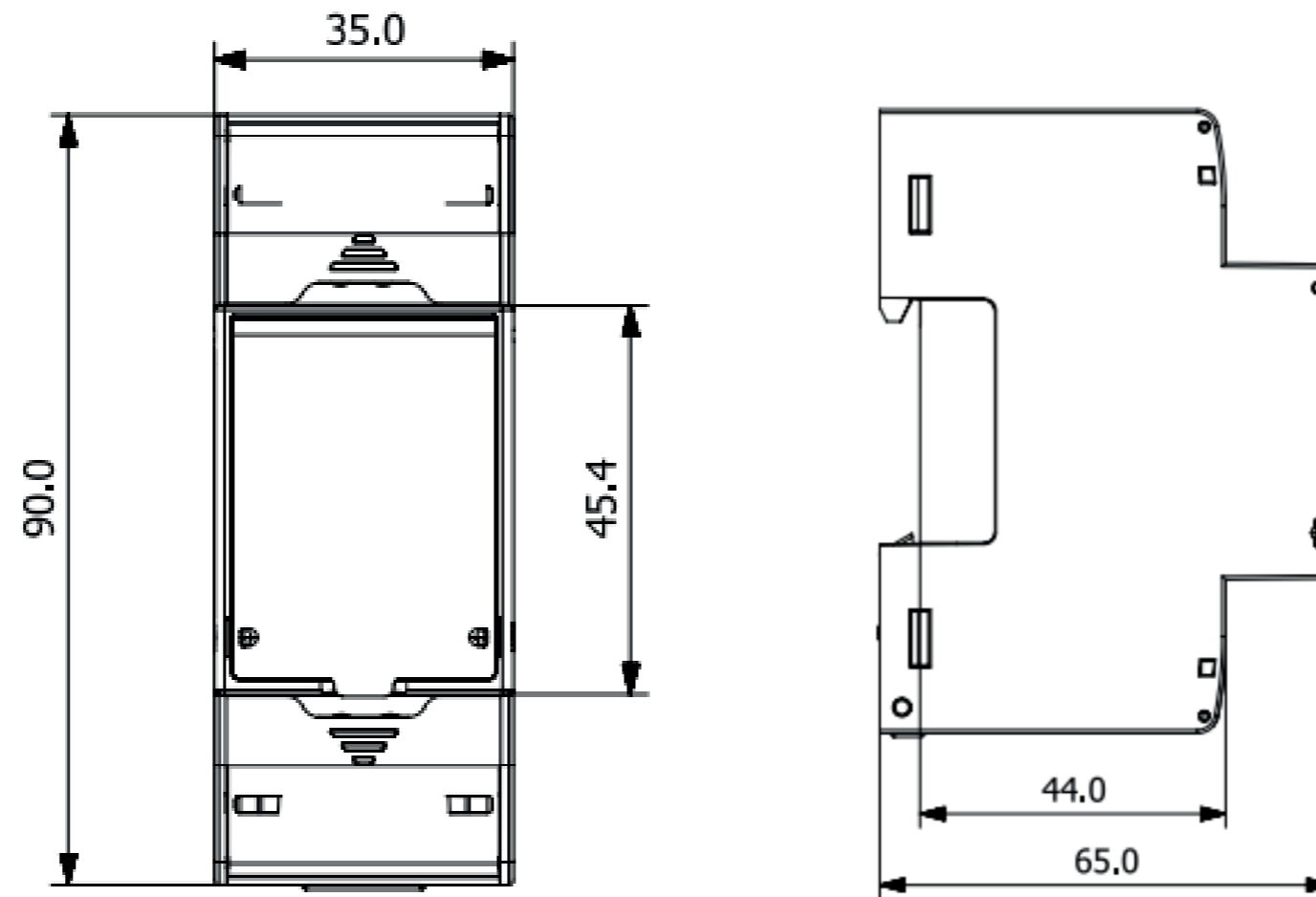
Smart & Smart+ ELPR - Alarm Relay Configuration





ELPR - Earth Leakage Relay





All Dimensions are given in mm



Motor Control Panel



Mining Industry



Cement Industry



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Springwood Industrial Estate
Braintree
Essex
CM7 2YW

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