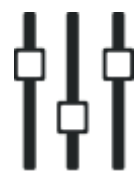


Device to safeguard life



Measure



Control



Record



Analyze



Voltage Relay



Line Monitoring Relay



Current Relay



Earth Leakage Relay



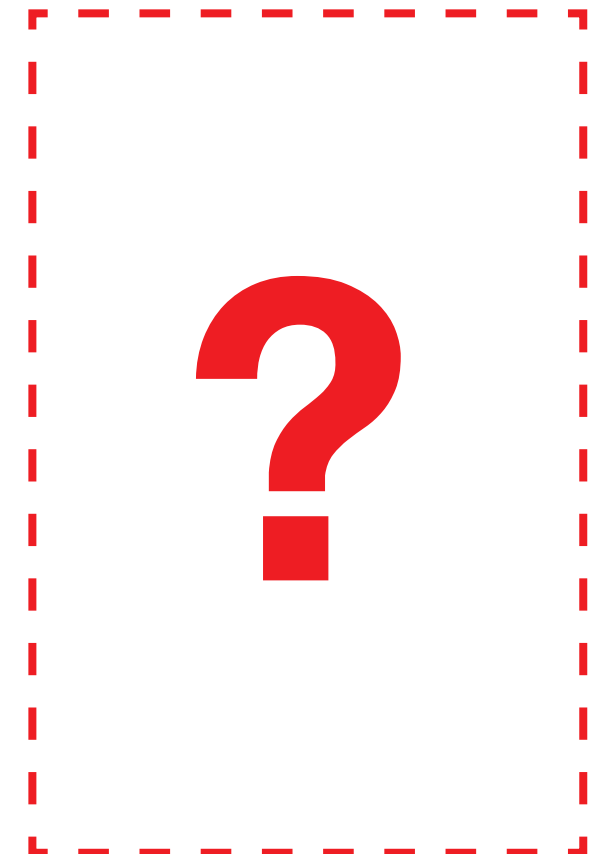
Voltage Relay



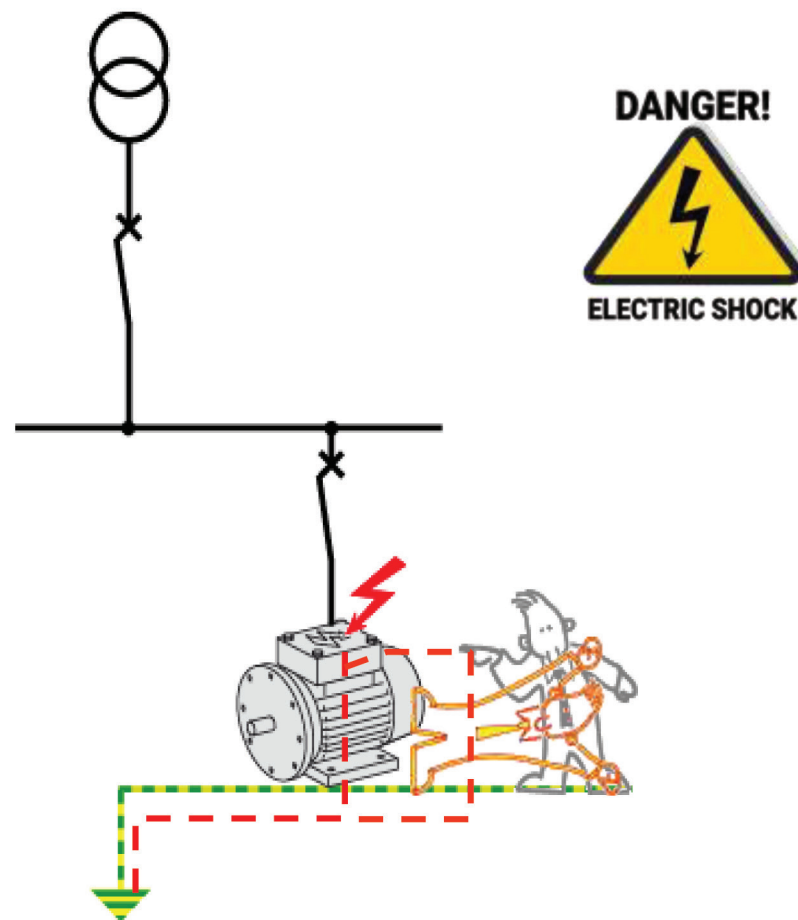
Current Relay



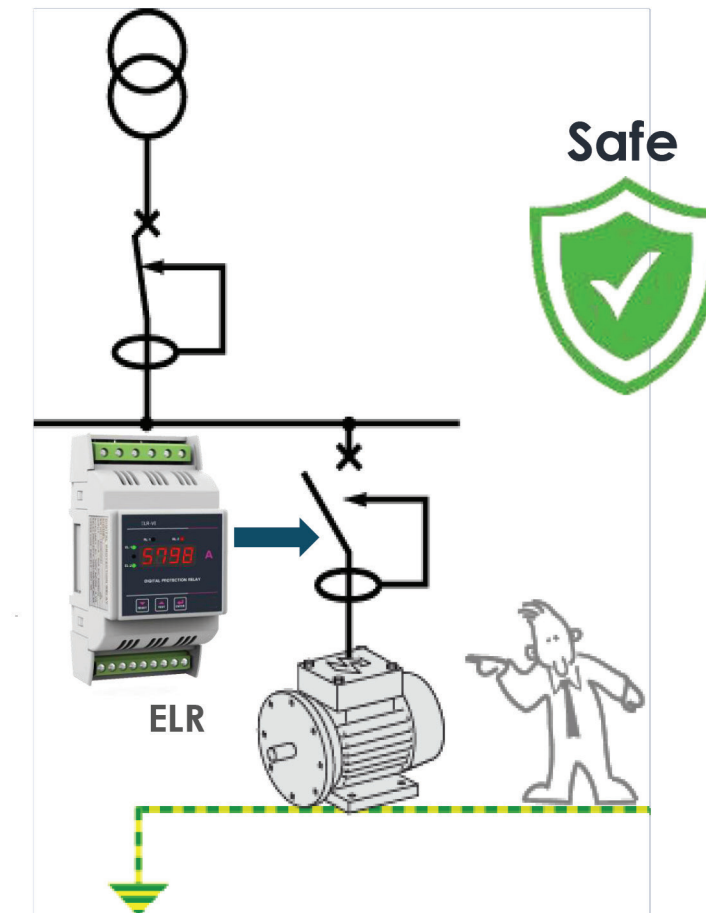
Phase Failure Relay



Earth Leakage Relay



Without ELR



With ELR



Selec

ELRA2M



GIC

17G715GF2

**Analog
ELRs**

Minilec

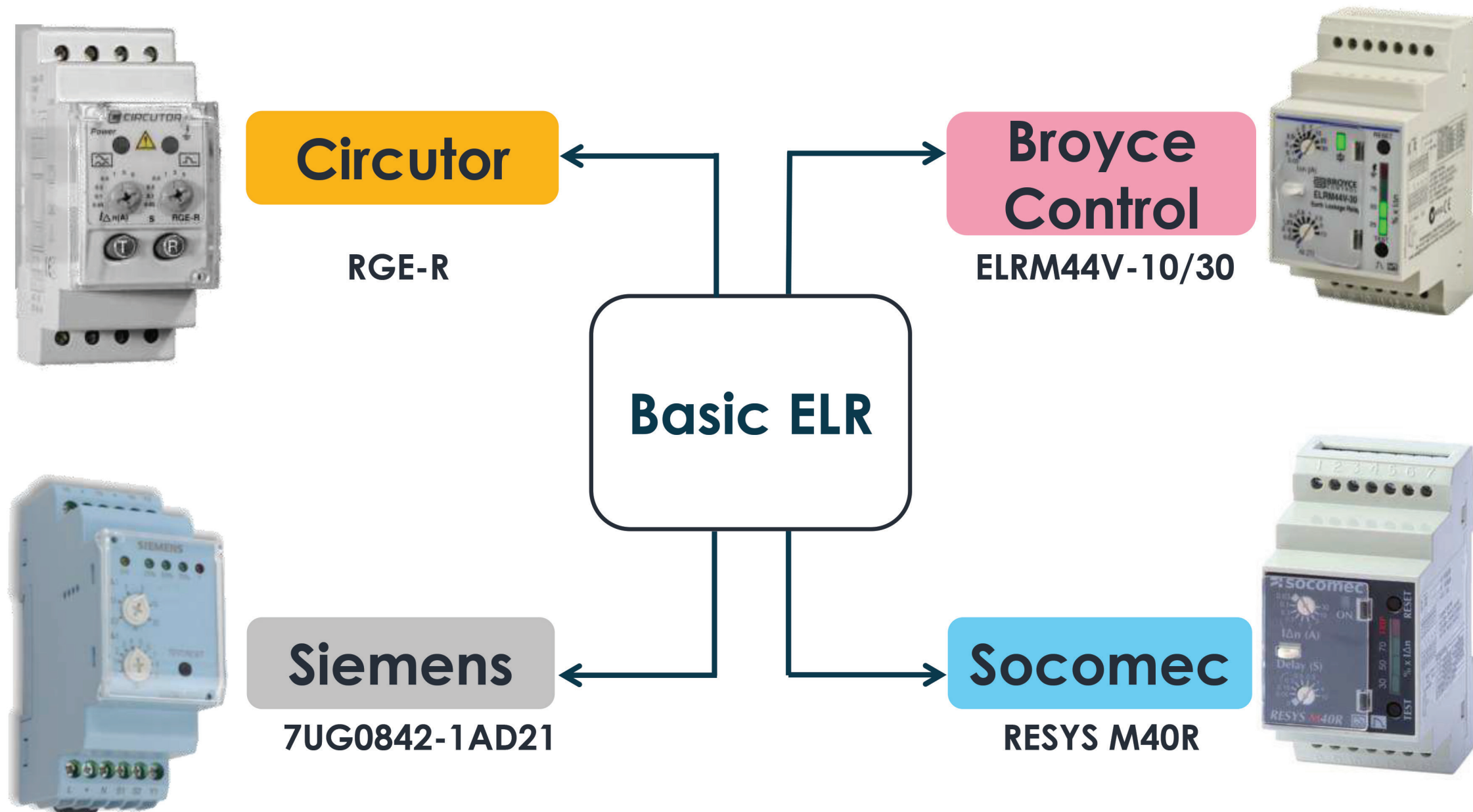
S2 ELR2

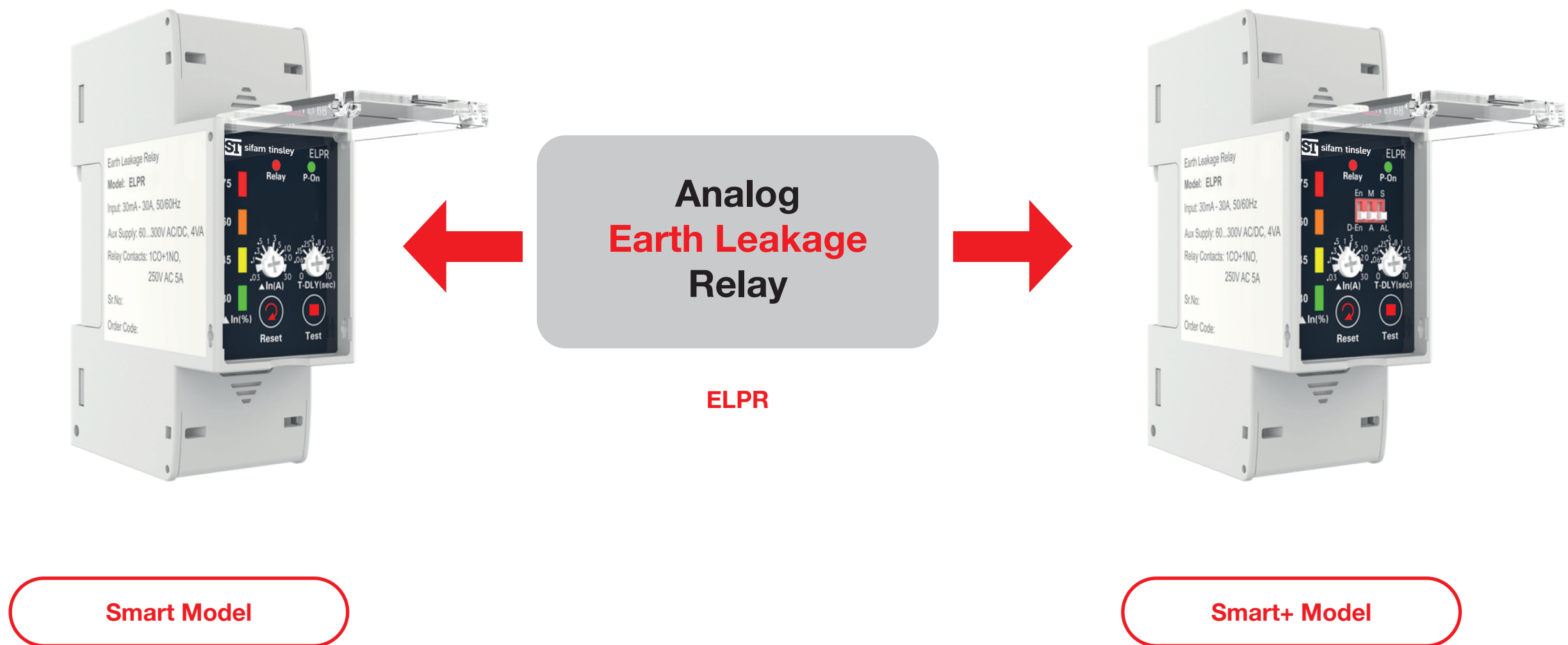


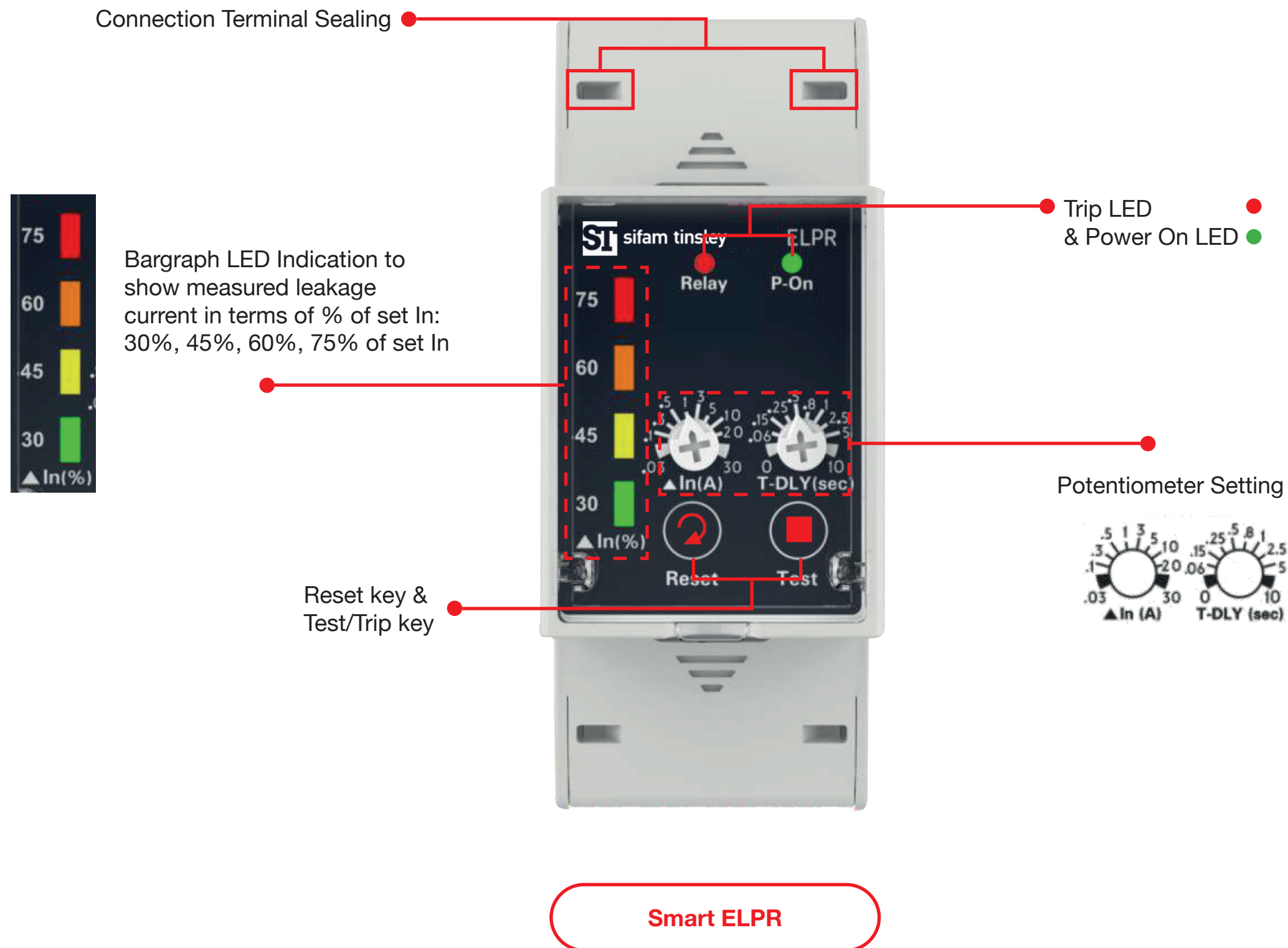
Veritek

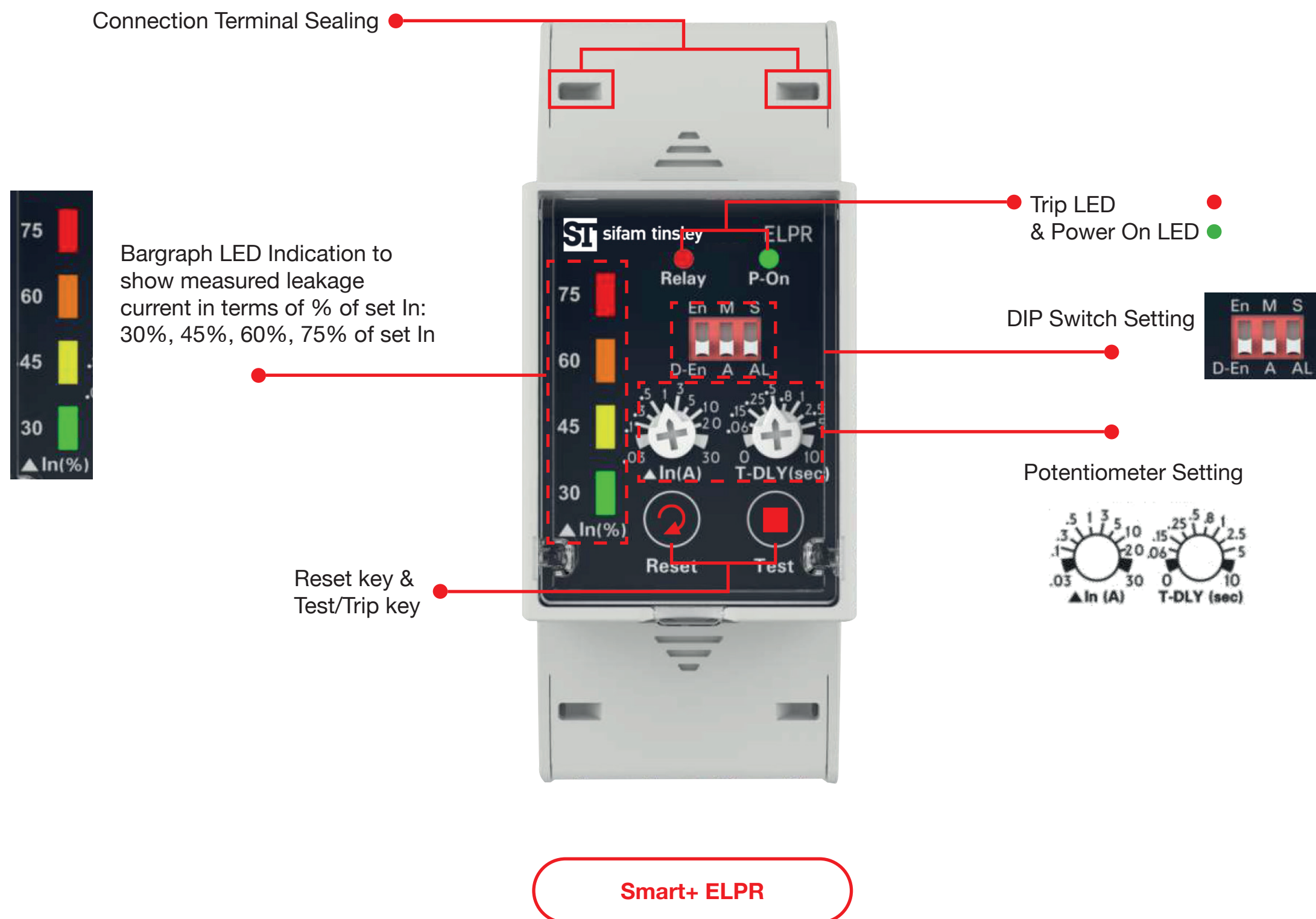
VIPS 98P







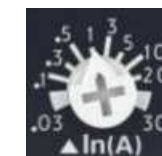






Onsite Programmable

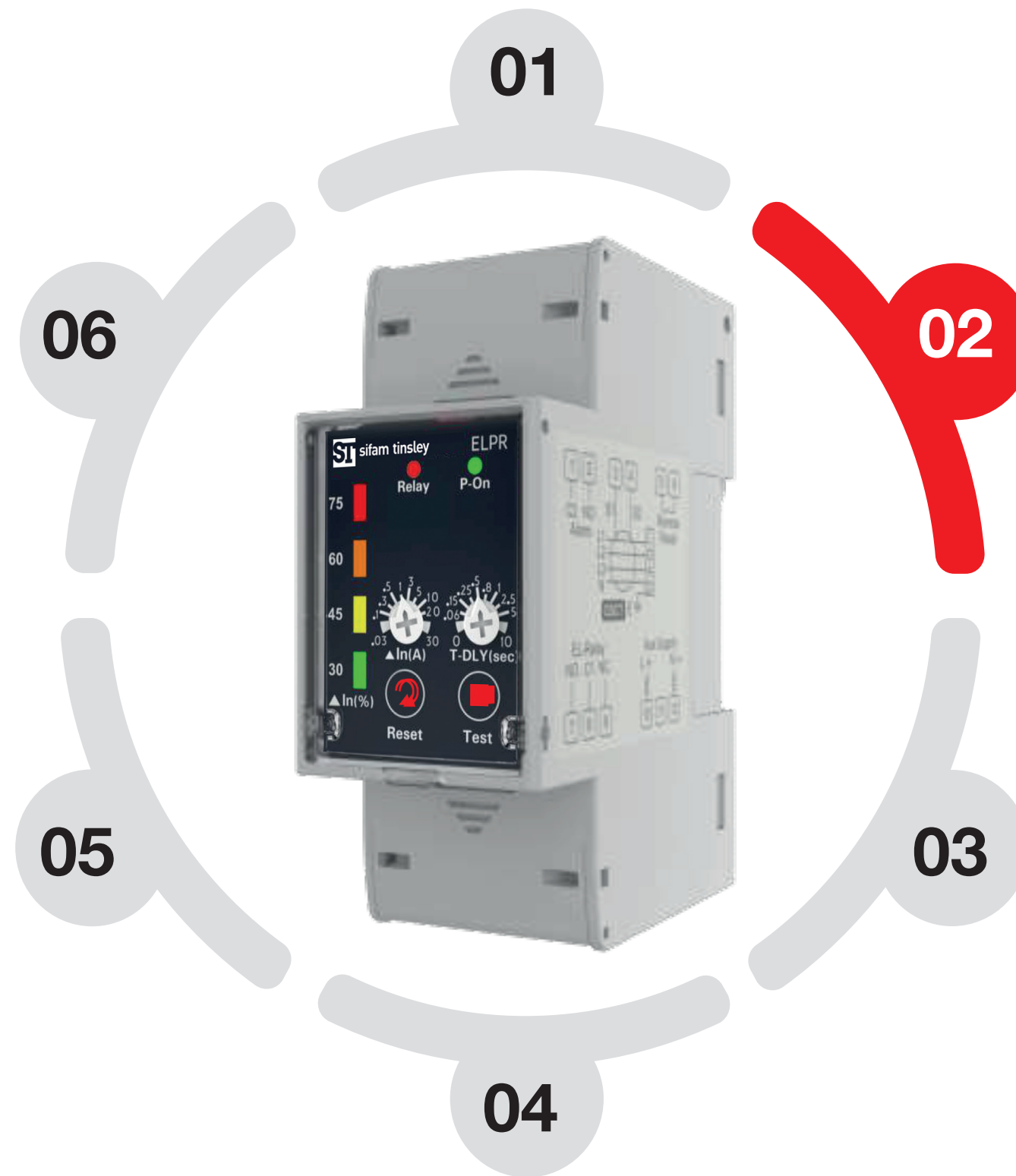
Can be programmed through potentiometer
1 Leakage current 30mA to 30A
2 Trip Time 0 to 10 sec



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



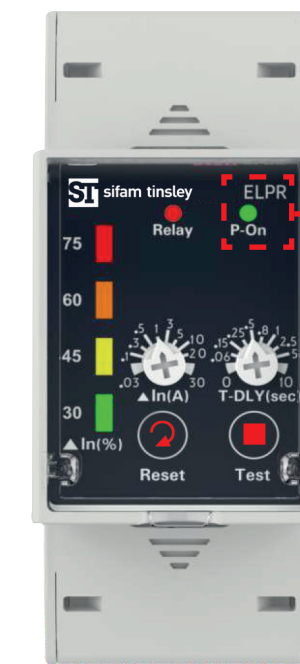
For example:
Set Current In = **1A**

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
----------------------------	-----------------------------	-----------------------------	-----------------------------

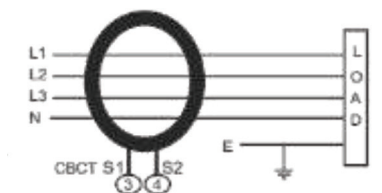


Status of Bargraph LED



P On LED

- 1) Continuous: **Power ON**
- 2) Blinking: **CBCT Open condition detected**



CBCT Fault Detection

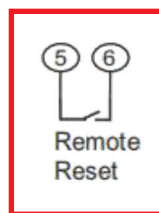
CBCT connections are monitored by ELR, so that leakage current detection is always accurate.

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.

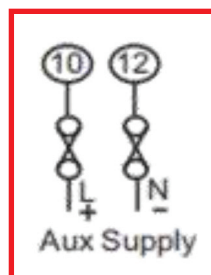




Wide Auxiliary Supply

To suit all grid conditions

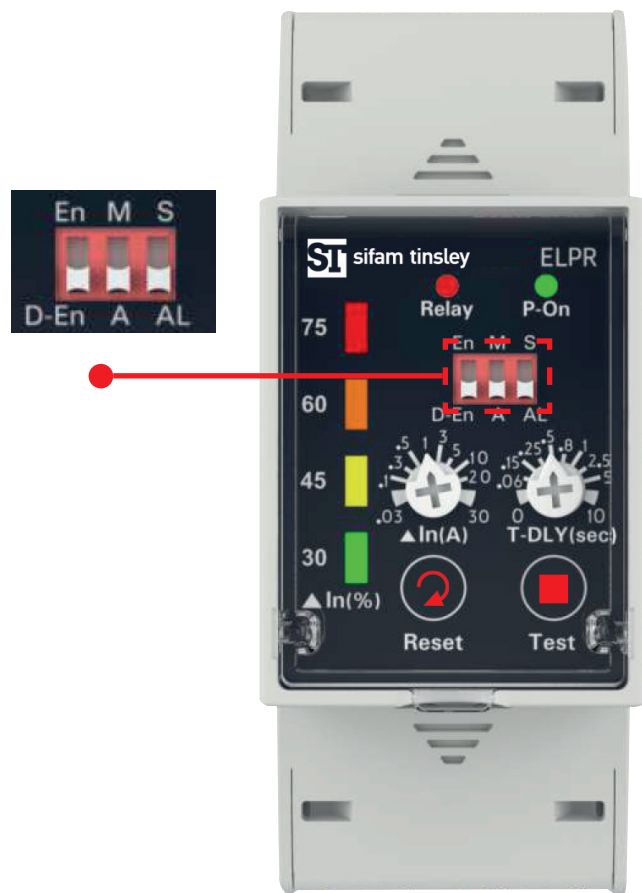
1. Higher:- 60V - 300V AC/DC
2. Lower:- 20 - 60V DC / 20-40 VAC



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
3. Additional Relay (1NO) Configuration Fail safe or Alarm Relay

Wide Auxiliary Supply

To suit all grid conditions

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

Remote Reset

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

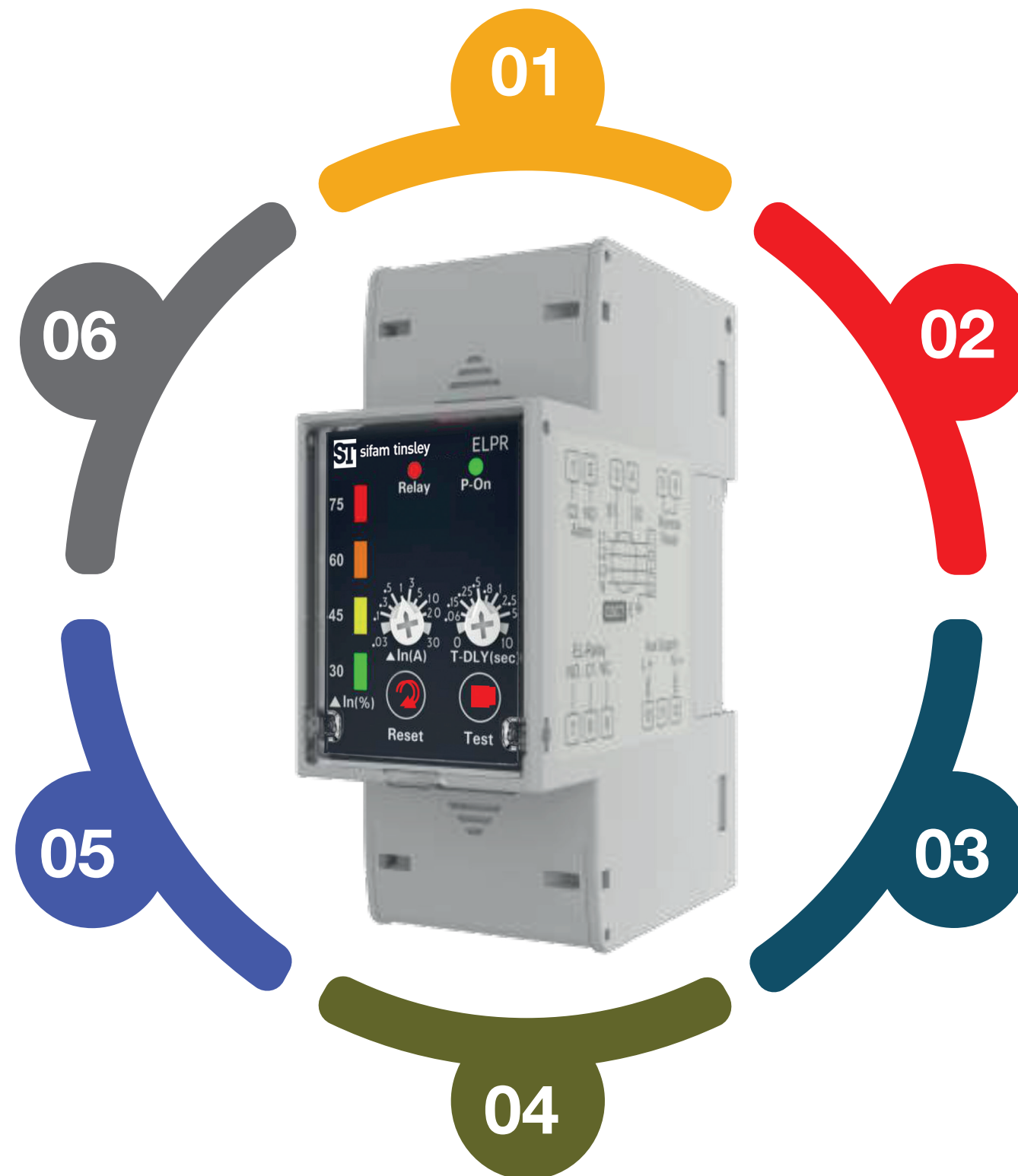
Bargraph Indication

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

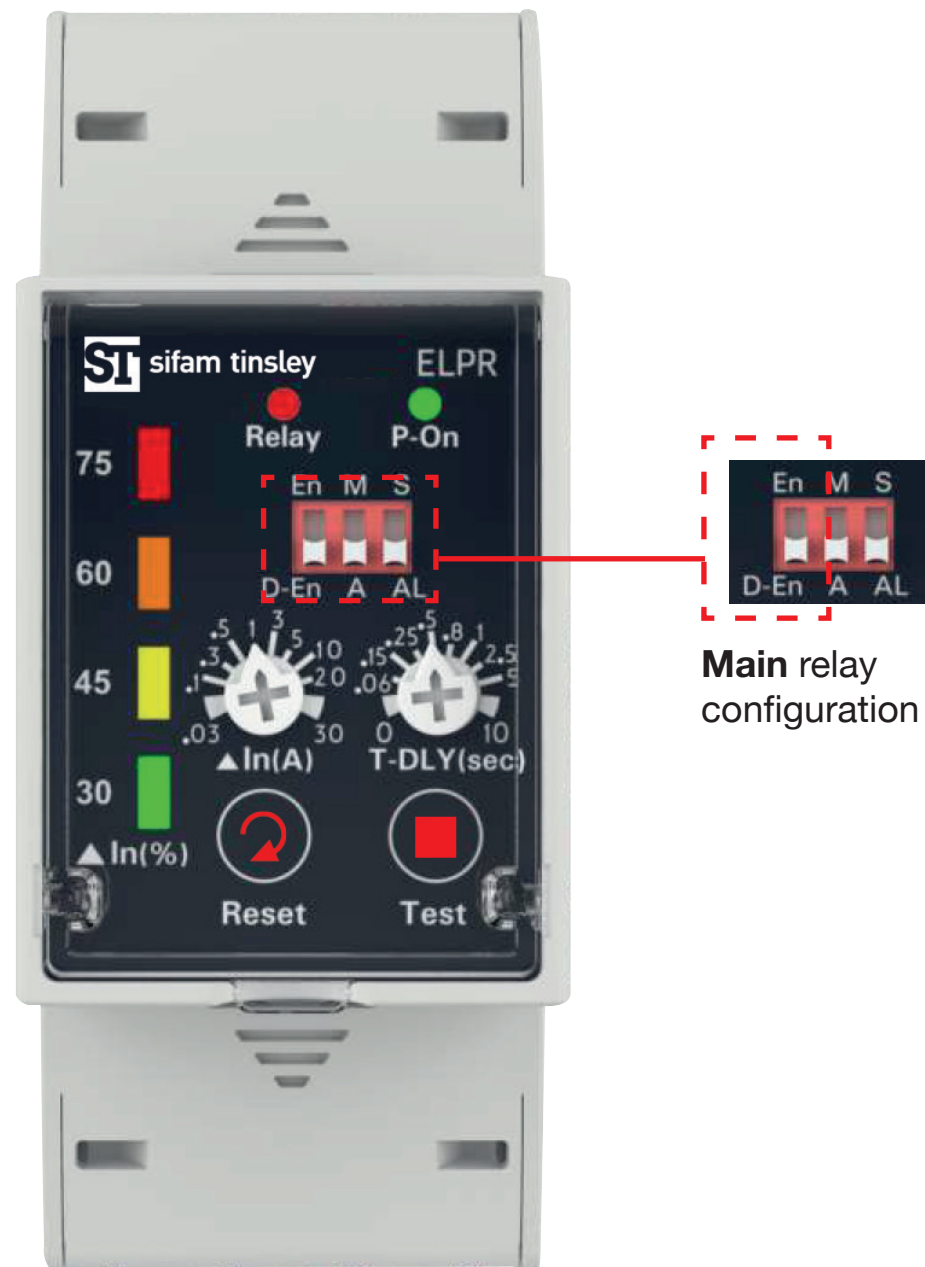
Main Relay :- 1 NO + 1 NC (1 CO)
Additional Relay:- 1 NO
Remote Reset Relay :- Non potential free
(Voltage:- 12VDC)
Rating:- 5A / 250 VAC or 30VDC



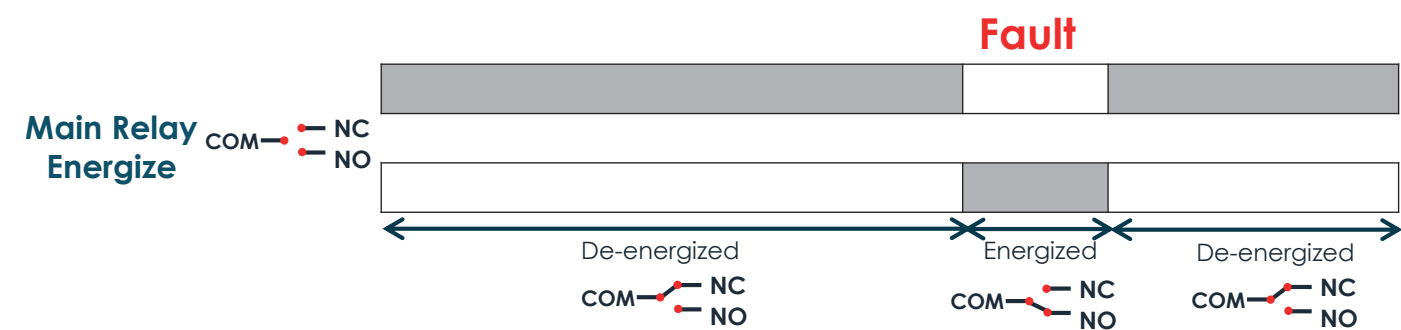
Higher :- 60 to 300V AC/DC
Lower :- 20 to 60V DC / 20 to 40V AC

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

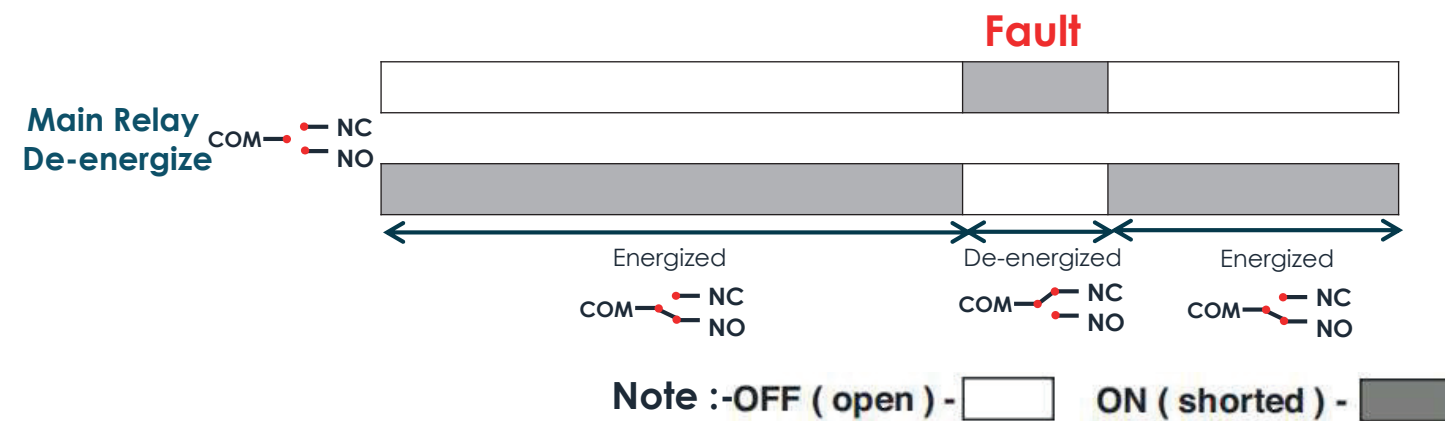
1. Energized / De-energized



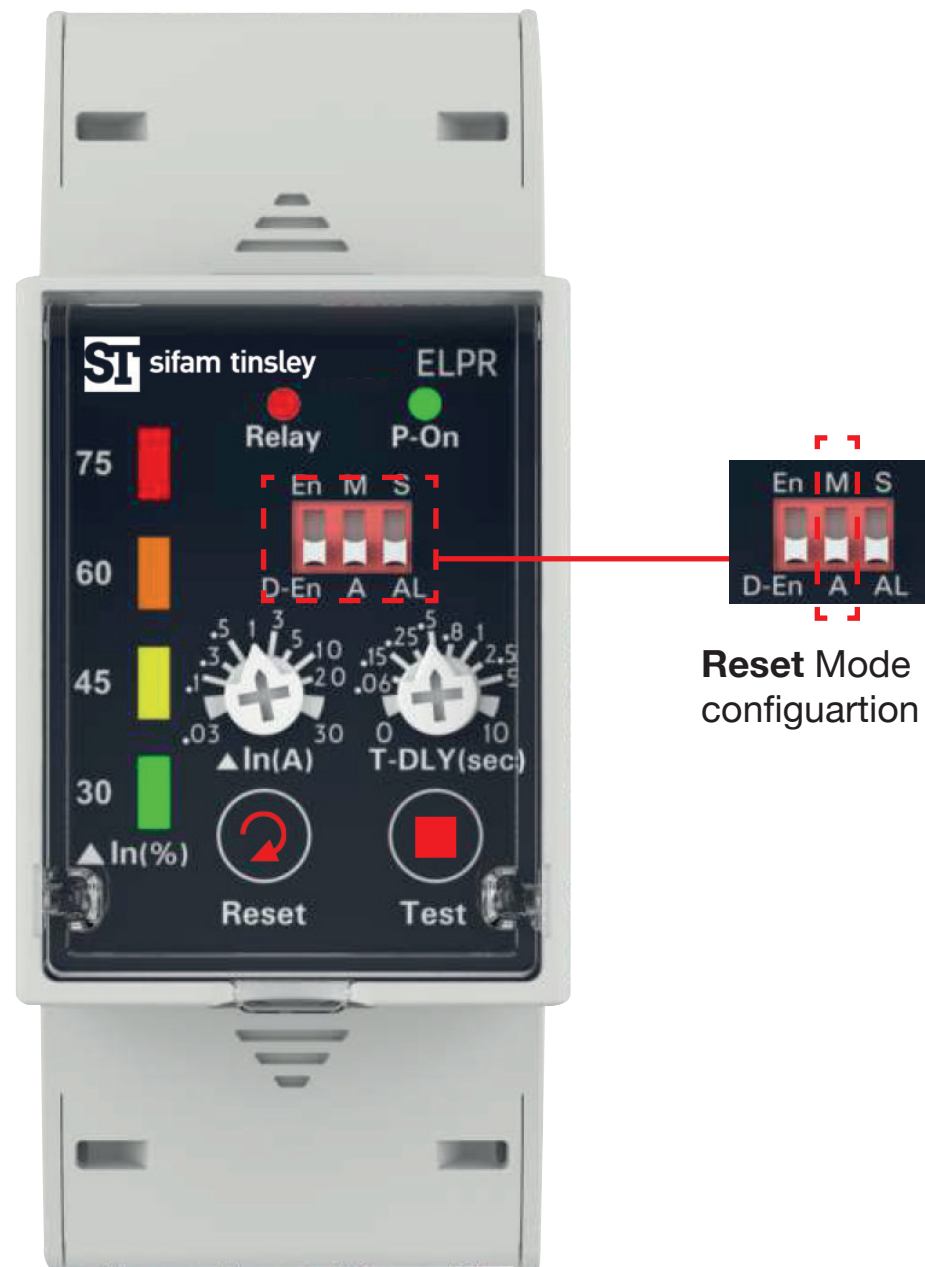
Energized Configuration :- In fault condition main relay contacts will get energized (COM & NO contacts are shorted)



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

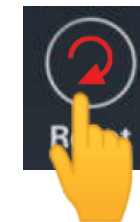


2. Auto / Manual Reset



Reset Mode configuration

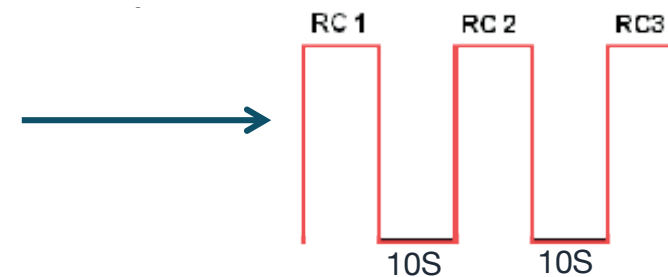
Manual Reset :- If the ELR is set to manual mode, then the relay must be reset manually by using Reset Key after clearing the fault condition.



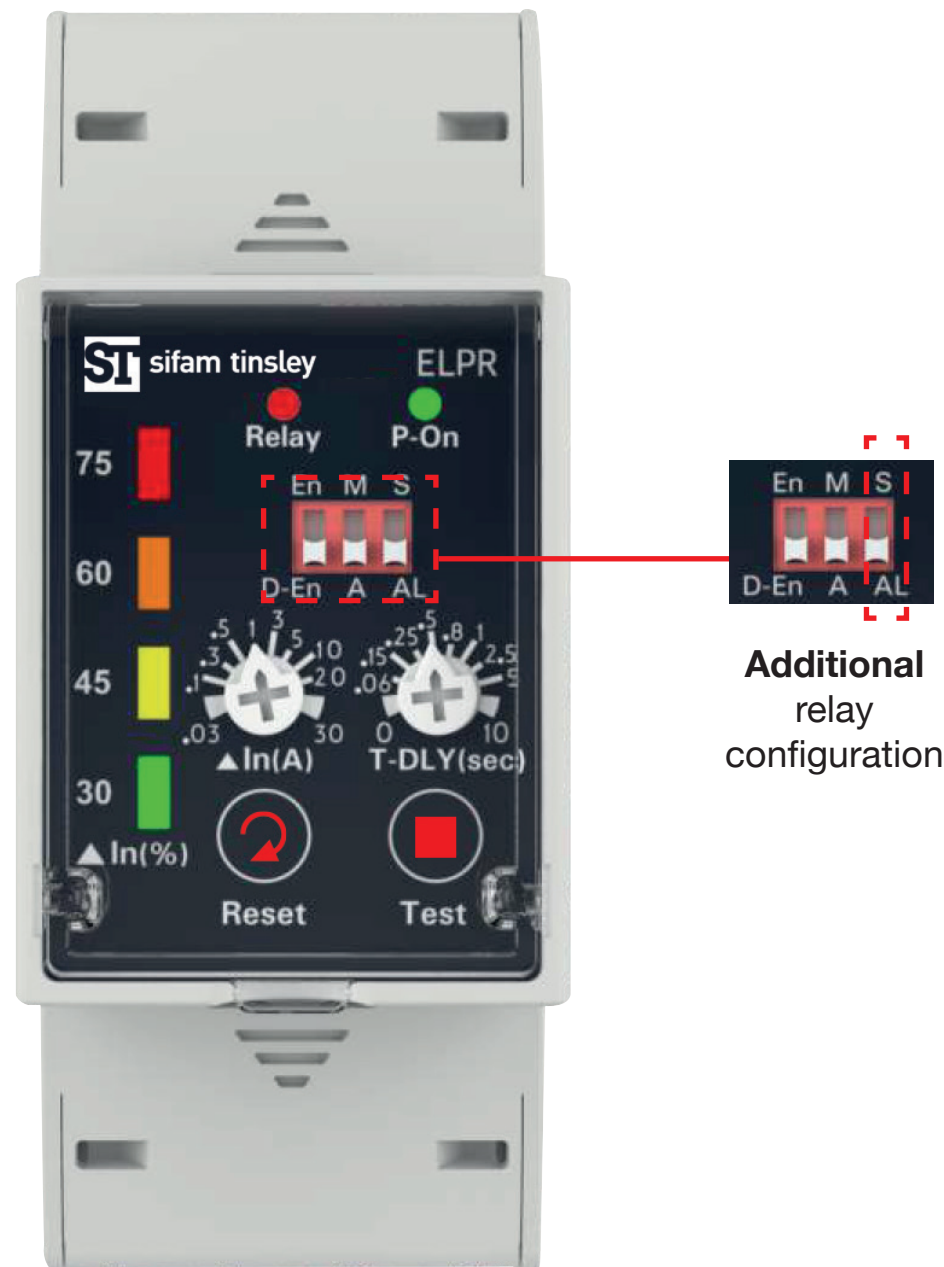
Auto Reset :- In auto reset mode ELR automatically tries to re-connect load to system by making 3 reclosure attempts (10 sec fixed interval between two attempts) after occurrence of fault.

- 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.

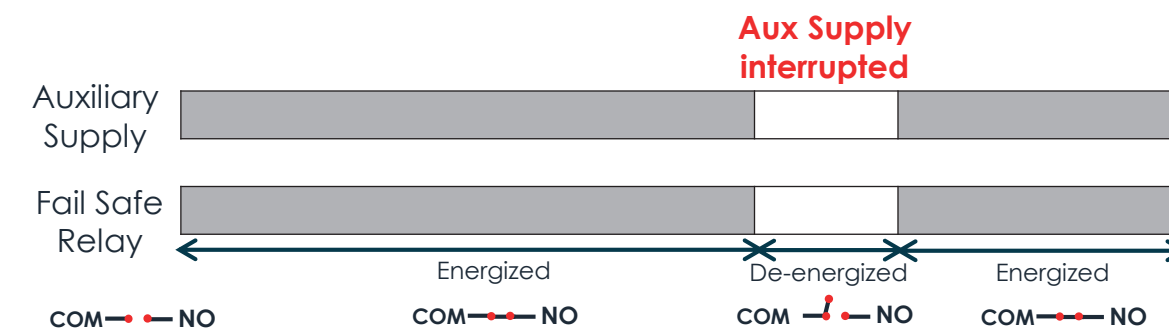
Reclosure Attempts



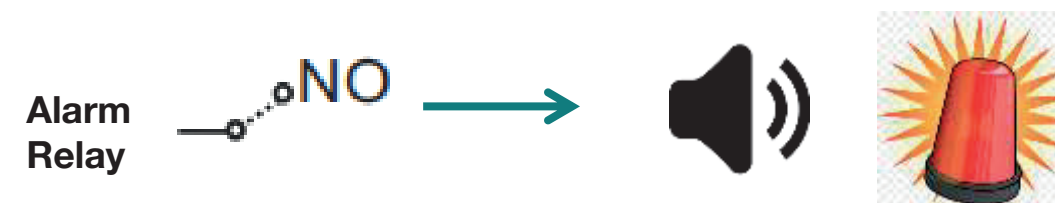
3. Fail safe or Alarm Relay



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



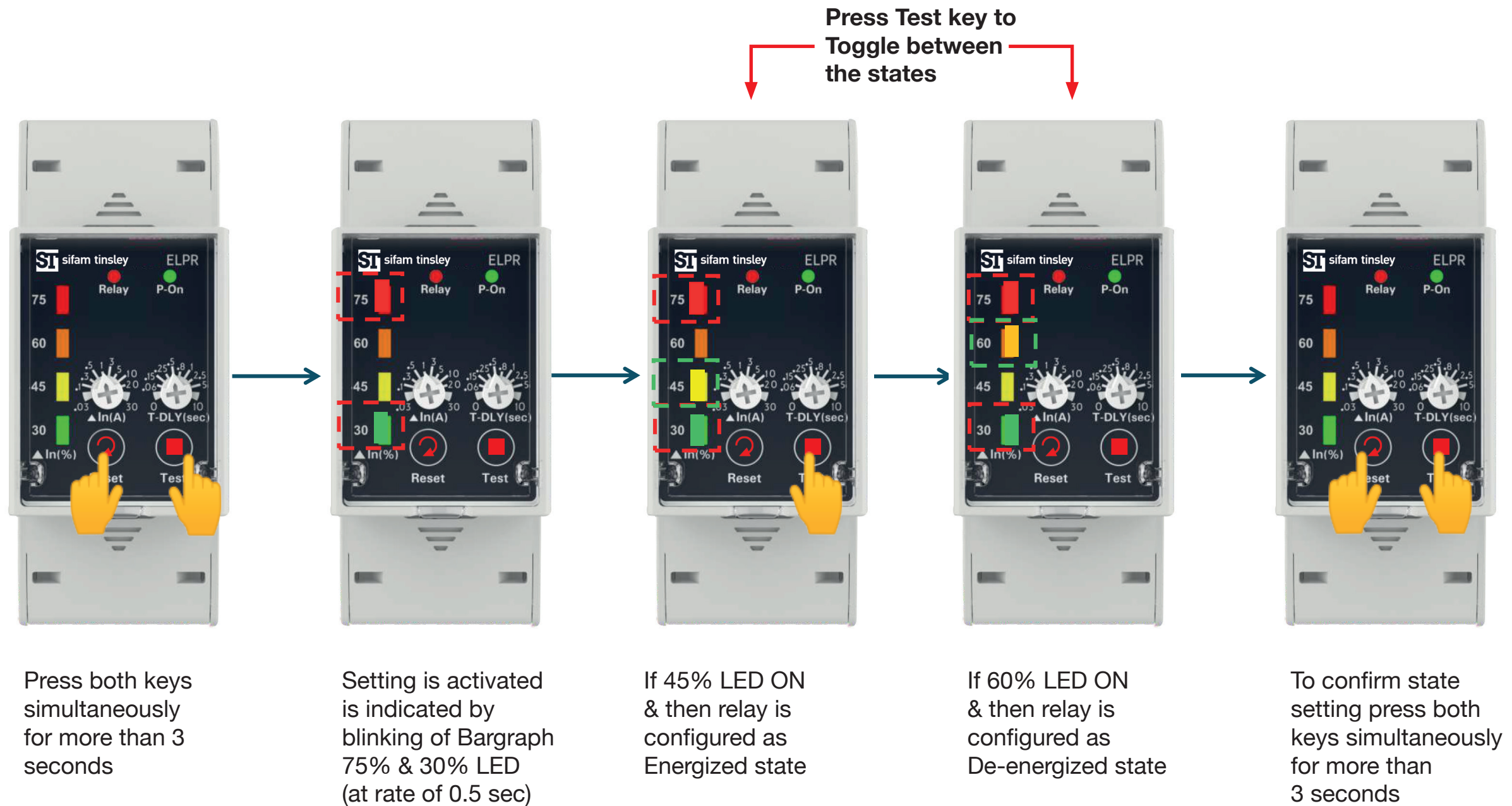
Alarm Relay :- If leakage current exceeds 50% of set value, alarm relay is activated in order to trigger suitable indications connected (Alarm / Buzzer)



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

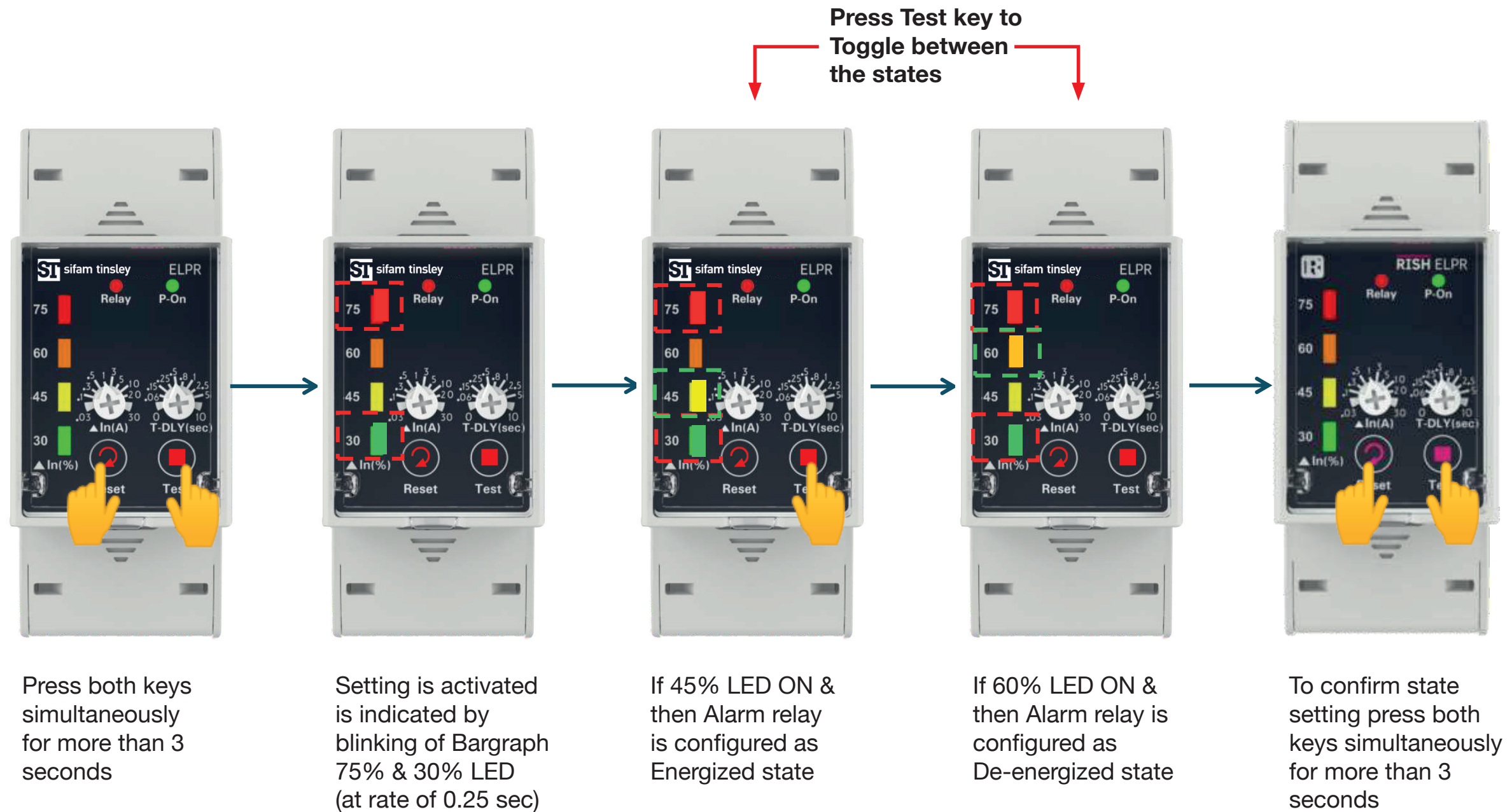


Smart ELPR - Main Relay Configuration



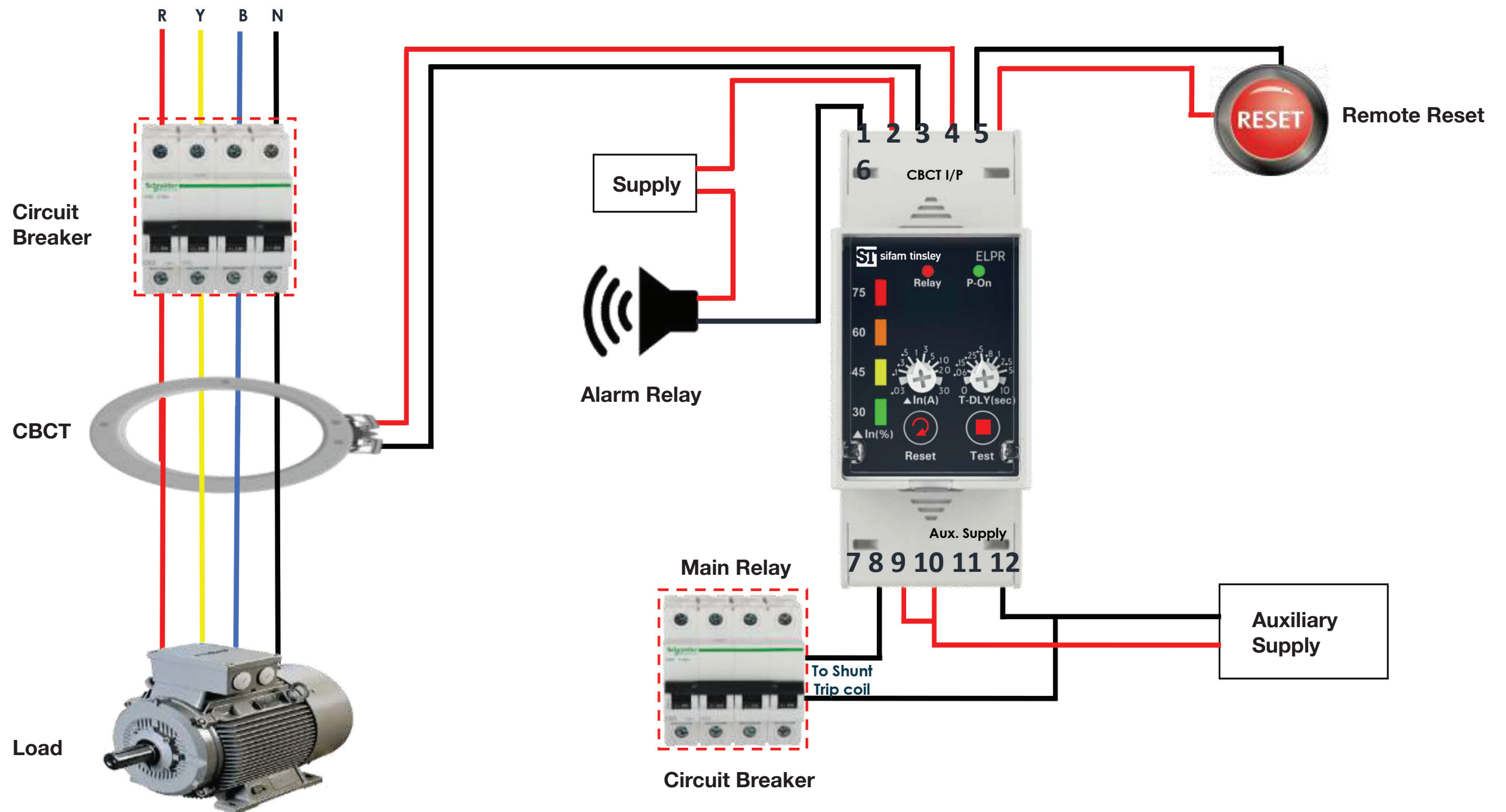


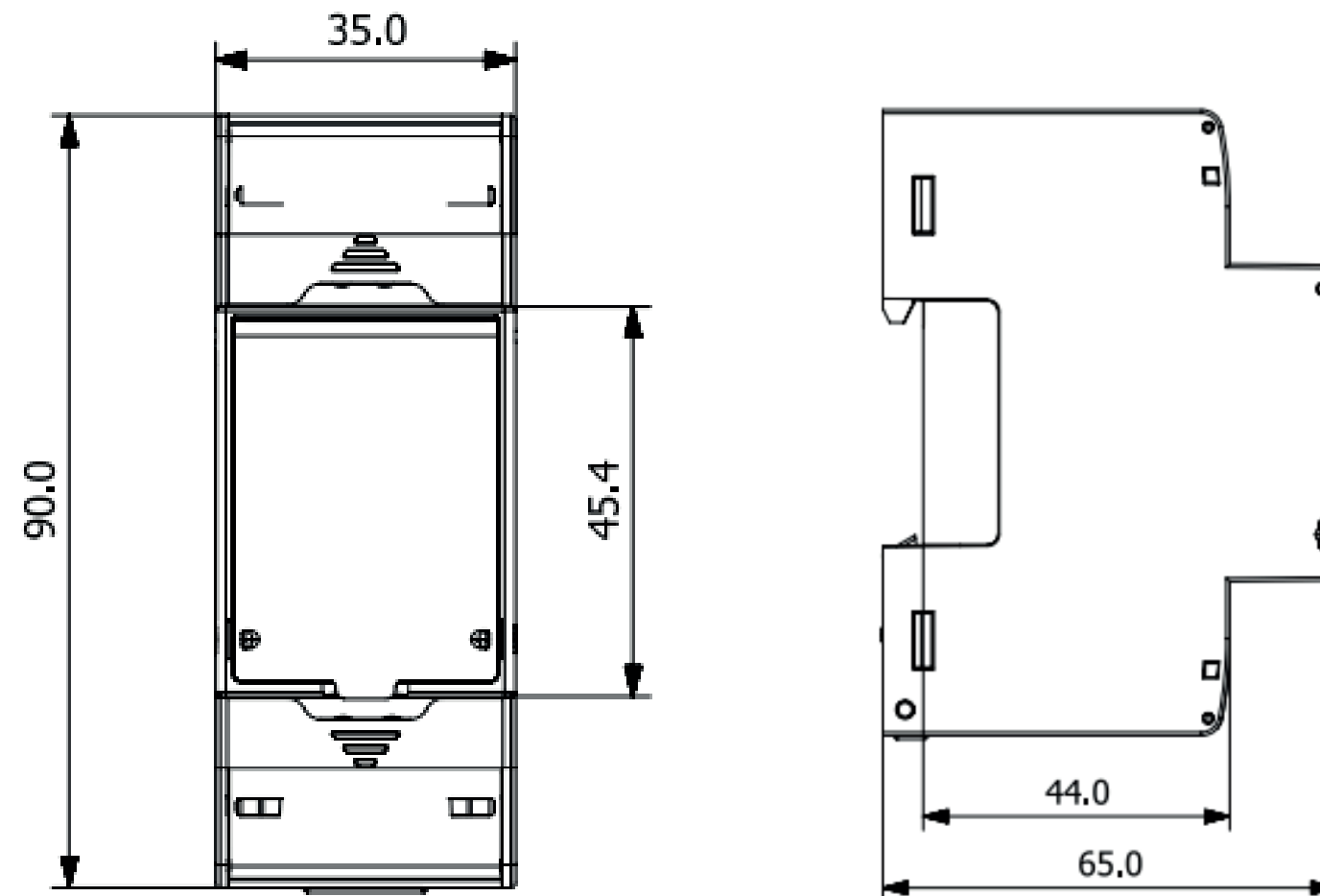
Smart & Smart+ ELPR - Alarm Relay Configuration





ELPR - Earth Leakage Relay





All Dimensions are given in mm



Motor Control Panel



Mining Industry



Cement Industry



Sifam Tinsley Instrumentation Ltd

1 Warner Drive
Springwood Industrial Estate
Braintree
Essex
CM7 2YW

Tel: 01376 335271
Email: sales@sifamtinsley.com

www.sifamtinsley.co.uk