

PROTIME<sup>®</sup>



## N45 Series Relay

**N45 - CR**

### Special Features

- 🔑 Micro controller based True RMS Measurement
- 🔑 Two Tripping ranges
- 🔑 Two Time delay ranges
- 🔑 User selectable Normal/Fail safe Modes
- 🔑 User selectable Auto/Manual Reset
- 🔑 Wide power supply range from 90-270V AC/DC
- 🔑 Dynamic 5 LED Bar Graph status indicator
- 🔑 RS 232/485 output-(Optional)
- 🔑 0-5V Analog Output-(Optional)

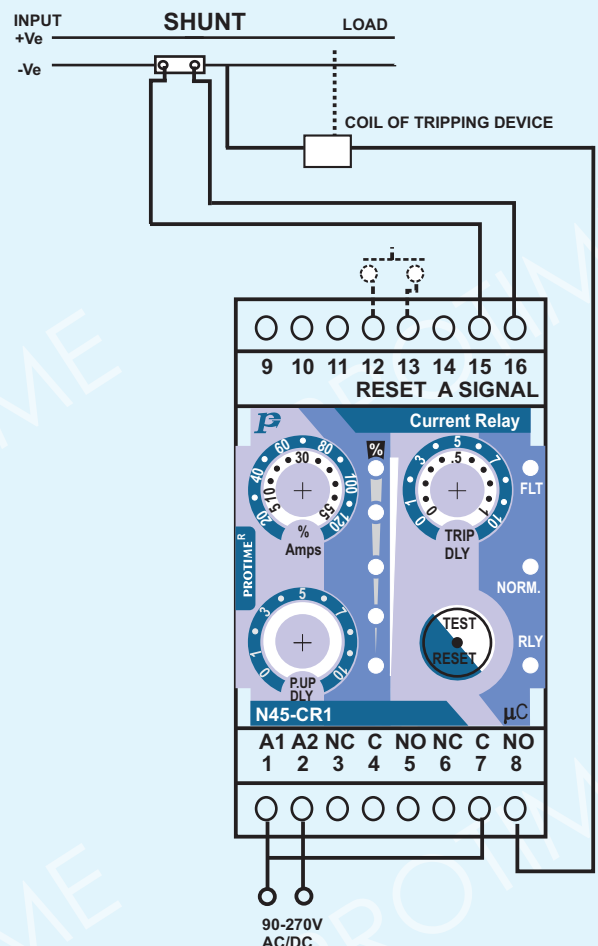
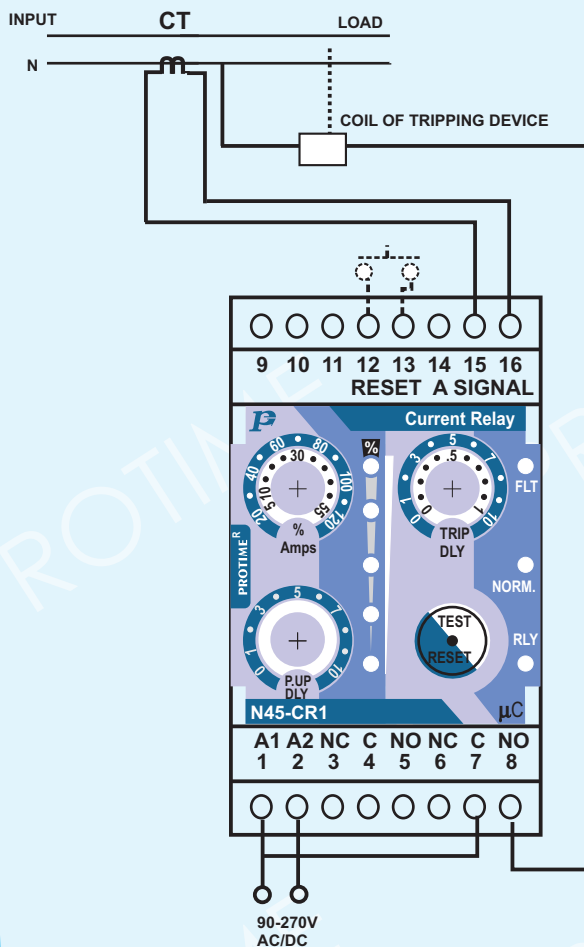
### Technical Data

- |                        |  |
|------------------------|--|
| 1) supply Voltage      | - 90-270V AC/DC  |
| 2) Output Contacts     | - Two change over (potential free)   |
| 3) Switching duty      | - 6A resistive at 250V AC or 24V DC  |
| 4) Electrical Life     | - 10 <sup>5</sup> operation at designed switching duty                                       |
| 5) Relay Status        | - Normal - De-energised in normal conditions<br>Fail Safe - De-energised in fault conditions |
| 6) Signal              | - From CBCT  |
| 7) Ranges              | - A = 10-90% (0.75 -4.5A For 5A CT Sec)<br>- B = 50-100% (1.0 -6A For 5A CT Sec)             |
| 8) Time Delays         | - Trip= 0.1 - 1 Sec / 1 - 10Sec<br>- Pick up = 1 - 10Sec                                     |
| 9) Mode of operation   | - Over current   |
| 10) Reset              | - User selectable Auto/Manual Reset  |
| 11) Mounting           | - Din channel  |
| 12) Approximate Weight | - 150gm  |
| 13) Dimension          | - 45mm(W) X 110(D) X 73.5mm(H)   |

## OPERATION:

PROTIME's N45-CR senses the current through Secondary of CT which is connected in current path. The current if exceeds beyond Set limit, can cause over loading resulting over heating, which in turn results in to loss of insulation &/or damage to equipment. N45-CR energises / de-energises an internal relay based on Mode of operation selected by user (i.e. Normal or Fail Safe) when current goes out of the range selected on the dial. N45-current Relays are provided with user selectable two Tripping Ranges, and also two Trip Time delay ranges in one unit. In Fail safe mode P.Up time delay is active, which can be set by DIP Switches. The CTis connected externally with the Busbar or cable carrying load current passed through it. It also has provision for RS 232/485 connectivity or 0-5V Analog output proportional to fault current. The Relay has 2 Changeover contacts. The Dynamic 5 LED bar graph gives an indication of fault level in terms of % of Settings selected. The Relay is also available for DC Current Protection using Shunt (Preferably) in Negative path of current.

## Connection Details



## HOW TO ORDER ?

Ordering Pattern (example)- **N45-CR-1**

N45-CR	-	1	-	D
Code		Tripping Range		for DC Relays
		A- 15-90%		
		B- 20-120%		