

## Features

- Single and 3 phase options
- Adjustable setpoint
- Adjustable time delay
- Internal differential
- LED trip indication
- Double pole relay contacts
- Automatic reset

## Benefits

- Ideal for any electrical load detection
- Over and under current monitoring
- Suitable for electric heating systems
- Ensures load current is within generator capacity
- Detects broken drive belts on machinery
- Nuisance tripping avoidance
- Customized options

## Applications

- Marine panels
- Switchgear
- Distribution systems
- Generator sets
- Control panels
- Process control
- Motor protection
- Transformers
- Overload protection

## Approvals

UL, CSA, BV and ABS

## A.C. Current with Adjustable Time Delay

250 series A.C. current protectors provide continuous surveillance of the monitored circuit. When the current moves outside the setpoint limit, the relay operates. The protector can be used to monitor over and under current conditions, load detection, and for monitoring electric heating systems. An illuminated LED indicates when the relay is energized. For 3 phase systems, the sequence of connection is not important.

### Operation

A.C. current protectors provide continuous surveillance of the monitored circuit. These products offer user adjustable trip point (setpoint) and time delay settings. The setpoint adjustment range is between 40% and 120% of the nominal current. Input currents can be via current transformers or direct up to 10A. An internal differential setting of 1% reduces nuisance tripping if the measured signal is noisy or unstable. When the measured current moves outside the setpoint limit, the relay will operate, giving an alarm or initiation signal. An adjustable time delay is provided to prevent the relay from tripping for a predetermined period to prevent nuisance tripping. The units draw their operating power from a separate auxiliary supply input. Single phase and three phase products are available. Three phase products monitor the current level for each phase, and are not phase sequence sensitive. Combined units offer under and over current trips in one compact unit. Single function units are also available.

### Over Current Models

When the monitored current exceeds the setpoint, the relay will energize and the red LED will illuminate to indicate the trip condition. The relay will automatically reset once the monitored current falls below the setpoint minus the differential. When reset, the LED will extinguish and the relay de-energizes.

### Under Current Models

When the monitored current falls below the setpoint, the relay will de-energize and the red LED will extinguish to indicate the trip condition. The relay will automatically reset once the monitored current rises above the setpoint plus the differential. When reset, the LED will illuminate and the relay energizes.

### Options

250 series protector relays offer various customized options to suit individual requirements. Please consult factory.

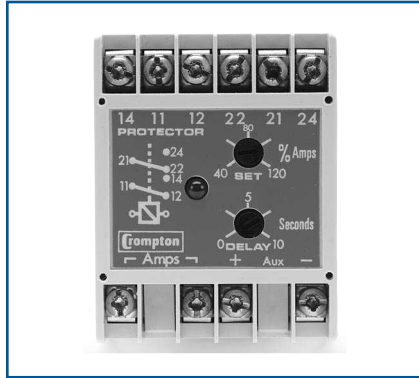
- Adjustment ranges - different adjustment ranges are possible for the setpoint and differential controls.
- Relay operation - standard models are fail safe, but the relays can be customized to energize or de-energize on trip.

### Product Codes

Relay	Protection	ANSI No.	Catalog No.
Single phase	Under current 40-120%	37	252-PAU
Single phase	Over current 40-120%	51	252-PAO
Single phase	Under and over current	37/51	253-PAD
3 phase 3 or 4 wire	Under current 40-120%	37	253-PAV
3 phase 3 or 4 wire	Over current 40-120%	51	253-PAP

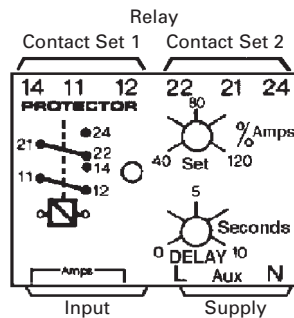
Specify system voltage, system current, frequency and required options at time of ordering.

# 250 Series DIN Rail and Wall Mounted Relays

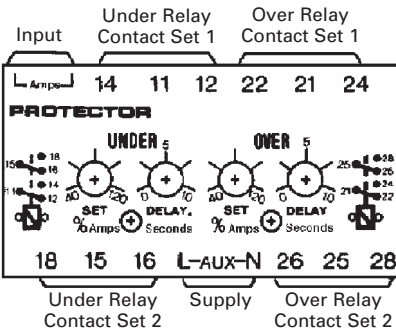


## Connections

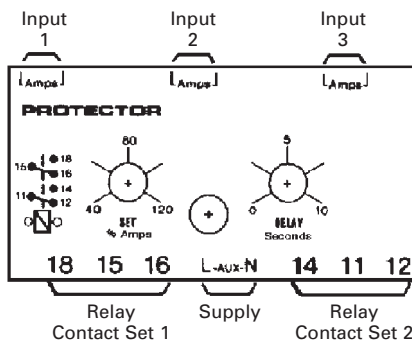
252-PAU  
252-PAO



253-PAD



253-PAP  
253-PAV

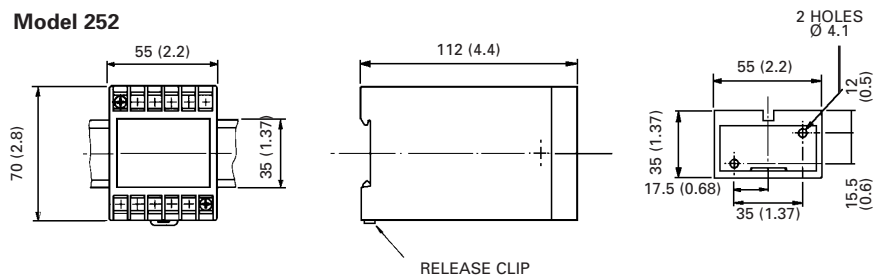


## Specification – AC Current with Adjustable Time Delay

Nominal Input Current	1A or 5A from CT secondary. 0.2A to 10A available on request
Nominal Frequency	50, 60 or 400Hz
Input Current Burden	0.5VA per phase
Overload	2 x rating continuously, 10 x rating for 3 seconds
Set Point Repeatability	>0.5% of full span
Differential (Hysteresis)	Preset at 1%. Values 1% to 10% available on request
Trip Level Adjustment	40 to 120%. Customized adjustment available
Time Delay Adjustable	0 to 10 seconds
AC Auxiliary Supply Voltage	100V, 110V, 120V, 208V, 220V, 240V, 480V, ±20%
DC Auxiliary Supply Voltage	12V, 24V, 48V, 110V or 125V, ±15%. Max ripple 15%
Auxiliary Voltage Burden	4VA (max)
Output Relay	Double pole change over
Relay Contact Rating	AC: 240V 5A, non inductive DC: 24V, 5A resistive
Relay Mechanical Life	0.2 million operations at rated loads
Relay Reset	Automatic
Operating Temperature	0°C to +60°C (0°C to +40°C for UL models)
Storage Temperature	-20°C to + 70°C
Temperature Co-efficient	0.05% per °C
Interference Immunity	Electrical stress surge withstand and non-function to ANSI/IEEE C37 90a
Enclosure Style	DIN rail with wall mounting facility
Material	Flame retardant polycarbonate/ABS
Enclosure Integrity	IP50
Compliant With	EMC, LVD, Safety Standard IEC 414 UL File No: E113067 recognized up to 600V CSA File No: LR52592 up to 300V BV File No: 2650H-07427-AO-PRSO BV ABS File No: 93-LD 17806-X
Model 252 Dimensions	55mm (2.2") wide x 70mm (2.8") high x 112mm (4.4") deep
Model 253 Dimensions	75mm (2.9") wide x 70mm (2.8") high x 112mm (4.4") deep
Weight	Model 252: 0.4Kg approx. Model 253: 0.6Kg approx.

## Dimensions

Model 252



Model 253

