

## 250 Series DIN-rail and Wall Mounted Relays



### Features

Single and three-phase options  
Adjustable set point  
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  
Customised options

### Applications

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

### AC Current with Adjustable Time Delay

250 series ac current protectors provide continuous surveillance of the monitored circuit. When the current moves outside the set point limit for longer than the time delay, 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 energised. For three-phase systems, the sequence of connection is not important.

### Operation

AC current protectors provide continuous surveillance of the monitored circuit. These products offer user adjustable trip point (set point) and time delay settings. The set point 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 set point 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 set point, the relay will energise and the red LED will illuminate to indicate the trip condition. The relay will automatically reset once the monitored current falls below the set point minus the differential. When reset, the LED will extinguish and the relay de-energises.

### Under-Current Models

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

### Options

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

- Adjustment ranges – different adjustment ranges are possible for the set point and differential controls.
- Relay operation – standard models are fail safe, but the relays can be customised to energise or de-energise on trip.

### Product Codes

Relay	Protection	ANSI no.	Cat. no.
1-phase	Under-current 40-120%	37	252-PAU
1-phase	Over-current 40-120%	51	252-PAO
1-phase	Under and over-current	37/51	253-PAD
<b>3-phase 3- or 4-wire</b>	<b>Under-current 40-120%</b>	<b>37</b>	<b>253-PAV</b>
3-phase 3- or 4-wire	Over-current 40-120%	51	253-PAP

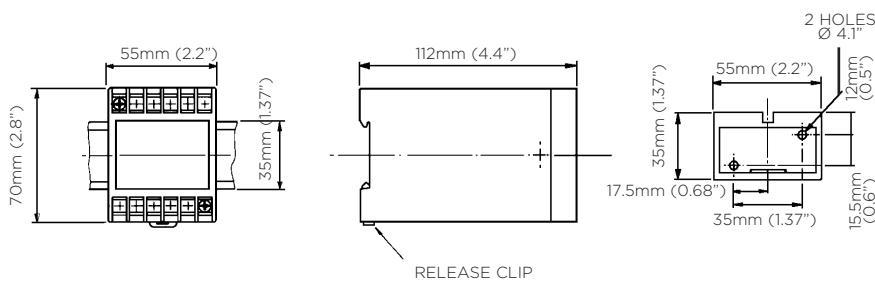
Please specify system voltage, system current, frequency and required options at time of ordering.

## Specifications

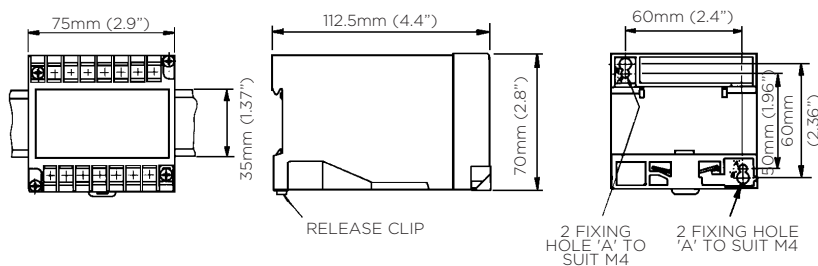
Nominal input current	1A or 5A from CT secondary. 0.2A to 10A available on request
Nominal frequency	50, 60 or 400Hz
Input current burden	0.5VA per phase
Overload	2 x rating continuously, 10 x rating for 3 seconds
Set point repeatability	>0.5% of full span
Differential (hysteresis)	Pre-set at 1%. Values 1% to 10% available on request
Trip level adjustment	40 to 120%. Customised adjustment available
Time delay adjustable	0 to 10 seconds
AC auxiliary supply voltage	100V, 110V, 120V, 208V, 220V, 240V, 480V, $\pm 20\%$
DC auxiliary supply voltage	12V, 24V, 48V, 110V or 125V, $\pm 20\%$ . Including ripple
Auxiliary voltage burden	4VA (max)
Output relay	2-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
Model 253 dimensions	75mm (2.9") wide x 70mm (2.8") high x 112mm (4.4") deep
Weight	Model 253: 0.6Kg approx.

## Dimensions

### Model 252

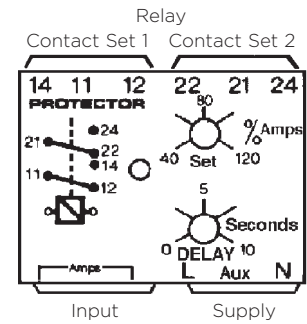


### Model 253

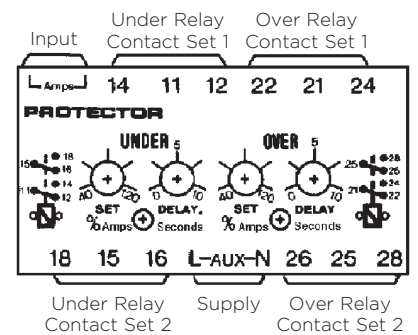


## Connections

### 252-PAU 252-PAO



### 253-PAD



### 253-PAP

### 253-PAV

