

## 250 Series DIN Rail and Wall Mounted - A.C. Current

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### Features

- » Adjustable setpoint
- » Adjustable differential
- » Internal time delay
- » LED trip indication
- » 2 pole relay contacts

### Application

- » **General application for any electrical load, monitoring for under load and over load conditions**
- » **Motors - to monitor for conditions such as overload, locked rotor and short circuit**
- » **Gensets - to ensure load current is within generator capacity**
- » **Machinery - detecting broken drive belts on machinery**



*The Crompton A.C. current protectors provide continuous surveillance of the monitored circuit. When the current moves outside the setpoint limit, the relay operates.*

*An illuminated LED indicates when the relay is energized.*

*For 3 phase systems, the sequence of connection is not important.*

*The Protector can be used to monitor:*

- **Over and Under current conditions**
- **Load detection**
- **Monitoring of electric heating systems**

### Introduction

Crompton 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. As soon as

the monitored signal moves outside of the setpoint limit, a trip will occur. 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.

### Product Function

**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.

### Product customisation options

Please contact the 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 customised to energise or de-energise on trip

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### Specification

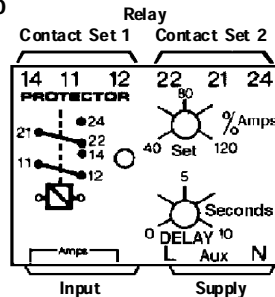
<b>Approvals:</b>	U.L. recognized up to 300V CSA approved up to 240V	<b>Range:</b>	40 to 120% of nominal current. Customised adjustment range to order
<b>Nominal current:</b>	1A or 5A from C.T. secondary other values between 0.2 and 10A to order	<b>Time Delay:</b>	0 to 10 seconds adjustable other values to order
<b>Frequency:</b>	50, 60 or 400 Hz	<b>Auxiliary Supply:</b>	
<b>C.T. Burden:</b>	0.5VA per phase	A.C. 50/60Hz:	100, 110, 120, 208, 220, 240, 480V, ±20%
<b>Overloads:</b>	2 x rating continuously 10 x rating for 3 seconds	D.C.:	12, 24, 48, 110 or 125V, ±15% maximum ripple 15%
<b>Set Point Repeatability:</b>	0.5% of full span	<b>Burden:</b>	4VA maximum
<b>Differential:</b>	Preset at 1% Other values 1 to 10% to order		

### Product Code Examples

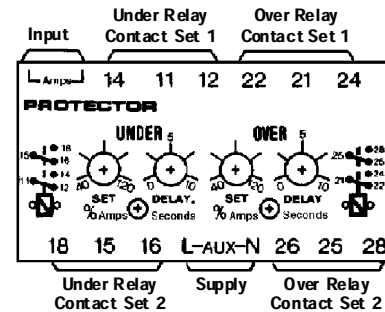
A.C. Current	A.C. Input	A.C. Aux Power	Protection	ANSI No.	Catalogue No.
Single Phase	5A	120V	Under current 40-120%	37	252-PAUU-LSBX-C6-DG-D1-EB
Single Phase	5A	120V	Over current 40-120%	51	252-PAOU-LSBX-C6-DG-D1-EA
Single Phase	5A	120V	Under & over current (2 output relays)	37/51	253-PADU-LSBX-C6-DG-D1-EC
3 Phase 3/4 Wire	5A	120V	Under current	37	253-PAVU-LSBX-C6-DG-D1-EB
3 Phase 3/4 Wire	5A	120V	Over current	51	253-PAPU-LSBX-C6-DG-D1-EA

### Connection Diagrams

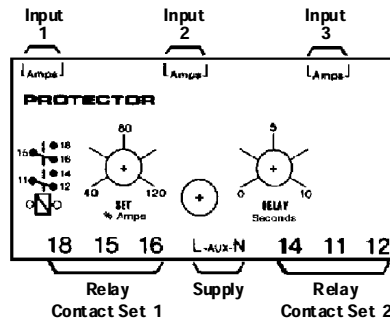
252-PAU  
252-PAO



253-PAD



253-PAP  
253-PAV



**Note:** The neutral connection is always required on 4 wire products.



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