

250 Series DIN-rail and Wall Mounted Relays

DC Voltage

DC voltage protectors provide continuous surveillance of the monitored voltage circuit, typically a battery supply or charging circuit. When the measured voltage moves outside the set point limits, the relay will operate after the selected time delay or differential, giving an alarm and/or initiation signal. The protectors offer protection for under-voltage, over-voltage and battery level control.

Operation

DC voltage protectors offer user adjustable trip point (set point) and time delay settings. The time delay setting adjustment range is typically 0 to 10 seconds, although longer delays up to 30 seconds are available. As soon as the monitored signal moves outside of the set point limit, the time delay is activated, after which a trip will occur. The time delay prevents the relay from tripping for a predetermined period to prevent nuisance tripping. The products also feature an internal differential (hysteresis) setting of 1% to reduce nuisance tripping if the measured signal is noisy or unstable. The units draw their operating power from the measuring inputs.

Over-Voltage Models

When the monitored voltage exceeds the set point, the time delay is started. When the time has elapsed, the relay will energise and the red LED will illuminate to indicate the trip condition. The relay will automatically reset once the monitored voltage falls below the set point minus the differential. When reset, the LED will extinguish and the relay de-energises. The time delay is not active when resetting.

Under-Voltage Models

When the monitored voltage falls below the set point, the time delay is started. When the time has elapsed, the relay will de-energise and the red LED will extinguish to indicate the trip condition. The relay will automatically reset once the monitored voltage rises above the set point plus the differential. When reset, the LED will illuminate and the relay energises. The time delay is not active when resetting.

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 time delay controls.
- Differential - internally fixed value between 1% and 15%.
- 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.
DC voltage	Under-voltage external time delay	27	252-PDU
DC voltage	Under-voltage differential	27	252-PDE
DC voltage	Over-voltage external time delay	59	252-PDO
DC voltage	Over and under-voltage external time delay	27/59	253-PDC

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



Features

- Adjustable set point
- Adjustable time delay
- Internal differential
- LED trip indication
- Automatic reset
- Double-pole relay contacts

Benefits

- Over and under-voltage monitoring
- Monitors correct terminal voltage on battery supplies
- Monitors charging voltage on battery chargers
- Battery level control
- Nuisance tripping avoidance
- Customised options

Applications

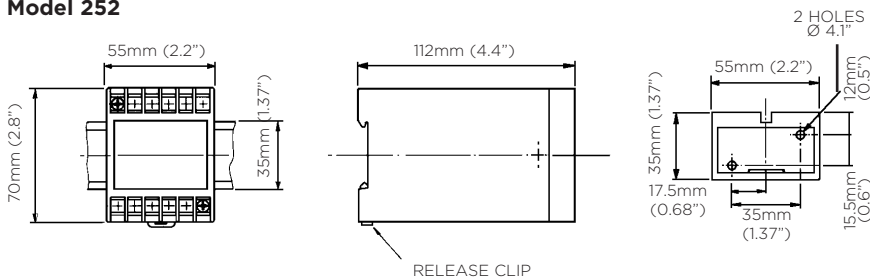
- Marine panels
- Switchgear
- Distribution systems
- Generator sets
- Control panels
- Process control
- Overload protection

Specification - DC Voltage

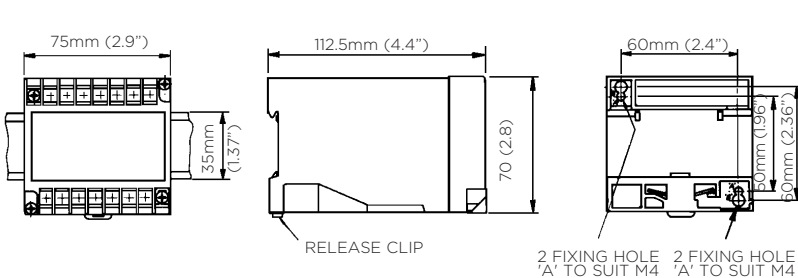
Nominal voltage	18 to 20V dc or 20 to 32V dc
Voltage burden	<3VA
Overload	1.2 x rating continuously
Set point repeatability	>0.5% of full span
Differential (hysteresis)	Models 252-PDU, 252-PDO and 253-PDC: Pre-set at 1% Values 1 to 15% available on request Model 252-PDE: Adjustable 1 to 15%
Time delay adjustment	Models 252-PDU, 252-PDO & 253-PDC: 0-10, 0-20, 0-30 seconds Model 252-PDE: Factory pre-set up to 30 seconds.
AC auxiliary supply voltage	100V, 110V, 120V, 208V, 220V, 240V, 480V, ±20%
DC auxiliary supply voltage	12V, 24V, 48V, 110V or 125V, ±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
Enclosure integrity	IP50
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

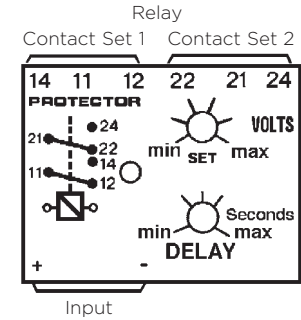


Model 253

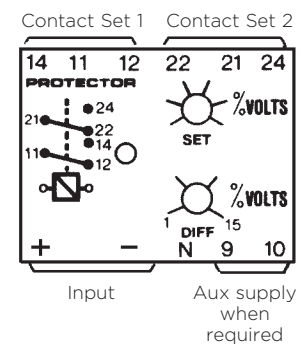


Connections

252-PDU 252-PDO



252-PDE



253-PDC

