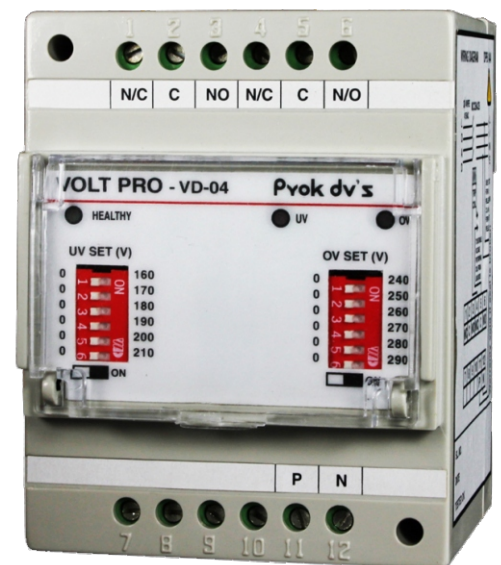
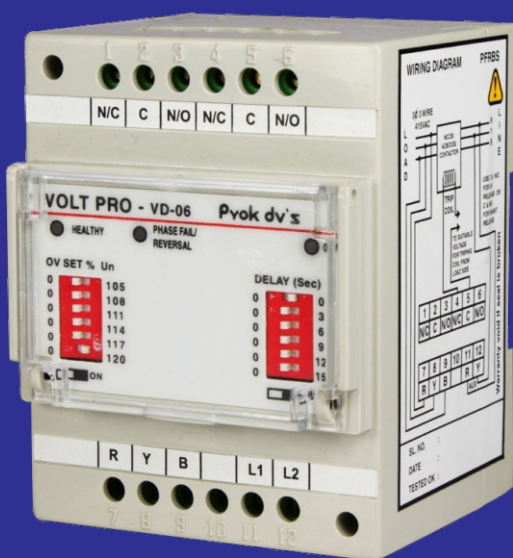


# STATIC UNDER-OVER VOLTAGE RELAY VD SERIES



# STATIC UNDER-OVER VOLTAGE RELAY VD SERIES

**Prok dv's®**

An ISO 9001 : 2015 Company

**STATIC OVER VOLTAGE (OV) AND UNDER VOLTAGE (UV)  
RELAY WITH PHASE FAILURE (SINGLE PHASING) AND  
PHASE REVERSAL IEEE DEVICE CODE-27,47,59,71**

## Features

- Solid state circuitry
- Negative Phase sequence voltage detection
- Definite fixed or variable time delay
- Low power consumption.
- Auto reset
- Fail safe system
- LED indication for healthy and fault indication
- DIN rail mounting

## Applications

- Protection of synchronous and induction motors of any HP rating
- Protection of generators, AMF switch Boards
- Transformer feeder panel
- Distribution boards
- Voltage regulators
- Protection f or UPS and single phase applications

## Introduction

Prok Dvs make STATIC OVER VOLTAGE (OV) AND UNDER VOLTAGE (UV) RELAY WITH PHASE FAILURE (SINGLE PHASING) AND PHASE REVERSAL RELAY for protection against under voltages, over voltages, phase failure, phase reversal and unbalance voltages caused due to transients such as inductive load switching and commutation voltage spikes etc.

Prok Dvs Make STATIC OVER VOLTAGE (OV) AND UNDER VOLTAGE (UV) RELAY WITH PHASE FAILURE (SINGLE PHASING) AND PHASE REVERSAL RELAY available in five models i.e. VD-02, VD-03, VD-04, VD-05 and VD-06 for various applications. They are provided with fixed or variable voltage settings, auto reset, definite time delay fixed or variable settings.

## Description

In motors operating at low loads, failure of any one phase causes over voltages, which may cause rupture of insulation leading to motor burn out. Low voltage will cause synchronous motors to come out of synchronism at 75% of rated voltage. Induction motors may stop when voltage falls below 70%. Over voltages may occur due to defective voltage regulator, over speeding, caused by sudden drop in load on account of this di-electric property deteriorates. In single phase supply low voltage may cause over load on supply cable and thermal damage to insulation of windings.

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## Specifications

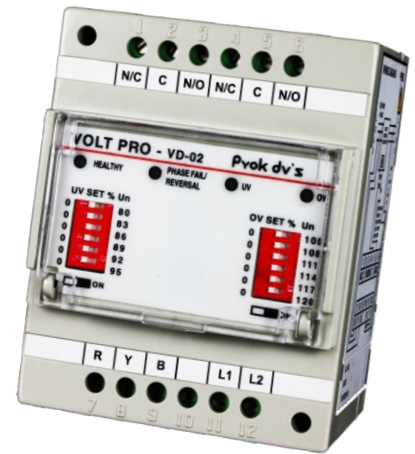
PARAMETERS	VD-02	VD-03
System voltage	415VAC $\pm$ 20%, 50Hz.	415VAC $\pm$ 20%, 50Hz.
Sensing Aux. Voltage(Un):	110V/230V/415VAC $\pm$ 20%, 50Hz	110V/230V/415VAC $\pm$ 20%, 50Hz
Contacts & rating:	2 C/O contacts, 6A/230VAC/28VDC	2 C/O contacts, 6A/230VAC/28VDC
Trip Voltage settings:		
a) Under voltage:	80% - 95% of Un, in steps of 3%	80% - 95% of Un, in steps of 3%
b) Over voltage:	105% - 120% of Un, in steps of 3%	105% - 120% of Un, in steps of 3%
c) Phase to phase unbalance	50V fixed.	50V fixed.
Reset gap (Max):		
a) under /over voltage	15V $\pm$ 5V	15V $\pm$ 5V
b) unbalance voltage	5-10V	5-10V
Trip time delay:		
a) phase fail	2-4Sec fixed.	2-4Sec fixed.
b) under /over voltage	100msec fixed.	0-15 sec variable in steps of 3sec.
Resetting mode:	Auto	Auto
Indication:		
a) Green LED	System healthy	System healthy
b) Red LED	1). Phase fail/Phase reversal/ Phase unbalance 2). Under voltage trip indication 3). Over voltage trip indication	1). Phase fail/Phase reversal/ Phase unbalance 2). Under voltage trip indication 3). Over voltage trip indication
Mounting:		Din rail mounting
Power consumption:		<4VA
Insulation:	Din rail mounting <4VA 2KV, 50Hz f or 1min	2KV, 50Hz f or 1min

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## Specifications

PARAMETERS	VD-04	VD-05
System voltage		415VAC $\pm$ 20%, 50Hz.
Sensing Aux. Voltage(Un):	230VAC $\pm$ 20%, 50Hz	110V/230V/415VAC $\pm$ 20%, 50Hz
Contacts & rating:	2 C/O contacts, 6A/230VAC/28VDC	2 C/O contacts, 6A/230VAC/28VDC
Trip Voltage settings:		
Under Voltage:	160V-210V, variable in steps of 10V	80% - 95% of Un, in steps of 3%
Over Voltage:	240V-290V, variable in steps of 10V	-----
Phase to phase unbalance	-----	50V fixed.
Reset gap (Max):		
Under /Over voltage	07V $\pm$ 3V	15V $\pm$ 5V
Unbalance voltage	-----	5-10V
Trip time delay:		
a) phase fail	-----	2-4Sec fixed.
b) Under /Over Voltage	100msec fixed.	0-15 sec variable in steps of 3sec.
Resetting mode:	Auto	Auto
Indication:		
a) Green LED	System healthy	System healthy
b) Red LED	1). Under Voltage trip indication 2). Over Voltage trip indication	1). Phase fail/Phase reversal/ Phase unbalance 2). Under voltage trip indication
Mounting:	Din rail mounting	Din rail mounting
Power consumption:	<4VA	<4VA
Insulation:	2KV, 50Hz for 1min	2KV, 50Hz for 1min

# STATIC UNDER-OVER VOLTAGE RELAY VD SERIES

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## Specifications

PARAMETERS	VD-06
System voltage	415VAC $\pm$ 20%, 50Hz.
Sensing Aux. Voltage(Un):	110V/230V/415VAC $\pm$ 20%,50Hz
Contacts & rating:	2 C/O contacts,6A/230VAC/28VDC
Trip Voltage settings:	
a) Under voltage:	-----
b) Over voltage:	105% - 120% of Un, in steps of 3% 50V fixed
c) Phase to phase unbalance	50V Fixed
Reset gap (Max):	
a) under /over voltage	15V $\pm$ 5V
b) unbalance voltage	5-10V
Trip time delay:	
a) phase fail	2-4Sec fixed.
b) under /over voltage	0-15 sec variable in steps of 3sec.
Resetting mode:	Auto
Indication:	
a) Green LED	System healthy
b) Red LED	1) Phase fail/Phase reversal/ Phase unbalance 2) Over Voltage trip indication
Mounting:	Din rail mounting
Power consumption:	<4VA
Insulation:	2KV, 50Hz for 1min

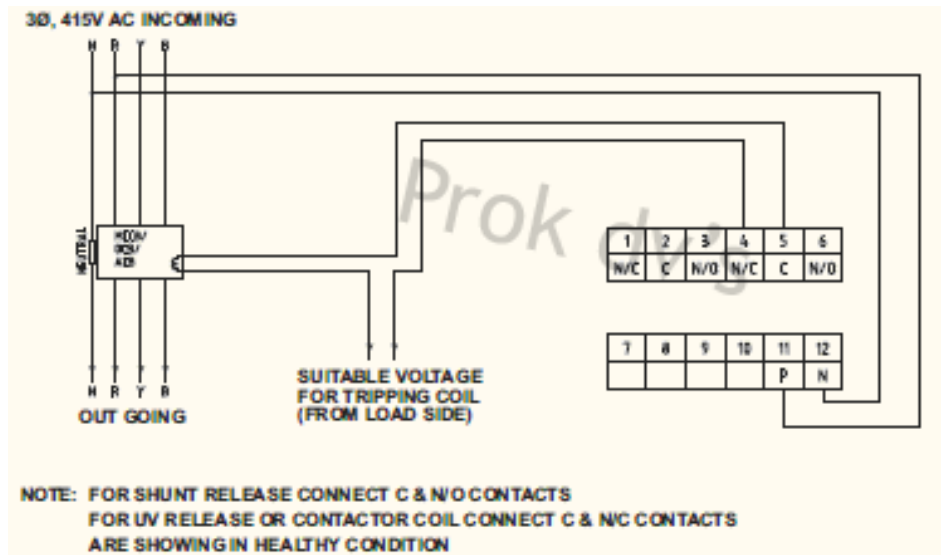
# STATIC UNDER-OVER VOLTAGE RELAY VD SERIES

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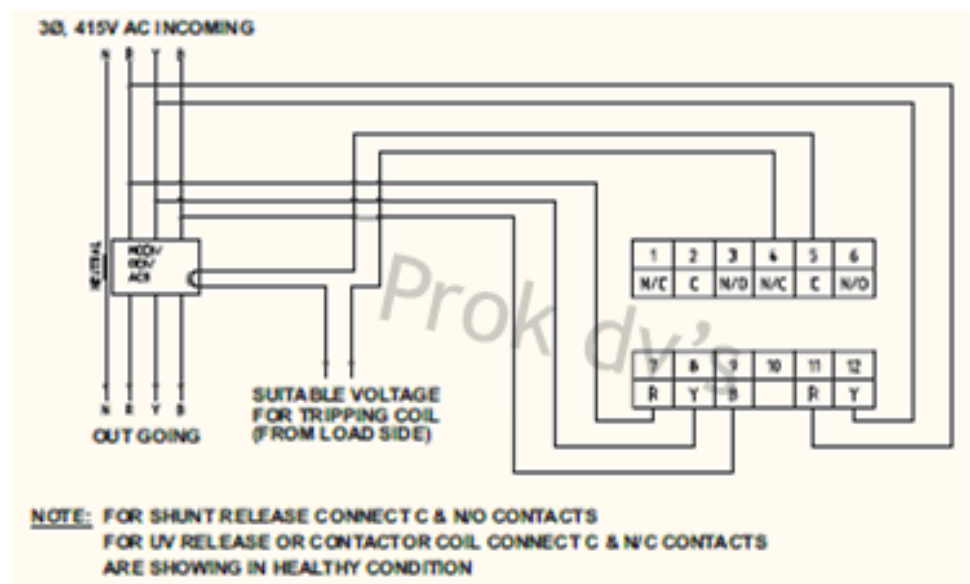
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**STATIC OVER VOLTAGE (OV) AND UNDER VOLTAGE (UV) RELAY WITH PHASE FAILURE (SINGLE PHASING) AND PHASE REVERSAL IEEE DEVICE CODE-27,47,59,71**

Wiring Diagram STATIC OVER VOLTAGE (OV) AND UNDER VOLTAGE (UV) RELAY WITH PHASE FAILURE (SINGLE PHASING) AND PHASE REVERSAL RELAY- VD-04



Wiring Diagram STATIC OVER VOLTAGE (OV) AND UNDER VOLTAGE (UV) RELAY WITH PHASE FAILURE (SINGLE PHASING) AND PHASE REVERSAL RELAY- VD-02/VD-03/VD-05/VD-06



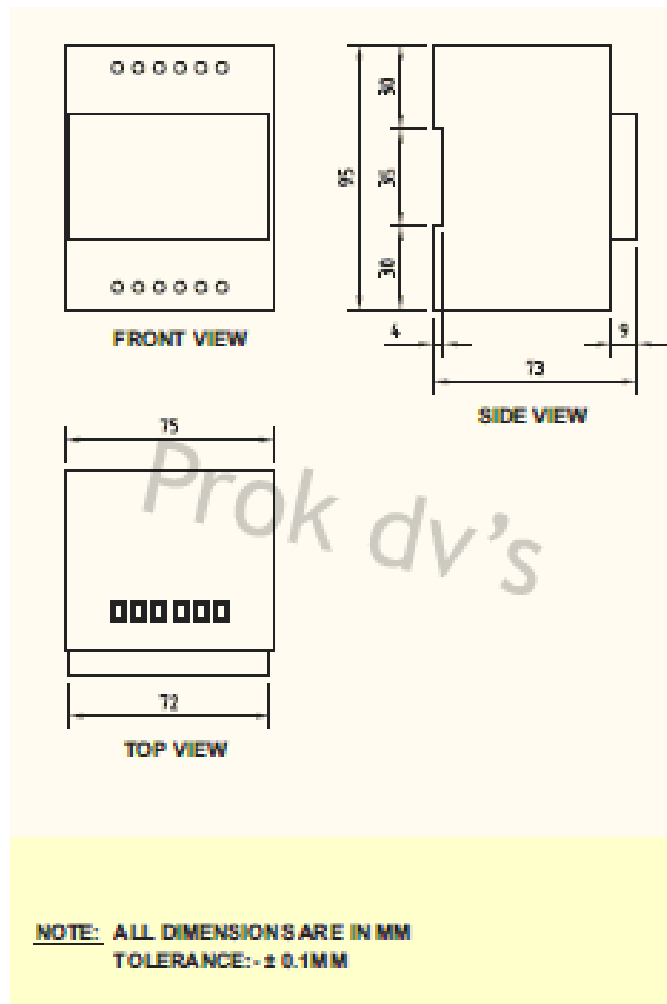
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Mechanical Dimensions STATIC OVER VOLTAGE (OV) AND  
UNDER VOLTAGE (UV) RELAY WITH PHASE FAILURE (SINGLE  
PHASING) AND PHASE REVERSAL RELAY - DIN MOUNTING





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ISO 9001-2015

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