

INSTALLATION INSTRUCTIONS FOR UNDER / OVER VOLTAGE RELAY VCR D2, VCT D2, VCF D2

INTRODUCTION

Thank you for selecting & purchasing MINILEC make Under / Over Voltage Relay.

The following installation instructions would guide you in installing your Under / Over Voltage Relay (i.e.VCR D2 / VCT D2 / VCF D2) and making the best use of it.

The above models are used in 1 □ or 3 □ system supply where under / over voltage protection is required.

MOUNTING

Any model of Under/Over Voltage Relay series can be RAIL mounted or PANEL mounted.(see Fig. 7 for mounting on & releasing from DIN RAIL . Also see Fig.8 for Panel Mounting and Drilling Details Dimension).

CAUTION

Ensure that any model of Under / Over Voltage Relay is

- * Not installed near any heat sources like Burner, sunlight, electric arc etc.
- * Not Subjected to abnormal vibrations.
- * Not subjected to direct heat, sunlight, rain, stormy wind and dust.
- * Installed as near to the starter as possible.

ELECTRICAL CONNECTIONS OF UNDER / OVER VOLTAGE RELAY

See Fig. (2/4/6) for electrical connection diagram details of corresponding model of Under / Over Voltage Relay.

See Fig. (1 / 3 / 5) for installation in power and control wiring of corresponding model of Under / Over Voltage Relay.

Connect the out put relay contacts in series with the no- volt coil as required.

FUNCTIONING

VCR D2

This type of under /over Voltage relay is used in 1 □ system supply for monitoring under /over voltage of the system.

The relay can be set for under & over voltage as per requirement with settable Trip Time & Power On Delay.The unit is having Auto / Manual operation mode. In this unit Phase to Neutral Voltage monitoring is done.

VCT D2

The VCT D2 is used for monitoring phase to phase voltages between all three phases. The unit trips when the supply goes below / above the settings as per the requirement. This model is having both the delays same as VCR D2. The unit is having Auto / Manual operation mode.

VCF D2

The VCF D2 model is used for monitoring phase to neutral voltage between all three phases. The VCF D2 is also having facility of variable under/ over voltage setting with adjustable Trip Time & Power On Delay. The unit is having Auto/ Manual operation mode.

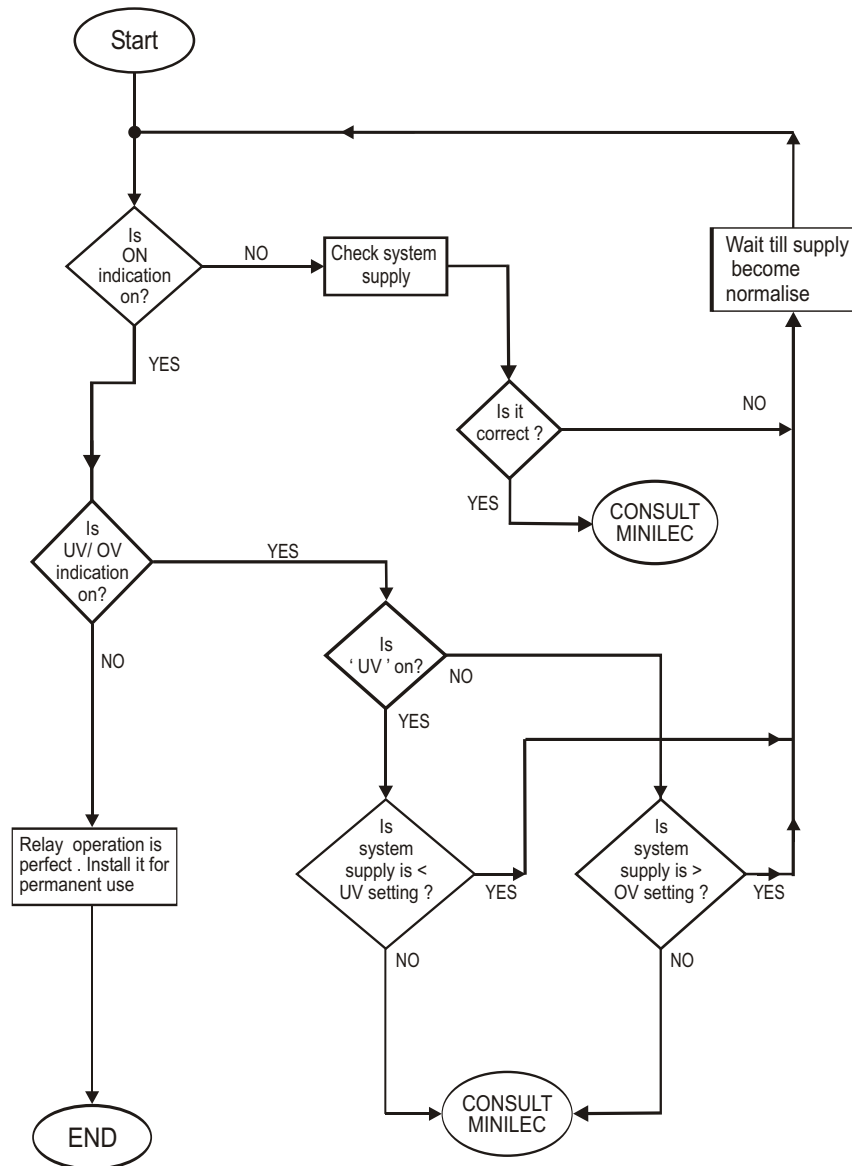
TECHNICAL SPECIFICATIONS OF UNDER / OVER VOLTAGE RELAY

1. System Supply
VCR D2 : 110/220/230/240 VAC, +20%,-25% (1 Phase)
VCT D2 : 110/220/230/240/380/415/440 VAC, +20%,-25% (3 Phase, 3 Wire)
VCF D2 : 110/220/230/240/380/415/440 VAC +20%,-25% (3 Phase, 4 Wire)

Common specifications for all models

2. Aux. Supply : Not applicable
3. Frequency : 50/60 Hz □ 3%
4. Output Relay Contact : 1CO / (2 CO)
5. Output Contact Rating : 5 A, 240 VAC (Resistive)
6. UV Trip Setting : 75 % to 95 % of monitored supply
7. OV Trip Setting: 105 % to 120 % of monitored supply
8. Trip Time Delay :1 to10 Sec.(Adjustable)
9. Power On Delay : 1 to 10 Sec. (Adjustable)
10. Reset : Auto / Manual
11. Reset Gap : 3% □1% of monitored Supply
12. Set Accuracy : □ 2% of set Value Upto 25°C. 1% drift per 10°C after 25°C
13. Indication :
ON (Green) Power On
UV (Red) Under Voltage TRIP
OV (Red) Over Voltage TRIP
14. Operating Conditions :
Temp -5°C to 60°C
Humidity Upto 95% R.H.
15. Enclosure : ABS
16. Dimensions : (mm)
Overall : 76 X 56.5 X 117.5
Mounting : 67 X 46
17. Weight : 450 gms.

TESTING PROCEDURE

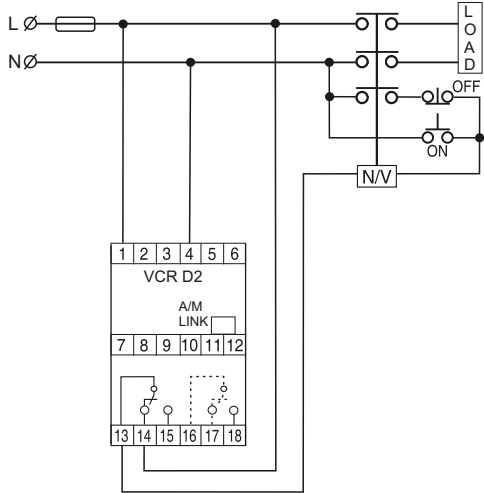


TRIP SETTING , TRIP DELAY AND RESETTING

	Under Voltage	Over Voltage
1. Cut off at	Site Selectable between 75 % to 95 % (of monitored supply) (□ 2% of Set value)	Site Selectable between 105 % to 120 % (of monitored supply) (□ 2% of Set value)
2. Cut in at	(Set value plus 3% of monitored Supply)	(Set value less 3% of monitored Supply)
3. Trip Time Delay	1-10 Sec. (Adjustable)	1-10 Sec. (Adjustable)
4. Power On Delay	1-10 Sec. (Adjustable)	1-10 Sec. (Adjustable)
5. Resetting	Auto / Manual	Auto / Manual

ELECTRICAL CONNECTIONS IN POWER AND CONTROL WIRING VCR D2

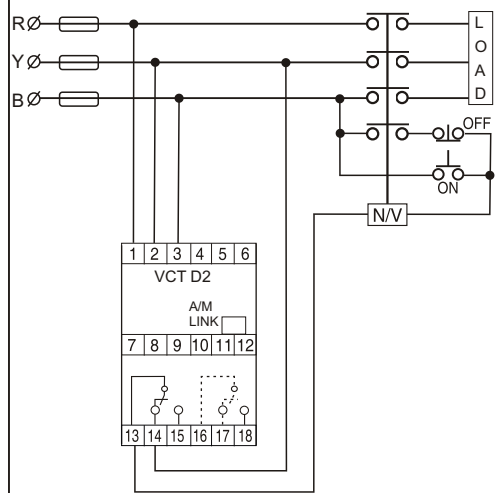
Fig. 1



NOTES :
 ■ RELAY CONTACT SHOWN IN HEALTHY CONDITION.
 ■ DOTTED PART IS ADDED IN CASE OF 2 CO RELAY.

ELECTRICAL CONNECTIONS IN POWER AND CONTROL WIRING VCT D2

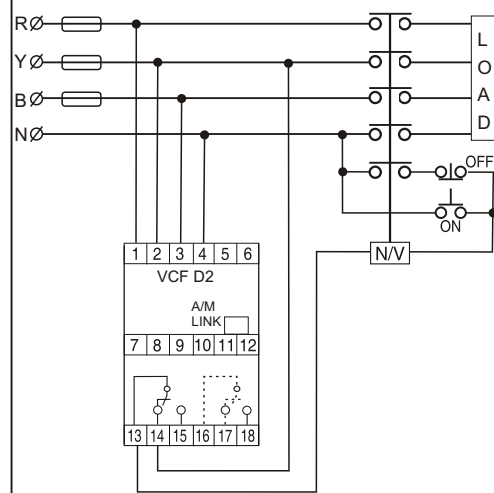
Fig. 3



NOTES :
 ■ RELAY CONTACT SHOWN IN HEALTHY CONDITION.
 ■ DOTTED PART IS ADDED IN CASE OF 2 CO RELAY.

ELECTRICAL CONNECTIONS IN POWER AND CONTROL WIRING VCF D2

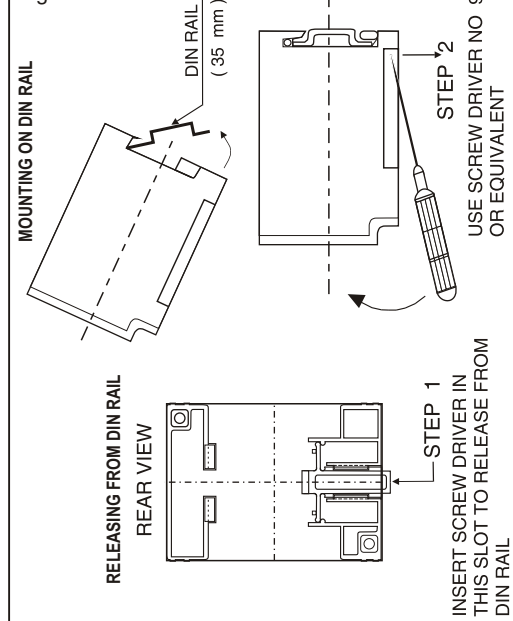
Fig. 5



NOTES :
 ■ RELAY CONTACT SHOWN IN HEALTHY CONDITION.
 ■ DOTTED PART IS ADDED IN CASE OF 2 CO RELAY.

MOUNTING ON AND RELEASING FROM DIN RAIL

Fig. 7



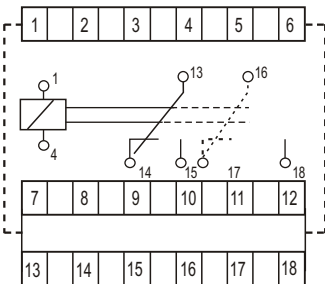
INSTALLATION INSTRUCTION MANUAL FOR UNDER / OVER VOLTAGE RELAYS

VCR D2, VCT D2, VCF D2



CONNECTION DIAGRAM VCR D2

Fig. 2



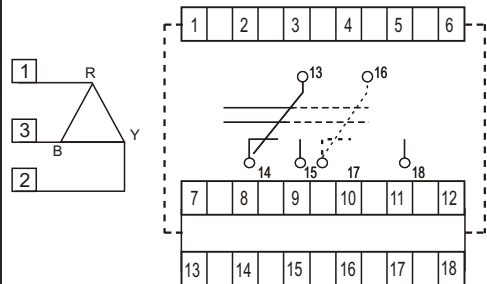
INDICATIONS :
 ON : POWER ON
 UV : UNDER VOLTAGE TRIP
 OV : OVER VOLTAGE TRIP

TERMINAL DETAILS :
 1-4 : SYSTEM SUPPLY
 11-12 : AUTO / MANUAL LINK
 14-13-15 : OUTPUT RELAY CONTACT (NO1-C1-NC1)
 17-16-18 : OUTPUT RELAY CONTACT (NO2 - C2 - NC2)

NOTES :
 ■ RELAY CONTACT SHOWN IN HEALTHY CONDITION.
 ■ DOTTED PART IS ADDED IN CASE OF 2 CO RELAY.

CONNECTION DIAGRAM VCT D2

Fig. 4



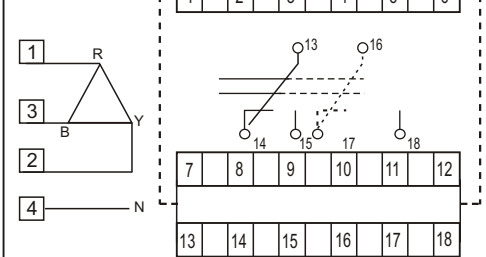
INDICATIONS :
 ON : POWER ON
 UV : UNDER VOLTAGE TRIP
 OV : OVER VOLTAGE TRIP

TERMINAL DETAILS :
 1-2-3 : R-Y-B PHASE VOLTAGE SENSING POINT
 11-12 : AUTO / MANUAL LINK
 14-13-15 : OUTPUT RELAY CONTACT (NO1-C1-NC1)
 17-16-18 : OUTPUT RELAY CONTACT (NO2 - C2 - NC2)

NOTES :
 ■ RELAY CONTACT SHOWN IN HEALTHY CONDITION.
 ■ DOTTED PART IS ADDED IN CASE OF 2 CO RELAY.

CONNECTION DIAGRAM VCF D2

Fig. 6



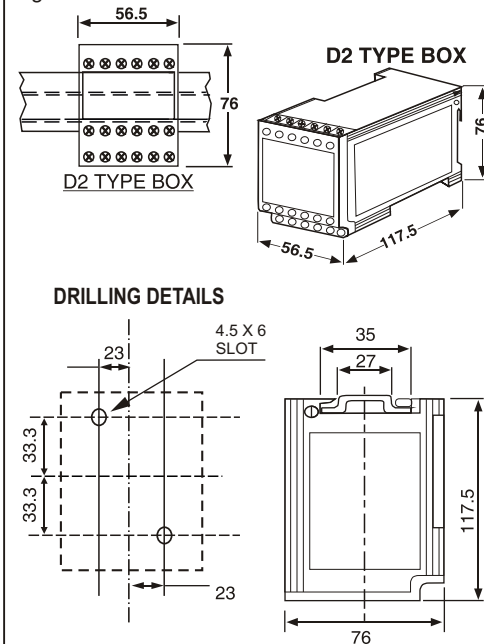
INDICATIONS :
 ON : POWER ON
 UV : UNDER VOLTAGE TRIP
 OV : OVER VOLTAGE TRIP

TERMINAL DETAILS :
 1-2-3 : R-Y-B PHASE VOLTAGE SENSING POINT
 4 : NEUTRAL POINT
 11-12 : AUTO / MANUAL LINK
 14-13-15 : OUTPUT RELAY CONTACT (NO1-C1-NC1)
 17-16-18 : OUTPUT RELAY CONTACT (NO2 - C2 - NC2)

NOTES :
 ■ RELAY CONTACT SHOWN IN HEALTHY CONDITION.
 ■ DOTTED PART IS ADDED IN CASE OF 2 CO RELAY.

MOUNTING DIMENSIONS

Fig. 8



WARRANTY AGAINST ALL MANUFACTURING DEFECTS FOR 18 MONTHS FROM DATE OF SUPPLY OR 12 MONTHS FROM INSTALLATION WHICHEVER IS EARLIER

Manufactured by :

minilec®

S.NO. 1073/1-2-3,
 AT POST : PIRANGOOT,
 TAL : MULSHI, DIST. : PUNE (INDIA)
 PIN : 412 111,

VERSION 05
 05/08/04