

INSTALLATION INSTRUCTION MANUAL PHASE FAILURE RELAY WITH FIXED UNDER/OVER VOLTAGE CUTOUT

2 ALO - 10 - 323



2 - ALO - 10 - 323 monitors phase to Neutral voltage for UV & OV faulty & separately monitors the UB voltage faults in 3Ø system supply (400 VAC) using negative sensing principle.

- It offers protection against
- Unbalance Voltage condition.
 - Phase Failure condition.
 - Phase Sequence Reversal condition.
 - Under Voltage condition.
 - Over Voltage condition.

Line monitoring Relay 2 ALO - 10 - 323 is an auxiliary relay and it should be used along with the starter only. The effective working of the unit will depend on the efficient working of the starter. Before installing your unit check whether the starter is operating perfectly by starting with the "ON" push button and switching off by "OFF" push button. If the operations of START and STOP are imperfect the starter needs to be serviced. Do not install your unit with faulty starter.

MOUNTING

2ALO - 10 - 323 is door mounting type. Refer Fig. 2 and Fig.4 for mounting & over all dimensions respectively.

TRIP SETTING, TRIP DELAY AND RESETTING

The units is factory set to trip the starter as per following values.

	Unbalanced voltage between any two phases	Under Voltage	Over Voltage
Cut off at	40 V ± 4 V	202 V ± 3V	254 V ± 3V
Trip time delay	3.5 Sec. ± 1.5 Sec.	10 Sec. ± 3 Sec.	10 Sec. ± 3 Sec.
Auto reset gap	Less than 10 V ± 3 V unbalance between all three phases.	Cut Off value plus 6V ± 3V	Cut Off value less 6V ± 3V

ELECTRICAL Connections

See Fig.1 for installation of the unit in the power and control wiring & Fig. 3 for terminal connection details System supply voltage should be as specified in Technical Specifications. Connect L1, L2, L3 phases at R, Y and B. The L1,L2, L3 sensing should be taken from incoming points of starter in case of Direct Online Starter. The output relay contacts C & No are to be connected in series with no-volt coil of the starter. For Star Delta starter, L1, L2, L3 sensing should be taken from incoming terminals of main contactor.

CAUTION

1. 2 ALO - 10 - 323 is a Line Monitoring Relay. And to be used for mains monitoring purpose.
2. **Ensure that 2 ALO - 10 - 323 is**
 - Not installed near any heat sources like burner, sunlight, electrical arc etc.
 - Not subjected to abnormal vibration.
 - Installed as near to the starter as possible.
 - Not subjected to direct heat, sunlight, rain, stormy wind and dust.
3. Working of the products is affected by frequency variation and harmonic distortion in application like Genset Supply or UPS Supply. Care should be taken to ensure that net resultant unbalance in supply is not beyond the unbalance trip limits of unit.

NOTE

Three phase sensing to the unit is from L1, L2, L3 sensing points at terminal No. R, Y, and B. Similarly, the reference voltage of 400V for under & over voltage sensing is tapped internally. The under & over voltage settings are customized to suit your requirement

TECHNICAL SPECIFICATIONS	
1. System Supply :	400 VAC, 3 Phase, 4 Wire, ± 20%
2. Aux. Supply Voltage :	Built - in
3. Frequency :	50 Hz ± 3%
4. Output Relay Contacts :	1 CO
5. Output contact rating :	5Amp, 240 VAC (Resistive)
6. Unbalance Trip Setting :	40V ± 4V
7. Under Voltage Trip Setting :	202V ± 3V
8. Over Voltage Trip Setting :	254 ± 3 Sec.
9. U/V - O/V Trip Delay	10 Sec. ± 3 Sec.
10. Set Accuracy :	NA
11. Unbalance Trip Delay & Reverse Phasing Trip Delay	3. Sec. ± 1.5 Sec.
12. Resetting	Auto Reset
13. Unbalance Reset Gap	10V ± 3V
14. U/V - O/V Reset Gap	6V ± 3V
15. Indications :	Power ON Single Phasing/ Unbalance Trip Under Voltage Trip Over Voltage Trip Phase Reverse
16. Enclosure :	MOULDED (ABS & NYLON) 96 X 96 TYPE
17. Dimensions :	Overall (mm) : 96 x96 x76 Panel Cutout (mm) : 90 x 90
18. Mounting :	Door / Flush Mounting Type
19. Weight (gms) :	425
20. Temperature :	-5° C to ± 60° C
21. Humidity :	Up to 95 % Ph.

COMPLIANCE TO STANDARDS

TEST	IEC STD.
1. EFT Test of System Supply	61000-4-4
2. Surge Test of Data Bus, I/O Lines	61000-4-5
3. ESD Test (Contact Discharge)	61000-4-2
4. ESD Teast (Air Discharge)	61000-4-2
5. H.V. Test (Dielectric Test)	60255-5
6. Insulation Resistance Test	60255-5
7. Dry Heat Test	60068-2-2
8. Damp Heat test (Steady State)	60068-2-30
9. Damp Heat test (cyclic test)	60068-2-78

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

