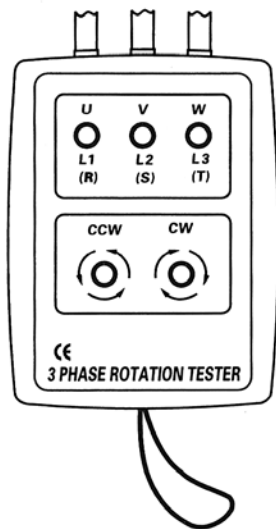


3 PHASE ROTATION TESTER OPERATION MANUAL



I INTRODUCTION

- * One Unit with Two Functions: The instrument was designed to check the phase sequence, and at the same time it has LEDs to show you if the phase is open or not.
- * Alligator Clips: They can easily involve the terminals of the control panel to be tested, guaranteeing reliability and safety.
- * Highly Reliable: It can check a large range of 60V to 600V AC three-phase. The instrument guarantee high reliance and performance.
- * Functional Design: Small, light and portable. It was designed to facilitate the operation to the maximum.

II SAFETY INFORMATION

This instrument was designed, manufactured and tested according IEC-348 (Safety requirements for electronic measuring apparatus) safety class II. This instruction manual contains warnings and safety rules that must be observed by the user to ensure safe operation of the instrument and retain it in safe condition. Therefore, read these operating instructions thoroughly and completely before using the instrument.

⚠ WARNING

1. Never open the instrument when making measurements.
2. If the instrument is shown in the following conditions ,

- do not attempt to make measurements and have the instrument checked for inspection or repair:
- A) The instrument is apparently broken in visual check.
 - B) Test leads are damaged.
 - C) The instrument can not be operated for intended measurements.
 - D) The instrument has been stored for a long period of time under improper conditions.
 - E) The instrument receives stress by severe transportation.
3. High voltage is loaded onto three phase lines. As it is very dangerous to get an electric shock, pay attention when you perform the work of connecting the instrument to the lines.
 4. Even if all open phase LEDs are not lit on, one phase may be still live circuit. Pay attention to avoid an electric shock.

⚠ CAUTION

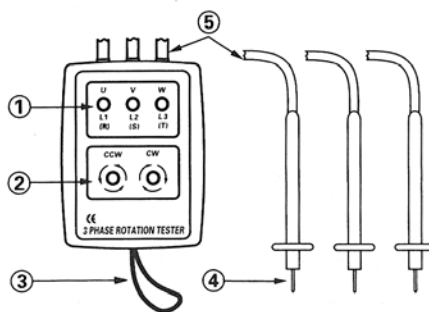
1. Never exceed the operational voltage specified as 60V~600V AC three phase.
2. Make sure not to exceed the time limit for continuous operation specified as 60 minutes at 60V and 4 minutes at 600V. The maximum time indicated above is measured from the time when more than 2 test leads of the unit are connected to the power supply cords.
3. Do not expose the instrument to the direct sun, extreme temperature, humidity or drops.
4. The instrument must be used by trained and

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qualified personal according to the instructions of this manual. We does not make responsible for damages caused by operation error or no conformity with the safety instructions and procedures. It is essential to read and understand the safety rules of this instruction manual, and they must be observed when using the instrument.

- 5 Test lads - Yellow for U phase (L1.R)
- Green for V phase (L2.S)
- Red for W phase (L3.T)



in the terminals of the three phase power supply where the rotary electrical machine, as a motor, will be connected. The sequence of test leads connection is optional.

- 2) Make sure that all LEDs to check open phase are lit. In this case the phases are not opened. When some of 3 LEDs are not lit we have an open phase.

Open phase Check LEDs	Phase Sequence Check LEDs	Buzzer
Correct Phase(CW)		
All 3 orange LEDs are lit	Green LED is lit	Intermittent Beep
Reverse Phase(CCW)		
All 3 orange LEDs are lit	Red LED is lit	Continuous Beep
Open Phase(one phase only)		
Orange LED for open phase in off	Both green and red LEDs are off	

III SPECIFICATIONS

- * Operation Voltage: 60V~600V AC, three phase.
- * Limit Support Voltage: 2000V/minute (impulse voltage 4000V)
- * Operation Frequency Range: 20Hz~400Hz.
- * Limit Time for Continuous Use:
-60 minutes maximum at 60V AC.
-4 minutes maximum at 600V AC.
- * Dimensions: 85×64×23mm
- * Weight: Approximately 200g
- * Test Leads: Double insulation, with approximately 1 meter length.

IV FRONT PANEL DESCRIPTION

- 1 Open phase indicator LED-3 orange LEDs
- 2 Phase sequence indicator LED - Green for correct phase sequence, Red for reverse phase sequence
- 3 Band: Hitch on wrist to avoid the meter falling
- 4 Meter pen

V OPERATION

Before making any measurement, read the "SAFETY INFORMATION" section with attention and remember of all warnings. Always check the instrument regarding damages, contamination (excessive dust, grease,.....)and defects. Check the test leads against cracks or defects in the insulation. In the case of any abnormal condition is detected, do not take any type of measurement.

- 1) Connect the test leads with colored meter pen

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