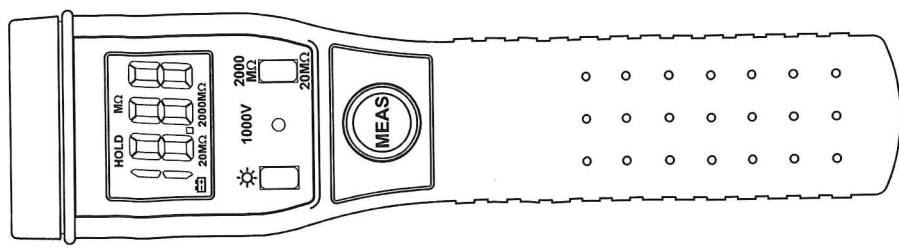


OPERATOR'S MANUAL TECPEL 570 MEGOHMMEETER (1000V)



	SEE EXPLANATION IN MANUAL
	SEE EXPLANATION IN MANUAL
	DOUBLE INSULATION (Protection Class 2)
	GROUND

International Electrical Symbols

INTRODUCTION

This instrument is a portable easy use 3 1/2 digit, compact-sized digital megohmmeter designed for simplicity one hand operation. Provides 1000V to test insulation. Meter with Backlit LCD display, Auto-hold function and auto power off (15 seconds approx.) feature after releasing MEAS button to extend battery life with external power supply input jack (DC 6V).

SAFETY INFORMATION

It is recommended that you read the safety and operation instructions before using the megohmmeter.

WARNING

- Remove power from circuit under test.
- To avoid electrical shock remove test leads before opening case or battery cover. Do not operate with battery cover open.

The Δ symbol on the instrument indicates that the operator must refer to an explanation in this manual.

SPECIFICATIONS

GENERAL
Display: 3 1/2 digit liquid crystal display (LCD) with maximum reading of 1999.
Overrange: (OL) or (-OL) is displayed.
Low battery indication: The "E" is displayed when the battery voltage drops below the operating level.
Measurement rate: 2.5 times per second, nominal.
Operating Environment: 0°C to 40°C at < 70% R.H.
Storage Temperature: -20°C to 60°C, 0 to 80% R.H. with battery removed from meter.
For Indoor use only.
Altitude: Up to 2000m.
Safety: According to EN61010-1 protection class 2 overvoltage category (CAT II 600V) pollution degree 2.
Auto power off: 15 seconds approx.
Standby consume current: < 10 μ A.
External power: 6VDC 1A \oplus \ominus \oplus .
Battery: 4 pcs 1.5V (AAA size) UM-4 R03. (Alkaline type)

Battery Life: 4 hours (continuity) typical with alkaline battery (@20M Ω range test 10M Ω resistor).
Dimensions: 170mm(H) x 44mm(W) x 40mm(D).
Weight: 160g including batteries.

ELECTRICAL

Range: 20M Ω , 2000M Ω
Resolution: 10K Ω on 20M Ω range
 1M Ω on 2000M Ω range
Accuracy:
 20M Ω range: $\pm(2\%/rdg + 2dgt)$
 2000M Ω range: $<500M\Omega \pm (4\%/rdg + 2dgt)$
 $>500M\Omega \pm (5\%/rdg + 2dgt)$
Rated voltage: DC-DC converter to 1000VDC
Accuracy temperature: 23°C \pm 5°C less than 70%RH
Temperature Coefficient: 0.1X (specified accuracy)/°C

(<18°C or >28°C)

OPERATING INSTRUCTIONS

Push buttons
 \odot **Display Back-Light Button**
 Releasing MEAS button then pressing "☀" button to toggle between turn on and turn off the Back-Light. When releasing MEAS button Back-Light will turn off automatically after 15 seconds to extend battery life.

Range Select Button
 Releasing MEAS button then press 20M Ω , 2000M Ω range select button to toggle between 20M Ω and 2000M Ω ranges.

MEAS (MEASURE) Button
 Depress MEAS button to turn on 1000VDC (red LED lighted) for measure insulation resistance. Releasing MEAS button to turn off 1000VDC and automatically hold the display reading, the meter turns off automatically after 15 seconds.

OPERATION

- Check of internal battery (E, L terminals open)**
- Depress the MEAS button.
 - The 1000V on LED lamp should light, indicating normal operation from the internal batteries.
 - If the 1000V on LED fails to light shown the batteries are completely worn or batteries are not installed in the meter. Since either of those conditions are possible, remove the battery cover and insert a set of four type AAA cells.
 - If the 1000V on LED lights (weakly) but the "E" LCD display lights, the batteries are near the end of their life and should be replaced immediately with new batteries.
 - To remove the battery cover, remove the centrally located case mounting screw and replace batteries.
 - After battery check is completed, releasing MEAS button.

Insulation resistance measurements

- Remove test tip and test lead from E, L terminals. (terminals open)
- Depress MEAS button to turn on 1000V on LED lamp, check the display resistance range is 20M Ω range or 2000M Ω range. If resistance is 20M Ω range, releasing MEAS button then press range button one time to selected 2000M Ω range.
- Connect the test tip to the "L" terminal and the clip lead to the "E" terminal of the meter.
- Connect the clip to one end of the circuit to be measured, and the test tip to the other end.
- Depress the MEAS button. The 1000V pilot LED lamp will light and the resistance value will be displayed in the meter. When display reading stable, releasing MEAS button, the meter will automatically hold the display reading then turns off automatically after 15 seconds.

- For open circuits or values of resistance over 2000M Ω , the meter will treat the resistance value as infinite and display a "OL" only.
- When measuring values of resistance below 20M Ω on the 2000M Ω range, measurement error is great. Releasing MEAS button then press range button one time to selected 20M Ω range, re-depress the MEAS button.
- When measuring values of resistance below 5M Ω on any range. The 1000V on LED will fail to light or lights weakly.
 This due to the large power consumed when measuring such small resistances.

PRECAUTIONS E and L terminals

If one point of the circuit to be measured is connected to ground, connect that part of the circuit to the E side measurement lead. This is a safety measure. In general, however, either terminal of the meter may be used for the ground side connection.
 When the 1000V on LED is lighted, 1000V is present between the E and L terminals. Please be caution when handling the instrument in this condition.

The Low battery alarm

The battery alarm, the "E" is displayed when measuring very low values of resistance (below 500K Ω). This due to the large power consumed when measuring such small resistances. When subsequent resistance measurements of high values result in the "E" disappearing, the meter batteries should be assumed to be normal.
 If the 1000V on LED lights (weakly) but the "E" LCD display lights, the batteries are near the end of their life and should be replaced immediately with new batteries.

Cleaning

Periodically wipe the case with a damp cloth and detergent, do not use abrasives or solvents.

Insulation Resistance Measurement Terminal Voltage

