Digital Insulation Tester

ET3010

CPU Controlled

1.Features

A.CPU controlled, simple operation
B.Powered by four AAA batteries.
a.Voltage options:
i.ET3010A 100V
ii.ET3010B 250V
iii.ET3010C 500V
iv.ET3010D 1000V
C.Auto data hold.
D.High voltage output automatically delay for 30s
E.Fault protection, buzzer alarms if short circuit
F.Equipped with an external DC power supply socket.

2.Overview

The ET3010 series changes 6V voltage into 100V/250V/500V/1000V DC voltage by using low power loss, high change rate inductance energy store type DC voltage converter. It measures insulation resistance by analogue/digital circuit.

ŸCPU controlled. Easy and accurate readout
ŸHigh stability and reliability
ŸLCD display for low power consumption and clear readout
ŸSuitable for on-site maintenance of escalator, electric and mechanical equipment as well as telecommunication equipment.

6. External Power Supply

A. In order to meet the need of long time insulation resistance testing, the unit equipped with external power supply socket. Please note that the pole of the insert socket is positive.
B. When using external power source, push the switch to “External Power Supply”.
C. Requirement of external power adaptor: output voltage: DC 6V; current > 500mA.

7. Care and Maintenance

A. The product is precious measuring equipment, please avoid using it under adverse environment.
B. When the battery has enough power,but the LCD has no display at the TEST, please check whether the battery and shrapnel contact good.
C. In order to ensure the accuracy, do not adjust or modify internal circuit.
D. Check battery level regularly. Remove the batteries if you do not intend to use the unit for a long time. Disconnect from the testing circuit before changing battery.

E. Note: When press “TEST”, there are high voltage output at “L” and “E”. DO NOT touch the subject resistance or disconnect test leads. The reading may flash but a stable reading or “1” will displays. If no stable reading is shown, there are four possibilities:

a. Connecting cable is too long.

b. The humidity of the test environment is higher than standard.

c. The outer layer of the subject resistance must connect to “COM”.

d. The subject resistance is not stable or in a critical state.

3. Technical Characteristics

A. General Specifications:

a. Display: 60*32mm LCD
b. Max reading: 1999 counts
c. Overload indication: LCD display “1”
d. Power: 4*AAA batteries
e. Low battery: Low battery sign on LCD
f. Static consumption: about 10mA, Short circuit current >1.7mA
g. Operation Environment: Temp,0℃---40℃; Humidity,30%---80%RH
h. Storage Environment: Temp,-10℃---50℃;Humidity<85%RH
i. Dimension: 80*185*45mm
j. Weight: ～500g(including battery)
k. Accessories: instruction manual,test lead.

B. Technical parameter

Model	Voltage	Rage	Measurement range	Resolution	Medium Resistance	Accuracy
ET3010A	100V	200MΩ	2MΩ～200MΩ	0.1MΩ	2MΩ	±(4%+5d)
ET3010B	250V	200MΩ	2MΩ～200MΩ	0.1MΩ	2MΩ	
ET3010C	500V	1GΩ	20MΩ～1GΩ	1MΩ	20MΩ	
ET3010D	1000V	2GΩ	20MΩ～2GΩ	1MΩ	20MΩ	±(5%+5d)

Note:Medium resistance ensures that voltage from two terminals is not less than 90% of the tested voltage of minimum value of measure resistance. Following below medium resistance, circuit protection launched buzzer alarm.

4.Front Panel Description

A. LCD Display
B. Auto-restored test button (TEST)(HOLD)
C. Power / Test / External Power Supply
D. External Power Supply socket
E. L:Input socket: connect to test circuit
F. G:Shield socket: connect to protection electrode when test cable
G. E:Connect to GND of test subject.
H. Belt

5.Operation

A. Connect input terminal E to GND of test subject. Connect terminal L to test circuit. (Hang terminal L as much as possible. When testing cable, connect COM terminal to GND).

B. Push the switch to "TEST" to turn ON the unit. LCD displays "1". (Note: When LCD displays , change the batteries.)

C. When press "TEST", there is high voltage output at terminal "L" and "E". Press the button for 2s or longer and release, the high voltage will automatically be delayed for 30s. Buzzer alarms every 2s. Press "TEST" again to stop the test manually.
Data will be held for 5s. (Press "TEST" again to stop data hold and return to normal status).

D. If LCD displays "1" after press "TEST", there are two possibilities:
a. The measured resistance may exceed the maximum range.
b. The unit is connected to a open circuit.