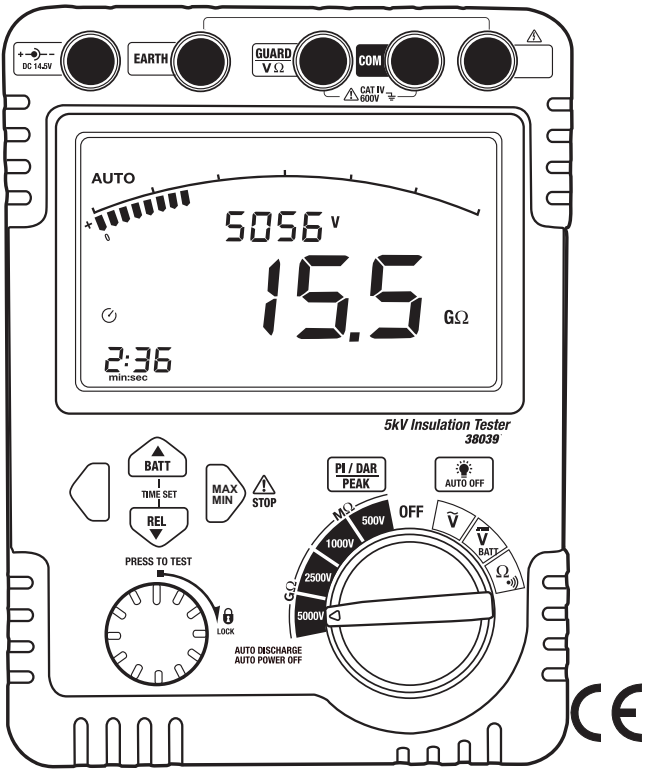
User's Guide

EXTECH® INSTRUMENTS
A FLIR COMPANY

Digital High Voltage Insulation Tester

Model 380395 or 380396



Introduction

Features

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Safety

International Safety Symbols

Danger

Warning:

Caution:

Operating Caution:

Danger:

Safety Notes

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Warnings

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Cautions

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Safety Category Information

Meter Description

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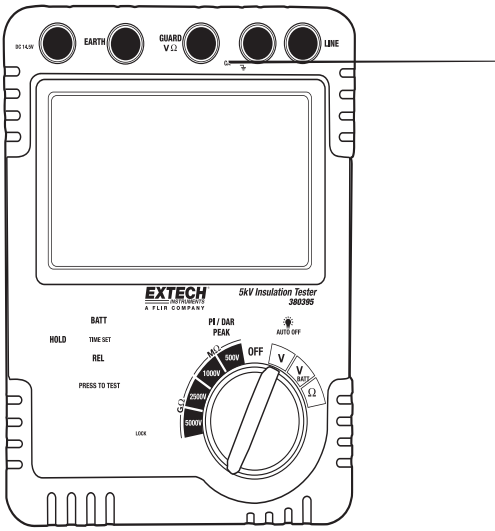

Display Description

Insulation Resistance Testing

CAUTIONS:

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CAUTION:

AUTO DISCHARGE

DANGER

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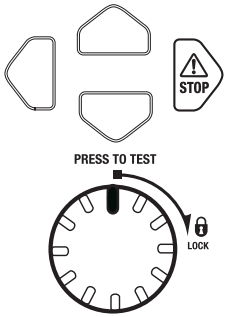
PRESS TO TEST Knob

PRESS TO TEST



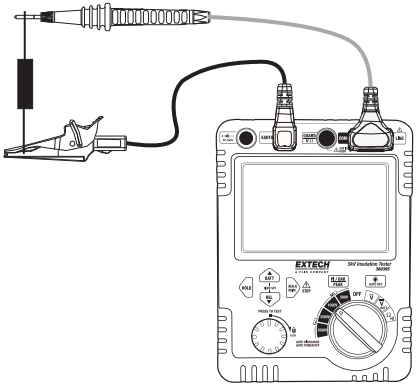
STOP

Emergency Stop

STOP **PRESS TO TEST**

Insulation Resistance Test

Manual Test



AUTO DISCHARGE

Locked Test

AUTO DISCHARGE

Timed Insulation Test

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AUTO DISCHARGE

Polarization Index (PI)

Polarization Index = Resistance after 10 minutes / Resistance after 1 minute

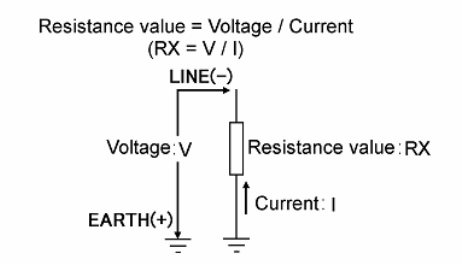
AUTO DISCHARGE

Dielectric Absorption Ratio (DAR)

Dielectric Absorption Ratio = Resistance after 1 minute / Resistance after 30 seconds

AUTO DISCHARGE

Insulation Resistance Measurement Considerations



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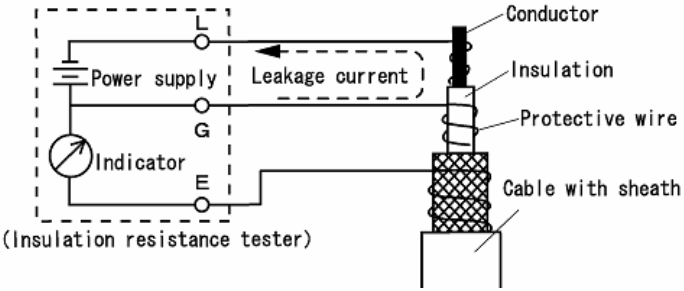
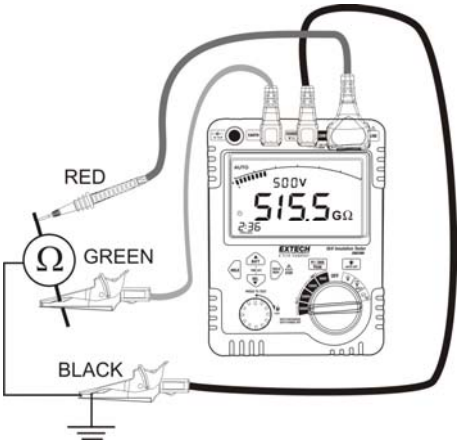
Use of the Guard Terminal





Data Hold

Backlight

Auto Power Off

Battery Check

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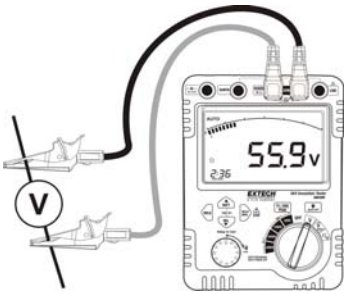
AC/DC Voltage and Resistance Testing

AC/DC Voltage Measurements

Ω

$\tilde{V}$

$\overline{\overline{V}}$



Low Resistance and Continuity Measurements

⚠ **WARNING:**

Ω

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Ω

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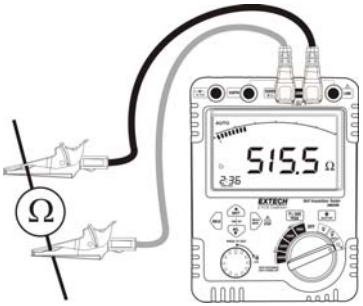

MAX/MIN Function (AC/DC Voltage measurements only)

Peak Hold Function (AC/DC Voltage measurements only)

Relative Mode (AC/DC Voltage measurements only)

Cleaning and Care

Warning:

Specifications

General Specifications

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Insulation Resistance Measurement Specifications

Test Voltages	500V	1000V	2500V	5000V *
Measurement Range (Auto-ranging)	0.005~6.000MΩ	0.005~6.000MΩ	0.05~60.00MΩ	0.05~60.00MΩ
	6.01~60.00MΩ	6.01~60.00MΩ	60.1~600.0MΩ	60.1~600.0MΩ
	60.1~600.0MΩ	60.1~600.0MΩ	0.61~6.00GΩ	0.61~6.00GΩ
	0.61~6.00GΩ	0.61~6.00GΩ	6.1~60.0GΩ	6.1~60.0GΩ
Open circuit Voltage	DC 500V +20%,-0%	DC 1000V +20%,-0%	DC 2500V +20%,-0%	DC 5000V +20%,-0%
Rated current	1~1.2mA (0.5 MΩ load)	1~1.2mA (1 MΩ load)	1~1.2mA (2.5 MΩ load)	1~1.2mA (5 MΩ load)
Short-circuit current	Approx.1mA			
Accuracy	0.005~600.0MΩ	±2.5% reading ±15 digits		
	0.61~6.00GΩ	±3% reading ±15 digits		
	6.1~60.0GΩ	±4% reading ±15 digits		
	5~6000VDC	±1.5%reading ±5 digits		
Note on voltage display in IR test mode	In Insulation Resistance test mode, this device is used to check whether or not the electric charge stored in the equipment under test has been discharged. During an Insulation Resistance test, the voltage value displayed on the LCD above the resistance measurement is the test reference voltage value.			

* NOTE: For 5000V IR measurements, use of the ac adapter to power the unit is recommended.

AC/DC Voltage Specifications

Range	Resolution	Accuracy
0.5 to 600 VAC (40 to 400Hz)	0.1V	±1% of rdg + 5d (40 to 60 Hz) ±2.5% of rdg + 10d (61 to 400 Hz)
0.5 to 600 VDC		±1% of reading + 5 digits

Low Resistance Measurement and Continuity Specifications

Range	Resolution	Accuracy
0.1 to 600	0.1	±1.5% rdg + 10d
601 to 6.00k	0.001k	±1.5% rdg + 15d
Continuity Buzzer	Triggers if the resistance is 50 or lower	
Open Circuit Voltage	4.5V minimum	
Short Circuit Current	200mA minimum	