

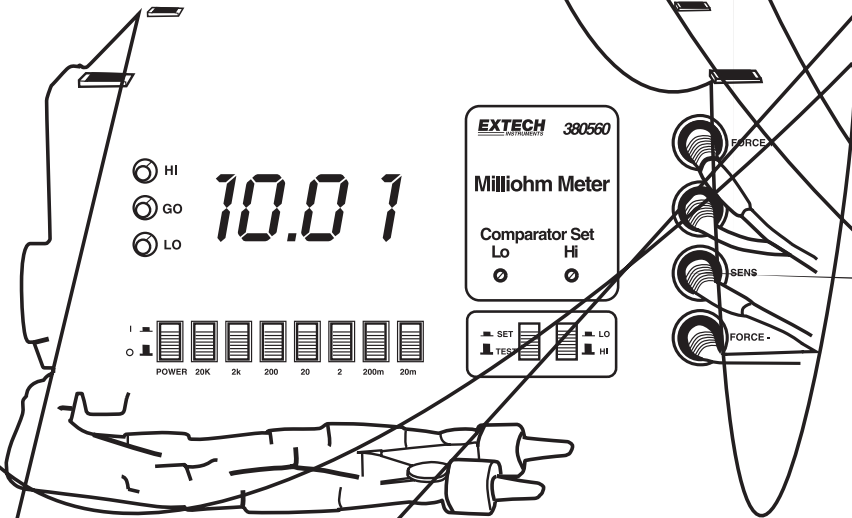
User's Guide

EXTECH[®]
INSTRUMENTS

A FLIR COMPANY

High Resolution Benchtop MilliOhm Meter

Models 380560 and 380562



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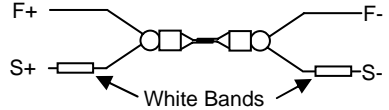
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Measurement Procedure

1. Connect the Kelvin test leads to the meter.
2. Press the **POWER** pushbutton to turn power on.
3. Position the **SET/TEST** pushbutton to the **TEST** position.
4. To check the meter zero, clip the test leads together as shown at right.
5. Select the desired measuring range using the labeled black pushbuttons. When the resistance of the device is unknown, start with the highest range and work downward.
6. Clip the leads onto the device under test as shown below.

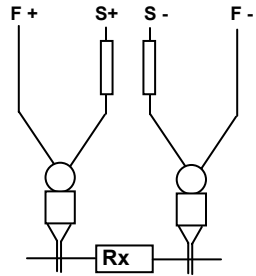


7. Observe the reading on the LED display.

Comparator Operation (HI-LO-GO)

The meter is equipped with a Comparator function allowing the user to sort resistance measurements against programmable HIGH and LOW limits. To program the comparator:

1. Position the **SET/TEST** pushbutton to SET.
2. Position the **LO/HI** pushbutton to LO.
3. Adjust the **LO** comparator screw to the desired low limit (shown on the LED display).
4. Position the **LO/HI** pushbutton to HI.
5. Adjust the **HI** comparator screw to the desired high limit.
6. Position the **SET/TEST** pushbutton to TEST.
7. Set the rear buzzer switch ON or OFF. When ON, the meter will sound an audible tone for each GO measurement.



Each time a measurement is taken, the appropriate Comparator status LED will light. If the measurement is lower than the LO setting, the LO LED will light. If the measurement is higher than the HI setting, the HI LED will light. If the reading is between the HI and LO settings, the green GO LED will light. If the rear beeper pushbutton is set ON, an audible tone will sound each time a GO reading is detected.

Measurement Principles

The test current flows through the resistance from the **FORCE+ (F+)** terminal to the **FORCE- (F-)** terminal. The **S+** and **S-** (**SENSE**) terminals measure the voltage drop across the device under test only, thus eliminating the lead and contact resistances. The meter displays the resistance based on the test current and the measured voltage; refer to the equation below:

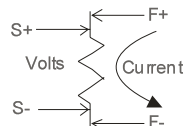
$$R_x = V_x / I_s$$

Where:

V_x is the voltage drop across the device under test;

I_s is the test current;

R_x is the resistance of the device under test.



Specifications

General Specifications







Circuit	Custom one-chip LSI microprocessor circuit
Display	0.8" (20 mm) 2000 Count LED Display
Connection type	4-Terminal Kelvin
Measurement ranges	Seven ranges (see listing below)
Test voltage	5V DC
Comparator	Built-in HI/LO/GO testing with audible beeper
Zero adjust	Automatic (no adjustment necessary)
Over-range indication	Display reads "1 ____" when the reading is out of range
Operating Temperature	32°F to 122°F (0°C to 50°C)
Operating Humidity	Max. 80% RH
Power Supply	110V (380560) or 220V (380562) $\pm 15\%$, 50/60Hz
Weight	4.85 lbs (2.2kg)
Dimensions	11 x 8.3 x 3.5" (280 x 210 x 90mm)

Range Specifications

Range	Resolution	Test Current	Accuracy (%rdg)	Test Voltage
20 m Ω	0.01m Ω	1A	$\pm (0.2\% + 6 \text{ digits})$	2.7V DC
200 m Ω	0.1m Ω	1A	$\pm (0.2\% + 4 \text{ digits})$	3.3V DC
2 Ω	.001 Ω	0.1A		3.5V DC
20 Ω	.01 Ω	10mA		4.1V DC
200 Ω	0.1 Ω	1mA		4.5V DC
2K Ω	.001k Ω	0.1mA		
20K Ω	.01k Ω	10uA		

Note: Specifications based on RF Field Strength <3V/m and frequency <30MHz

International Symbols

	DC Voltage DC Current		Refer to explanation in owners manual
	AC Voltage AC Current		Dangerous voltage risk of electrical shock
	Ground		Double Insulation

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more info for Extech 380562

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