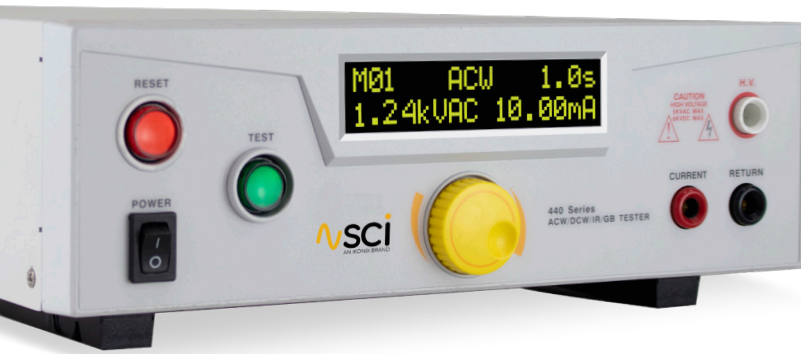


# 440 SERIES



VERSATILE 4-IN-1  
FUNCTIONALITY

INTUITIVE USER INTERFACE

40A GROUND BOND  
CAPABILITY





20 PROGRAMMABLE  
MEMORIES

EASILY AUTOMATE FOR  
DATA COLLECTION

REMOTE SAFETY INTERLOCK

EASILY SAFEGUARD YOUR  
WORKSTATION WITH PPE  
ACCESSORIES

The **440 Series** provides advanced 4-in-1 test capability in a convenient one-box solution. This new series performs AC Hipot (448 - 500 VA), DC Hipot, Insulation Resistance and 40A AC Ground Bond tests while taking up minimal production line space. The **440 Series** is simple and easy-to-use; reducing setup time and increasing production line throughput for your application. With multiple memories and an optional USB port for remote BUS communication so you can quickly perform tests on a variety of DUTs from the front panel or with a PC.

	 AC Hipot	 DC Hipot	 Insulation Resistance	 40A Ground Bond
446	•	•	•	•
448	<b>500VA</b>	•	•	•

## RELEVANT APPLICATIONS

APPLIANCE  
INDUSTRIAL EQUIPMENT  
INFORMATION TECHNOLOGY

CONTRACT MANUFACTURING  
LABORATORY EQUIPMENT

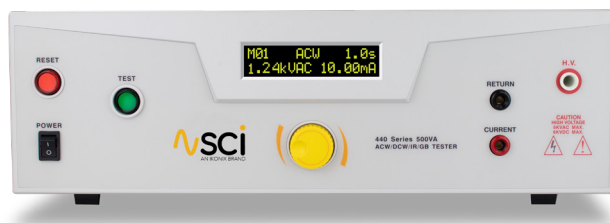
## WHAT'S IN THE BOX

125-013-001	Power Cord (10A) 6ft - *446 Model
99-10164-01	Power Cord (15A) 6ft - *448 Model
99-10783-01	Fuse 10A Slow Blow 20mm - *446 Model
99-10168-01	Fuse 15A Fast Blow 30mm - *448 Model
99-10040-01	Interlock Connector Male
99-10866-01	Ground Bond Test Lead
99-10865-01	Ground Bond Return Lead
102-055-913	High Voltage Test Lead 6ft
99-10797-01	USB A-B 1.8M Cable

All testers come with the accessories you need to run a test right out of the box.

## OPTIONS

Description	446	448
Rear Outputs	•	•
USB Port	•	•



SCI 448

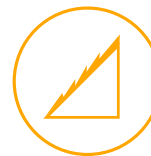
## SERIES FEATURES



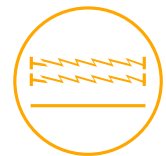
Test Setup Memories



Frequency Selection



Ramp



Dwell



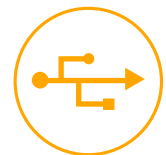
Low Current Sense



Safety Agency Listed



PLC Remote



USB (optional)



On the Go Portability



Intuitive User Interface

# 440 SERIES SPECIFICATIONS

## INPUT (446 and 448)

<b>Voltage</b>	100 - 120Vac / 200 - 240Vac $\pm$ 10% Auto Range	
<b>Frequency</b>	50/60Hz $\pm$ 5%	
<b>Fuse</b>	446	10A / 250Vac Slow-Blow
	448	15A / 250Vac Fast-Blow

## DIELECTRIC WITHSTAND TEST MODE

<b>Output Rating</b>	446	5 KV @ 20 mA AC 6 KV @ 5 mA DC
	448	5 KV @ 99.99 mA AC 6 KV @ 10 mA DC
<b>Voltage Setting/Display</b>	Range	0 – 5.00 KV AC 0 – 6.00 KV DC
	Resolution	0.01
	Accuracy	$\pm$ (2% of setting + 5V)
<b>Current Display</b>	446	Range: 0 - 20.00 mA AC, 0 - 5.00 mA DC Resolution: 0.01 mA Accuracy: $\pm$ (2% of reading + 0.02 mA)
	448	Range: 0 - 99.99 mA AC, 0 - 10.00 mA DC Resolution: 0.01 mA Accuracy: $\pm$ (2% of reading + 0.06 mA)
<b>Hi-Limit Lo-Limit</b>	446 AC	Range: Lo-Limit 0 - 20.00 mA, Hi-Limit 0.10 – 20.00 mA Resolution: 0.01 mA Accuracy: $\pm$ (2% of setting + 2 counts)
	446 DC	Range: Lo-Limit 0 - 5.00 mA, Hi-Limit 0.02 – 5.00 mA Resolution: 0.01 mA Accuracy: $\pm$ (2% of setting + 2 counts)
	448 AC	Range: Lo-limit 0 - 99.99 mA, Hi-Limit 0.10 – 99.99 mA Resolution: 0.01 mA Accuracy: $\pm$ (2% of reading + 6 counts)
	448 DC	Range: Lo-Limit 0 - 10.00 mA, Hi-Limit 0.02 – 10.00mA Resolution: 0.01 mA Accuracy: $\pm$ (2% of reading + 6 counts)
<b>Failure Detector</b>	Audible and Visual	
<b>DC Output Ripple</b>	446	<5 % ( 6KV / 5mA at Resistive Load )
	448	<5 % ( 6KV / 10mA at Resistive Load )
<b>Discharge Time</b>	446	< 50 ms for no load, < 200 ms for capacitor load
	448	< 50 ms for no load, < 100 ms for capacitor load
<b>Max. Capacitive Load in DC Mode</b>	1 $\mu$ F < 1KV	0.08 $\mu$ F < 4KV
	0.75 $\mu$ F < 2KV	0.04 $\mu$ F < 5KV
	0.5 $\mu$ F < 3KV	0.015 $\mu$ F < 6KV
<b>AC Wave Form</b>	Sine Wave, Crest Factor = 1.3 - 1.5 and output voltage > 300V	
<b>AC Output Frequency</b>	50Hz/60Hz $\pm$ 0.1%, User Selection	

## DIELECTRIC WITHSTAND TEST MODE (Cont.)

<b>Output Regulation</b>	$\pm$ (1% of output + 5V), From no load to full load	
<b>Dwell Timer</b>	Range:	0, 0.2 - 60.0 (0=continuous)
	Resolution:	0.1
	Accuracy:	$\pm$ (0.1% of setting + 0.05 sec)
<b>Ramp Timer</b>	Range:	0.2-180.0
	Resolution:	0.1
	Accuracy:	$\pm$ (0.1% of setting + 0.05 sec)

## INSULATION RESISTANCE TEST MODE

<b>Output Voltage, VDC</b>	Range:	100 - 1000
	Resolution:	1
	Accuracy:	$\pm$ (2% of setting + 5V)
<b>Hi-Limit resistance, M<math>\Omega</math></b>	Range:	0, 1 - 1000 (0 = OFF)
	Resolution:	1
	Accuracy:	100-499V $\pm$ (7% of setting + 2 counts)
<b>Lo-Limit resistance, M<math>\Omega</math></b>	Range:	1 - 1000
	Resolution:	1
	Accuracy:	500-1000V $\pm$ (3% of setting + 2 counts)
<b>Ramp Time , second</b>	Range:	0.1 or 2.0
	Resolution:	0.1
	Accuracy:	$\pm$ (0.1% of setting + 0.05 sec)
<b>Delay Time, second</b>	Range:	0, 0.5 - 999.9 (0=continuous)
	Resolution:	0.1
	Accuracy:	$\pm$ (0.1% of setting + 0.05 sec)

Specifications subject to change without notice.

## GROUND BOND

<b>Output AC Current, A</b>	Range: Resolution: Accuracy:	1.0 – 40.0 0.1 $\pm$ (2 % of setting + 2 counts)
<b>Output AC Voltage, V</b>	8V(Fixed)	
<b>Output Frequency, Hz</b>	50Hz/60Hz $\pm$ 0.1%, User Selectable	
<b>Maximum Loading</b>	1.0–10.0A/0–600m $\Omega$ , 10.1–30.0A/0–200m $\Omega$ , 30.1–40.0A/0–150m $\Omega$	
<b>Offset, m<math>\Omega</math></b>	Range: Resolution: Accuracy:	0-100 1 $\pm$ (2 % of setting + 2 counts)
<b>HI and LO-Limit Resistance, m<math>\Omega</math></b>	Range: Resolution: Accuracy:	0 – 150 (30.1-40.0A) 1 $\pm$ (2 % of setting + 2 counts)
	Range: Resolution: Accuracy:	0 – 200 (10.1-30.0A) 1 $\pm$ (2 % of setting + 2 counts)
	Range: Resolution: Accuracy:	0 – 600 (1.0-10.0A) 1 $\pm$ (2 % of setting + 2 counts)
	Range: Resolution: Accuracy:	0.4 0.1 $\pm$ 0.05 sec
<b>Fix Ramp Timer, second</b>	0-250m $\Omega$ = 0.1sec ramp up 251-300m $\Omega$ = 0.2sec ramp up 301-450m $\Omega$ = 0.3sec ramp up >450m $\Omega$ = 0.4sec	
<b>Dwell Timer, second</b>	Range: Resolution: Accuracy:	0, 0.1 - 240.0 (0 = continuous) 0.1 $\pm$ 0.05 sec

## GENERAL SPECIFICATIONS

<b>Memories</b>	Allows storage of up to 20 different test programs and a single step mode	
<b>Remote I/O</b>	Input:	Test, Reset, Interlock & Recall Memory 1 – 6
	Output:	Pass, Fail, Test-in-Process
<b>Interface</b>	USB (Optional)	
<b>Security</b>	Lockout capability to avoid unauthorized access to test set-up programs	
<b>Calibration</b>	Software and adjustments made through the front panel	
<b>Dimension</b>	446	280mm(W) x 89mm(H) x 400 mm(D)
	448	430mm(W) x 132mm(H) x 400 mm(D)
<b>Weight</b>	446	18lbs (8kg)
	448	53lbs (24kg)

Specifications subject to change without notice.