

**Southwire™**

TOOLS &amp; EQUIPMENT

# Multimeters and Clamp Meter

## Overview

Measure AC/DC voltage, current, resistance, continuity, capacitance, frequency, duty cycle, or temperature with one of these tough Southwire meters. Trust that all these Southwire meters meet or exceed the UL's various testing equipment standards and carry the UL mark. Regardless if just testing for the presence of voltage, or troubleshooting the toughest problem, we have you covered.

## Features

- Up to CAT IV safety ratings
- Test for AC/DC voltage, current, resistance, continuity, and more
- Auto and manual ranging
- Models available with non-contact voltage and detectors; built-in LED flashlight
- Models available with temperature function and include the thermocouple and adapter
- All include batteries and test leads



Multimeters and Clamp Meter				
Part Number	Description	Price	Weight (lbs)	Qty/Pkg
<b><u>10031S</u></b>	Southwire General Purpose manual ranging digital multimeter, AC/DC voltage, DC current, resistance, continuity and battery tester, CAT III 600V. Test leads included.	\$31.25	0.91	1
<b><u>10041N</u></b>	Southwire General Purpose autoranging digital multimeter, AC/DC voltage, AC/DC current, resistance, continuity, capacitance, frequency, non-contact AC voltage detection, battery tester and temperature, CAT III 600V. Test leads included.	\$50.25	0.97	1
<b><u>14060S</u></b>	Southwire TechnicianPRO autoranging digital multimeter, AC/DC voltage, AC/DC current, resistance, continuity, capacitance, frequency and temperature, CAT IV 600V/CAT III 1000V. Test leads included.	\$107.00	1.7	1
<b><u>16020N</u></b>	Southwire Compact Series autoranging digital multimeter, AC/DC voltage, AC/DC current, resistance, continuity, capacitance, frequency and non-contact AC voltage detection, CAT I VAC 600V. Built-in test leads included.	\$38.00	0.64	1
<b><u>23070T</u></b>	Southwire MaintenancePRO clamp-on multimeter, True RMS AC/DC voltage, AC/DC current, resistance, continuity, capacitance and frequency, CAT IV 600V/CAT III 1000V. Test leads included.	\$197.75	1.84	1


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# Multimeters

Safety Category Ratings		
Category Rating	Brief Description	Typical Applications
<b>CAT IV</b>	Connection point to utility power and outdoor conductors	<ul style="list-style-type: none"> <li>Electricity meters, primary overcurrent protection equipment</li> <li>Outside and service entrance, service drop from pole to building, run between meter and panel</li> <li>Overhead line to detached building, underground line to well pump</li> </ul>
<b>CAT III</b>	Three-phase circuits and single phase lighting circuits in commercial buildings	<ul style="list-style-type: none"> <li>Equipment in fixed installations, such as switchgear and polyphase motors               <ul style="list-style-type: none"> <li>Bus and feeder in industrial plants</li> </ul> </li> <li>Feeders and short branch circuits, distribution panel devices</li> <li>Lighting systems in larger buildings</li> <li>Appliance outlets with short connections to service entrance</li> </ul>
<b>CAT II</b>	Single-phase receptacles and connected loads	<ul style="list-style-type: none"> <li>Appliance, portable tools, and other household and similar loads               <ul style="list-style-type: none"> <li>Outlet and long branch circuits</li> </ul> </li> <li>Outlets at more than 10 meters (30 feet) from CAT III source</li> <li>Outlets at more than 20 meters (60 feet) from CAT IV source</li> </ul>
<b>CAT I</b>	Electronics	<ul style="list-style-type: none"> <li>Protected electronic equipment</li> <li>Equipment connected to (source) circuits in which measures are taken to limit transient overvoltages to an appropriately low level</li> </ul>

The measurement category (CAT) rating and voltage rating is determined by a combination of the meter, test probes and any accessories connected to the meter and test probes. The combination rating is the **LOWEST** of any individual component.

Work on de-energized circuits whenever possible. Use proper lock-out/tag-out procedures. Always assume a circuit is live until verified otherwise.

When working on live power circuits the protection of flame resistant clothing, safety glasses or safety face shield, and insulated gloves should be worn at a minimum.

As a rule of thumb the closer the tested device is to the power source the higher the Category Level should be. Category Levels (CAT) are determined by UL & IEC and are explained in detail in IEC61010.

Multimeters Specifications				
Family	TechnicianPRO™	Compact Series	General Purpose	
<b>Model Number</b>	<a href="#">14060S</a>	<a href="#">16020N</a>	<a href="#">10041N</a>	<a href="#">10031S</a>
<b>Safety Rating</b>	CAT IV 600V, CAT III 1000V	CAT IV 600V	CAT III 600V	CAT III 300V CAT II 600V
<b>AC/DC Voltage</b>	1000V	600V	600V	600V
<b>AC/DC Current</b>	10A	200mA	10A	10A (DC only)
<b>Input Impedance</b>	10MΩ AC/DC Voltage	> 7.5MΩ AC/DC Voltage	> 10MΩ AC/DC Voltage	
<b>Backlighting</b>	Controls, Display	Display	Display	-
<b>MAX/MIN</b>	X	-	-	-
<b>Temperature</b>	X	-	X	-
<b>Built-in NCV*</b>	-	100V-600V	50V-600V	-
<b>Peak Hold</b>	-	-	-	-
<b>Resistance</b>	60MΩ	40MΩ	40MΩ	2.0 MΩ
<b>Diode Test</b>	X	X	X	-
<b>Capacitance</b>	4000μF	100μF	100μF	-
<b>Frequency</b>	10kHz	10kHz	10kHz	-
<b>Duty Cycle</b>	X	X	X	-
<b>Built-in-Worklight</b>	X	X	-	-
<b>Drop Protection</b>	2m	2m	2m	2m

\* NCV - Non-Contact Voltage


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# Clamp Meter

## Overview

The Southwire23070T MaintenancePRO™ 1000A TrueRMS AC/DC clamp meter measures AC and DC current up to 1000A and with a UL listed safety rating of CAT IV 600V / CAT III 1000V, this clamp meter is built to get the tough jobs done. Other functions include: AC and DC Voltage, Resistance, Continuity, Capacitance, Frequency, Duty Cycle, Temperature, and Diode Test. A built-in non-contact AC voltage detector and flashlight provide added convenience.



## Features

- CAT IV 600V / CAT III 1000V
- 11 measuring functions
- Clamp-On function reads both AC and DC current up to 1000 Amps
- Built in non-contact AC voltage detector
- Powerful LED work light
- Includes test leads, Type K temperature probe with banana plug adapter, carrying case, and 9 volt battery

Clamp Meter Specifications	
<b>Model Number</b>	23070T
<b>Safety Rating</b>	CAT IV 600V CAT III 1000V
<b>AC/DC Voltage</b>	1000V
<b>AC Current</b>	1000A
<b>DC Current</b>	1000A
<b>True RMS</b>	X
<b>Input Impedance</b>	10MΩ AC/DC Voltage
<b>Worklight</b>	X
<b>Backlit Display</b>	X
<b>Drop Protection</b>	1.5m
<b>Display Count</b>	6000
<b>Bar Graph</b>	X
<b>MAX/MIN/AVG</b>	MAX/MIN
<b>Temperature</b>	X
<b>Built-in NCV*</b>	100-1000V
<b>Resistance</b>	60MΩ
<b>Continuity</b>	X
<b>Diode Test</b>	X
<b>Capacitance</b>	6000μF
<b>Frequency</b>	10MHz
<b>Duty Cycle</b>	X
<b>Auto Power Off</b>	-

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# Voltage Testers

## 40126N NCV Dual Range 24-600V & 100-600V AC

- Green LED means power on, flashing red LED with beeper means voltage detected
- Low battery self-test
- Two modes: green means high voltage mode, yellow means low voltage mode
- Bright LED flashlight
- Thinner probe tip for working with wall outlets
- On/Off power switch
- Pocket clip for easy storage


**40126N**

## 40141S AC/DC Voltage Tester

- CAT III 600V safety rating
- UL listed
- Tests AC voltage from 120V to 480V
- Tests DC voltage from 160V to 600V
- Built-in test leads and handy pocket clip
- No batteries required
- Test probes conveniently store in the back of the tester and are spaced to fit standard AC outlets

Retired: Consider using 40126N as a replacement


**40141S**

## 41171N Precision Voltage Detector & Tester

- CAT IV 600V safety rating
- UL listed
- Backlit LCD display
- Built-in non-contact voltage detector with self-test
- Tests continuity with visual & audible confirmation
- Bright LED flashlight
- 0-600V AC measurement range
- 0-600V DC measurement range
- Replaceable test leads

Retired: Consider using 16020N as a replacement.


**41171N**

Voltage Testers				
Part Number	Description	Price	Weight (lbs)	Qty/Pkg
<b>40126N</b>	Southwire voltage tester, non-contact AC voltage detection, CAT IV 600V.	\$18.50	0.21	1
<b>40141S</b>	Southwire voltage tester, AC/DC voltage, CAT III 600V.	Retired	0.19	1
<b>41171N</b>	Southwire autoranging voltage tester, AC/DC voltage, continuity and non-contact AC voltage detection, CAT IV 600V.	Retired	0.8	1

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Voltage Tester Specifications			
Model #	40126N	40141S	41171N
Safety Rating	CAT IV 600V	CAT III 600V	CAT IV 600V
Voltage Measurement Range	24-600 VAC	120-480 VAC / 160-600 VDC	6-600 VAC/VDC
NCV* Detection Range	24-600 VAC	-	100 V AC to 1000 V AC
Input Impedance	-	-	> 10MΩ AC/DC Voltage
Frequency Range	50/60 Hz	60 Hz	50/60 Hz
Display	-	-	Backlit LCD
Worklight	Yes	No	Yes
Test Leads	-	Attached	Removable
On/Off Button	Yes	No	Yes
Low Batt Self Test	Yes	-	Yes
Auto Power Off	Yes	-	Yes
Drop Protection	1.5m	1.5m	2m
Operating Temperature	32 to 104°F [0 to 40°C]		
Storage Temperature	14 to 140°F [-10 to 60°C]	14 to 122°F [-10 to 50°C]	14 to 122°F [-10 to 50°C]
Maximum altitude	2000m		
Humidity	Max 80% RH (NC)	Max 80% RH (NC)	Max 85% RH (NC)
Power	Two AAA batteries (included)	-	Two AAA batteries (included)


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# Cable and Continuity Testers

## Overview

The Southwire 40040S provides a simple way of checking continuity on wires and cables. The bright LEDs and loud beeper provide a positive indication of continuity and polarity. The M550 gives instant continuity status for category and coaxial cables. Featuring rugged double molded tester body and easy-to-interpret LED display. Both have a detachable remote that allows cables and wires to be tested after installation.


**40040S**
**M550**

## Features

- 40040S can trace up to 3 cables at a time
- Detachable remote indicator
- LEDs provide visual indication of continuity
- Audible beeper on 40040S provides additional verification of electrical connections
- M550 data/video cable tester detects issues with network and coaxial cables
- M550 test for correct wiring, opens, shorts, reversals, miswires, split pairs, and shielded cables
- The M550 removable remote allows for the testing of installed cable
- Both units come with leads and cable required to connect to any number of cable types
- Batteries included

### Continuity Tester Specifications

Model #	40040S	M550
Indicators	LED	LED
Maximum Cable Length	10,000 feet (3000m)	1000 feet (305m)
On/Off Button	Yes	
Auto Power Off	No	
Operating Temperature	10 to 113°F [-12 to 45°C]	32 to 122°F [0 to 50°C]
Storage Temperature	-4 to 140°F [-20 to 60°C]	
Humidity	Max 90% RH (NC)	Max 80% RH (NC)
Power	One 9 volt battery	Two AAA batteries (included)

### Testers Selection Table

Part Number	Description	Price	Weight (lbs)	QtyPkg
<b>40040S</b>	Southwire continuity tester, remote included, for individual wires and multiconductor cables.	\$31.00	0.46  lb	1
<b>M550</b>	Southwire data/video cable tester, for Cat 7, Cat 7a, Cat 6a, Cat 6, Cat 5e, Cat 5, Cat 4, Cat 3 and Coax.	\$47.75	0.51  lb	1


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# Test Kit

## Features

- The 10031S multimeter measures AC/DC voltage, DC current, resistance, and functions as a battery tester with a safety rating of CAT III 600V. This makes this specific multimeter a must-have for every toolbox
- The 40117N Non-Contact AC Voltage Detector has flashing green LED to indicate it is on, which changes to red and a beeper sounds if voltage is detected
- Convenient LED Flashlight in the 40117N saves space in your pocket or tool pouch
- Auto power-off feature for both the 10031S and 40117N to conserve and extend battery life
- Receptacle tester detects wiring configurations and indicates correct wiring, open ground, open hot, open neutral, hot/ground reversed and hot/neutral reversed
- Includes test leads and batteries for 10031S and 40117N



Test Kit				
Part Number	Description	Price	Weight (lbs)	Qty/Pkg
<b>10037K</b>	Southwire electrical test kit, includes 10031S manual-ranging multimeter, a non-contact AC voltage detector and receptacle tester.	\$37.00	1.2	1

Test Kit Specifications			
Model #	10031S	40117N	40012S
<b>Safety Rating</b>	CAT III 300V CAT II 600V	CAT IV 1000V	-
<b>Voltage Measurement Range</b>	600V	-	110-125VAC
<b>DC Current</b>	20mA/200mA/10A (fused)	-	-
<b>NCV* Detection Range</b>	-	90VAC - 1000VAC	-
<b>Frequency Range</b>	45 Hz - 400 Hz	50/60 Hz	60 Hz
<b>Display / Indicator</b>	LCD	Red/Green LEDS	Reg/Amber LEDS
<b>Worklight</b>	-	Yes	-
<b>Test Leads</b>	Removable	-	-
<b>On/Off Button</b>	Rotary Switch	Momentary Button	-
<b>Hold</b>	Manual (Button)	-	-
<b>Low Batt Self Test</b>	-	X	-
<b>Auto Power Off</b>	>15 minutes	>5 minutes	-
<b>Operating Temperature</b>	32 to 104°F [0 to 40°C]		
<b>Storage Temperature</b>	14 to 122°F [-10 to 50°C]		
<b>Maximum altitude</b>	2133m	2000m	
<b>Humidity</b>		Max 80% RH (NC)	
<b>Power</b>	One 9V battery (included)	Two AAA batteries (included)	-

\* NCV - Non-Contact Voltage