


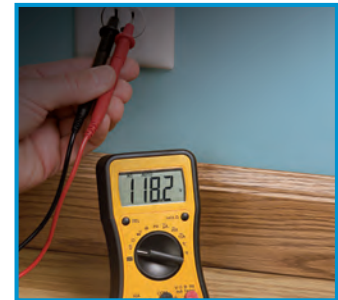
# Multimeter Selection Guide

MULTIMETER SELECTION GUIDE	310 Series		340 Series		360	480 Series		490 Series		600	610 Series	
	61-310	61-312	61-340	61-342	61-361	61-484	61-486	61-497	61-498	61-605	61-610	61-614
<b>MEASUREMENT FUNCTIONS</b>												
AC & DC Voltage	•	•	•	•	•	•	•	•	•	•	•	•
AC Current	•	•	•	•	•	•	•	•	•			
DC Current	•	•	•	•	•	•	•	•	•		•	•
Resistance	•	•	•	•	•	•	•	•	•	•	•	•
LV Resistance						•	•	•	•			
Audible Continuity	•	•	•	•	•	•	•	•	•	•		•
Diode Test	•	•	•	•	•	•	•	•	•	•		
Capacitance		•	•	•	•	•	•	•	•			
Frequency		•	•	•	•	•	•	•	•			
Temperature	•	•	•	•			•	•	•			
Duty Factor			•	•				•	•			
Battery Test	•										•	•
Decibels								•	•			
Phase Rotation					•							
<b>FEATURES</b>												
Display Type (Digital or Analog)	D	D	D	D	D	D	D	D	D	D	A	A
True RMS				•	•	•	•	•	•			
Auto/Manual Ranging		•	•	•		•	•	•	•	•		
Non-Contact Voltage Detection						•	•					
Data Hold / Auto Hold	D	D	D	D		D	D	A	A	D		
Min/Max			•	•		•	•	•	•			
Min/Max/Avg			•	•		•	•	•	•			
Peak Min/Max						•	•	•	•			
Relative Mode								•	•			
High Speed Analog Bar Graph							•	•	•	•	•	•
Auto Power Off			•	•	•	•	•	•	•	•		
Backlight			•	•		•	•	•	•	•		
Low Battery Indication			•	•	•	•	•	•	•	•		
Dual Display								•	•	•		
Overload Protection on all Ranges	•	•	•	•	•	•	•	•	•	•		
Data Logging								•	•			
Data Acquisition								•	•			
Memory Storage & Recall								•	•			
Optical USB Interface								•	•			
ProVision™ II Software								•	•			
Warranty (years)	2	2	2	2	2	2	2	2	2	2	2	2
<b>CERTIFICATIONS</b>												
UL 61010 Listed 	•	•	•	•	•	•	•	•	•	•	•	•
CAT Rating	II	II	III	III	III	IV	IV	IV	IV	II	II	II
CE	•	•	•	•	•	•	•	•	•	•	•	•



## 310 Series Residential Meters

- Voltage
- Current
- Resistance
- Audible continuity
- Temperature
- Data hold
- Diode test
- Large numbers displayed
- 2-year warranty



Description	Cat. No.
Resi-Pro™ Meter w/Auto Ranging, AC/DC Current, Capacitance, Frequency, Auto Power Off, Low Battery Indication	61-312
Resi-Pro™ Meter w/Manual Ranging, Tests Batteries	61-310

Includes: Test Leads and Thermocouple.

### Specifications

	61-310		61-312	
	Range & Resolution	Accuracy	Range & Resolution	Accuracy
AC Voltage	200.0/300 V	1.2%	4.000/40.00/400.0/300 V	1.2%
DC Voltage	200.0m/2.000/20.00/200.0/300 V	0.5%	400.0m/4.000/40.00/400.0/300 V	0.5%
Current	200.0m/10.00 ADC	1.5%	400.0μ/4000μ/40.00m/400.0m/10.00A AC/DC	1.5%
Resistance	200.0/2.000k/20.00k/200.0k/20.00M Ω	1.0%	400.0/4.000k/40.00k/400.0k/4.000M/40.00M Ω	1.0%
Capacitance	—	—	40.00n/400.0n/4.000μ/40.00μ/400.0μ F	3.0%
Frequency	—	—	10.00/100.0/1.000k/10.00k/100.0k/1.000M/10.00M Hz	0.3%
Temperature	-4-1382°F (-20-750°C)	2.5%	-4-1382°F (-20-750°C)	2.5%

## Pocket Meter

- Convenient pocket size
- Built-in lead storage and test stand
- Audible continuity
- Auto power off
- Test lead storage
- 2-year warranty



Description	Cat. No.
Pocket Meter	61-605

Includes: Test Leads.

### Specifications

	Range & Resolution		Accuracy
	61-610	61-614	
AC Voltage	200.0m/2.000/20.00/200.0/600 V	10/50/250/500 V	4.0%
DC Voltage	200.0m/2.000/20.00/200.0/600 V	2.5/10/50/250/1000 V	2.0%
Resistance	200.0/2.000k/20.00k/200.0k/2.000M/20.00M Ω	5m/50m/500m/20A	3.0%



## Analog Meters

- Multi-color analog display with mirrored scale
- High-impact thermoplastic case
- Battery test
- 2-year warranty



Description	Cat. No.
Analog Multimeter w/Audible Continuity, built-in stand	61-614
Analog Multimeter (pocket-size)	61-610

Includes: Test Leads.

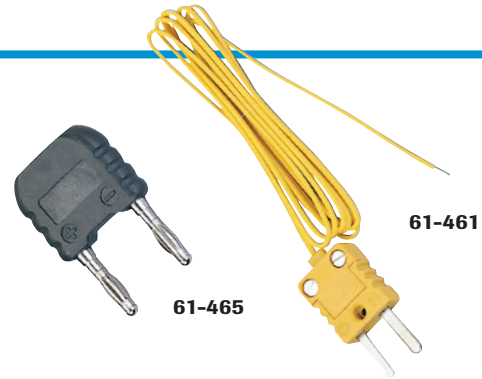
### Specifications

	Range & Resolution		Accuracy
	61-610	61-614	
AC Voltage	10/50/250/500 V	10/50/250/1000 V	+/- 4.0% Full Scale
DC Voltage	10/50/250/500 V	2.5/10/50/250/1000 V	+/- 3.0% Full Scale
DC Current	500μ/50m/250mA	5m/50m/500m/20A	+/- 3.0% Full Scale
Resistance	1 M Ω Full Scale 5 k Ω Mid Scale	10k/100k/10M Ω Full Scale 50/500/50k Ω Mid Scale	+/- 3.0% Arc Length
Decibels	-20 to +56 dB	-8 to +62 dB	—
Battery Test	1.5, 9.0 VDC	1.5, 9.0 VDC	—



# Thermocouple

- Measures up to 1500° F (816° C)
- K-type thermocouple plugs into digital multimeter voltage jacks with 61-465 adapter



Description	Cat. No.
Beaded K-type Thermocouple	61-461
Thermocouple Adapter	61-465

# Carrying Cases



Description	Cat. No.
Leather Carrying Case - for use with 61-065, 61-076, 61-085, 61-086	61-010
Small Nylon Carrying Case w/four pockets	61-445
Nylon Carrying Case - for use with all Vol-Con® and Vol-Test® Voltage Testers	C-90
Nylon Carrying Case - for use with Digital Multimeters	C-290

# Carrying Case Selection Guide

	VOLTAGE TESTERS																															
	61-059	61-065	61-076	61-085	61-086	61-090	61-092	61-096	61-164	61-165	61-310	61-312	61-340	61-342	61-361	61-484	61-486	61-497	61-498	61-610	61-614	61-702	61-704	61-744	61-746	61-763	61-765	61-773	61-775	61-830		
61-179 Nylon Carrying Case									•	•																					•	
C-50 Nylon Carrying Case	•																															
C-90 Nylon Carrying Case		•	•	•	•	•	•	•																•	•							
C-230 Nylon Carrying Case																		•	•													
C-290 Nylon Carrying Case											•	•	•	•	•	•	•	•	•	•	•											
C-700 Nylon Carrying Case																							•	•								
C-760 Nylon Carrying Case																										•	•					
C-770 Nylon Carrying Case																													•	•		

## Replacement Parts Selection Guide

METER REPLACEMENT PARTS SELECTION GUIDE			090	310	340	360	480	490	600	610	700	740	760	770	790										
			61-096	61-310	61-312	61-340	61-342	61-361	61-484	61-486	61-497	61-498	61-605	61-610	61-614	61-702	61-704	61-744	61-746	61-763	61-765	61-773	61-775	61-795	61-797
<b>FUSES</b>																									
F-1	0.5A (250V)	6.35 x 38mm										•													
F-105	1A (600V)	10.3 x 35mm																						•	
F-310	250mA (250V)	5 x 20mm		•							•														
F-312	500mA (250V)	5 x 20mm			•																				
F-314	10A (250V)	5 x 20mm			•																				
F-340	0.5A (500V)	6.35 x 32mm				•	•																		
F-341	10A (1000V)	10 x 38mm				•	•																		
F-497	440mA (1000V)	10 x 35mm						•	•	•	•														
F-498	11A (1000V)	10 x 38mm						•	•	•	•														
F-797	315mA (1000V)	5 x 32mm																						•	
LA-3893	2A (600V)	6.35 x 25.4mm					•																		
LA-3898	0.25A (500V)	5 x 32mm					•																		
<b>BATTERIES</b>																									
61-201	1.5V (LR44)									•															
—	1.5V (AA)								•		•	•													
—	1.5V (AAA)				•								•	•									•	•	
—	9V		•	•	•	•	•	•	•	•			•	•				•	•	•	•				
<b>TEST LEADS</b>																									
TL-34	Leads w/pin connectors										•														
TL-56	Test leads										•														
TL-95	Test leads		•																						
TL-100	Test leads w/alligator clips				•	•	•	•	•	•			•	•											
TL-102	Silicone test leads											•	•												
TL-104	Test leads w/large alligator clips											•	•												
TL-310	Test leads			•	•																				
TL-795	Test leads																							•	
TL-797	Test leads																								•

## Safety in the Field

The power demands of today's high-tech world have caused a marked increase in occurrences and levels of transient overvoltages. The International Electrotechnical Commission (IEC) has developed a safety standards model for measurement, control and laboratory use.

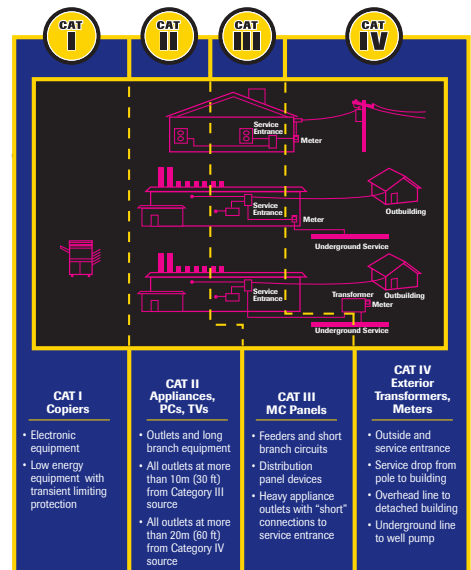
**Category I** – The signal level for telecommunications, electronic and other low-energy equipment with transient-limiting protection. Peak impulse transient range is 600–4,000 volts with a 30 ohm source.

**Category II** – The local level for fixed and non-fixed powered devices including appliances, lighting and portable equipment. Outlets located more than 30 feet from CAT III sources and 60 feet from CAT IV sources. Peak impulse transient range is from 600–6,000 volts with a 12 ohm source.


**Category III** – The distribution level for fixed primary feeders or branch circuits. Circuits that are separated from CAT IV sources by at least one level of transformer isolation. Peak impulse transient range is 600–8,000 volts with a 2 ohm source.

**Category IV** (proposed) – The primary supply level for the highest levels of transient overvoltage. Includes the utility service both outside and at the service entrance, service drop from the pole to the building, overhead line to remote buildings, and underground line to a well pump. Peak impulse transient range is 600–12,000 volts with less than a 1 ohm source.

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# Multimeter Selection Guide

MULTIMETER SELECTION GUIDE	310 Series		340 Series		360	480 Series		490 Series		600	610 Series	
	61-310	61-312	61-340	61-342	61-361	61-484	61-486	61-497	61-498	61-605	61-610	61-614
<b>MEASUREMENT FUNCTIONS</b>												
AC & DC Voltage	•	•	•	•	•	•	•	•	•	•	•	•
AC Current	•	•	•	•	•	•	•	•	•			
DC Current	•	•	•	•	•	•	•	•	•		•	•
Resistance	•	•	•	•	•	•	•	•	•	•	•	•
LV Resistance						•	•	•	•			
Audible Continuity	•	•	•	•	•	•	•	•	•	•		•
Diode Test	•	•	•	•	•	•	•	•	•	•		
Capacitance		•	•	•	•	•	•	•	•			
Frequency		•	•	•	•	•	•	•	•			
Temperature	•	•	•	•			•	•	•			
Duty Factor			•	•				•	•			
Battery Test	•										•	•
Decibels								•	•			
Phase Rotation					•							
<b>FEATURES</b>												
Display Type (Digital or Analog)	D	D	D	D	D	D	D	D	D	D	A	A
True RMS				•	•	•	•	•	•			
Auto/Manual Ranging		•	•	•		•	•	•	•	•		
Non-Contact Voltage Detection						•	•					
Data Hold / Auto Hold	D	D	D	D		D	D	A	A	D		
Min/Max			•	•		•	•	•	•			
Min/Max/Avg			•	•		•	•	•	•			
Peak Min/Max						•	•	•	•			
Relative Mode								•	•			
High Speed Analog Bar Graph							•	•	•	•	•	•
Auto Power Off			•	•	•	•	•	•	•	•		
Backlight			•	•		•	•	•	•	•		
Low Battery Indication			•	•	•	•	•	•	•	•		
Dual Display								•	•	•		
Overload Protection on all Ranges	•	•	•	•	•	•	•	•	•	•		
Data Logging								•	•			
Data Acquisition								•	•			
Memory Storage & Recall								•	•			
Optical USB Interface								•	•			
ProVision™ II Software								•	•			
Warranty (years)	2	2	2	2	2	2	2	2	2	2	2	2
<b>CERTIFICATIONS</b>												
UL 61010 Listed 	•	•	•	•	•	•	•	•	•	•	•	•
CAT Rating	II	II	III	III	III	IV	IV	IV	IV	II	II	II
CE	•	•	•	•	•	•	•	•	•	•	•	•



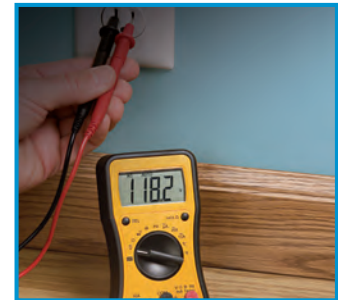
## 310 Series Residential Meters

- Voltage
- Current
- Resistance
- Audible continuity
- Temperature
- Data hold
- Diode test
- Large numbers displayed
- 2-year warranty

61-312



61-310



Description	Cat. No.
Resi-Pro™ Meter w/Auto Ranging, AC/DC Current, Capacitance, Frequency, Auto Power Off, Low Battery Indication	61-312
Resi-Pro™ Meter w/Manual Ranging, Tests Batteries	61-310

Includes: Test Leads and Thermocouple.

### Specifications

	61-310		61-312	
	Range & Resolution	Accuracy	Range & Resolution	Accuracy
AC Voltage	200.0/300 V	1.2%	4.000/40.00/400.0/300 V	1.2%
DC Voltage	200.0m/2.000/20.00/200.0/300 V	0.5%	400.0m/4.000/40.00/400.0/300 V	0.5%
Current	200.0m/10.00 ADC	1.5%	400.0μ/4000μ/40.00m/400.0m/10.00A AC/DC	1.5%
Resistance	200.0/2.000k/20.00k/200.0k/20.00M Ω	1.0%	400.0/4.000k/40.00k/400.0k/4.000M/40.00M Ω	1.0%
Capacitance	—	—	40.00n/400.0n/4.000μ/40.00μ/400.0μ F	3.0%
Frequency	—	—	10.00/100.0/1.000k/10.00k/100.0k/1.000M/10.00M Hz	0.3%
Temperature	-4-1382°F (-20-750°C)	2.5%	-4-1382°F (-20-750°C)	2.5%

## Pocket Meter

- Convenient pocket size
- Built-in lead storage and test stand
- Audible continuity
- Auto power off
- Test lead storage
- 2-year warranty



Description	Cat. No.
Pocket Meter	61-605

Includes: Test Leads.

### Specifications

	Range & Resolution		Accuracy
	61-610	61-614	
AC Voltage	200.0m/2.000/20.00/200.0/600 V	10/50/250/500 V	4.0%
DC Voltage	200.0m/2.000/20.00/200.0/600 V	2.5/10/50/250/1000 V	2.0%
Resistance	200.0/2.000k/20.00k/200.0k/2.000M/20.00M Ω	5m/50m/500m/20A	3.0%



## Analog Meters

- Multi-color analog display with mirrored scale
- High-impact thermoplastic case
- Battery test
- 2-year warranty

61-614



Description	Cat. No.
Analog Multimeter w/Audible Continuity, built-in stand	61-614
Analog Multimeter (pocket-size)	61-610

Includes: Test Leads.

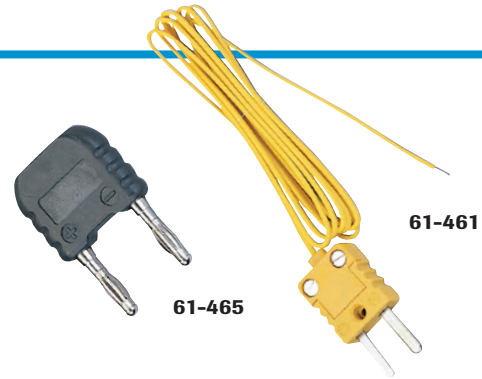
### Specifications

	Range & Resolution		Accuracy
	61-610	61-614	
AC Voltage	10/50/250/500 V	10/50/250/1000 V	+/- 4.0% Full Scale
DC Voltage	10/50/250/500 V	2.5/10/50/250/1000 V	+/- 3.0% Full Scale
DC Current	500μ/50m/250mA	5m/50m/500m/20A	+/- 3.0% Full Scale
Resistance	1 M Ω Full Scale 5 k Ω Mid Scale	10k/100k/10M Ω Full Scale 50/500/50k Ω Mid Scale	+/- 3.0% Arc Length
Decibels	-20 to +56 dB	-8 to +62 dB	—
Battery Test	1.5, 9.0 VDC	1.5, 9.0 VDC	—



# Thermocouple

- Measures up to 1500° F (816° C)
- K-type thermocouple plugs into digital multimeter voltage jacks with 61-465 adapter



Description	Cat. No.
Beaded K-type Thermocouple	61-461
Thermocouple Adapter	61-465

# Carrying Cases



Description	Cat. No.
Leather Carrying Case - for use with 61-065, 61-076, 61-085, 61-086	61-010
Small Nylon Carrying Case w/four pockets	61-445
Nylon Carrying Case - for use with all Vol-Con® and Vol-Test® Voltage Testers	C-90
Nylon Carrying Case - for use with Digital Multimeters	C-290

# Carrying Case Selection Guide

	VOLTAGE TESTERS																																
	61-059	61-065	61-076	61-085	61-086	61-090	61-092	61-096	61-164	61-165	61-310	61-312	61-340	61-342	61-361	61-484	61-486	61-497	61-498	61-610	61-614	61-702	61-704	61-744	61-746	61-763	61-765	61-773	61-775	61-830			
61-179 Nylon Carrying Case									•	•																						•	
C-50 Nylon Carrying Case	•																																
C-90 Nylon Carrying Case		•	•	•	•	•	•	•																•	•								
C-230 Nylon Carrying Case																		•	•														
C-290 Nylon Carrying Case											•	•	•	•	•	•	•	•	•	•	•												
C-700 Nylon Carrying Case																							•	•									
C-760 Nylon Carrying Case																										•	•						
C-770 Nylon Carrying Case																													•	•			

## Replacement Parts Selection Guide

METER REPLACEMENT PARTS SELECTION GUIDE			090	310	340	360	480	490	600	610	700	740	760	770	790										
			61-096	61-310	61-312	61-340	61-342	61-361	61-484	61-486	61-497	61-498	61-605	61-610	61-614	61-702	61-704	61-744	61-746	61-763	61-765	61-773	61-775	61-795	61-797
<b>FUSES</b>																									
F-1	0.5A (250V)	6.35 x 38mm										•													
F-105	1A (600V)	10.3 x 35mm																						•	
F-310	250mA (250V)	5 x 20mm		•							•														
F-312	500mA (250V)	5 x 20mm			•																				
F-314	10A (250V)	5 x 20mm			•																				
F-340	0.5A (500V)	6.35 x 32mm				•	•																		
F-341	10A (1000V)	10 x 38mm				•	•																		
F-497	440mA (1000V)	10 x 35mm						•	•	•	•														
F-498	11A (1000V)	10 x 38mm						•	•	•	•														
F-797	315mA (1000V)	5 x 32mm																						•	
LA-3893	2A (600V)	6.35 x 25.4mm					•																		
LA-3898	0.25A (500V)	5 x 32mm					•																		
<b>BATTERIES</b>																									
61-201	1.5V (LR44)									•															
—	1.5V (AA)										•	•													
—	1.5V (AAA)				•								•	•									•	•	
—	9V		•	•	•	•	•	•	•	•			•	•			•	•	•	•	•	•	•	•	
<b>TEST LEADS</b>																									
TL-34	Leads w/pin connectors										•														
TL-56	Test leads											•													
TL-95	Test leads		•																						
TL-100	Test leads w/alligator clips				•	•	•	•	•	•			•	•											
TL-102	Silicone test leads												•	•											
TL-104	Test leads w/large alligator clips																	•	•	•	•				
TL-310	Test leads			•	•																				
TL-795	Test leads																							•	
TL-797	Test leads																								•

## Safety in the Field

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**Category I** – The signal level for telecommunications, electronic and other low-energy equipment with transient-limiting protection. Peak impulse transient range is 600–4,000 volts with a 30 ohm source.

**Category II** – The local level for fixed and non-fixed powered devices including appliances, lighting and portable equipment. Outlets located more than 30 feet from CAT III sources and 60 feet from CAT IV sources. Peak impulse transient range is from 600–6,000 volts with a 12 ohm source.

**Category III** – The distribution level for fixed primary feeders or branch circuits. Circuits that are separated from CAT IV sources by at least one level of transformer isolation. Peak impulse transient range is 600–8,000 volts with a 2 ohm source.

**Category IV** (proposed) – The primary supply level for the highest levels of transient overvoltage. Includes the utility service both outside and at the service entrance, service drop from the pole to the building, overhead line to remote buildings, and underground line to a well pump. Peak impulse transient range is 600–12,000 volts with less than a 1 ohm source.

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