

# TEST AND MEASUREMENT (LAB) INSTRUMENTS

## MULTIFUNCTION INSTALLATION TESTERS

### MODELS CA 6116N & CA 6117

*Safety for your electrical installations and high performance with these unique instruments*



## SPECIFICATIONS

MODELS	CA 6116N	CA 6117
<b>CONTINUITY/RESISTANCE</b>		
I Rated/Range/Resolution	I > 200mA / 39.99Ω / 0.01Ω / ±(1.5% of measurement + 2cts); 12mA/39.99Ω & 399.9Ω / 0.01 & 0.1Ω / ±(1.5% of measurement + 5cts) with beep	
Range/Resolution/Accuracy	4kΩ/1Ω/±(1.5% of measurement + 5cts); 40 to 400kΩ/10 to 100Ω/±(1.5% of measurement + 2cts)	
<b>INSULATION</b>		
Rated Voltage	50, 100, 250, 500, 1000V <sub>bc</sub>	
Range/Resolution/Accuracy	0.01MΩ to 2GΩ / 10kΩ to 1MΩ / ±(5% of measurement + 3cts)	
Short-Circuit Current	≤ 3mA	
<b>GROUND RESISTANCE</b>		
3-Point Range/Resolution/Accuracy	0.50 to 40Ω / 0.01Ω / ±(2% of measurement + 10cts); 40Ω to 15kΩ / 0.1 to 1Ω / ±(2% of measurement + 2cts); 15 to 40kΩ / 10Ω / ±(10% of measurement + 2cts)	
U <sub>fk</sub>	Complies with SEV 3569	
1-Point Selective Range/Resolution/Accuracy	0.20 to 39.99Ω – 40 to 399.9Ω / 0.01 to 0.1Ω / ±(10% of measurement + 10cts) (ISel via clamp)	
<b>LOOP IMPEDANCE (Z<sub>s</sub> (L-PE) &amp; Z<sub>i</sub> (L-N or L-L)) / 1-POINT LIVE GROUND</b>		
Live Ground Installation Voltage/Frequency	90 to 500V / 15.8 to 17.5Hz – 45 to 65Hz	
<b>HIGH-CURRENT MODE WITH TRIP Z<sub>s</sub> (L-PE) &amp; Z<sub>i</sub> (L-N or L-L)</b>		
Range/Resolution/Accuracy	Max. test current: 7.5 A (0.050) 0.100 to 0.5Ω / 0.001Ω / ±(10% of measurement + 20cts); 0.5 to 3.999Ω / 0.001Ω / ±(5% of measurement + 20cts); 3.999 to 39.99Ω / 0.01Ω / ±(5% of measurement + 2cts); 39.99 to 399.99Ω / 0.1Ω / ±(5% of measurement + 2cts)	
No TRIP Mode (Z <sub>s</sub> (L-PE) only)	Test current: 6mA – 9mA – 12mA (as required) 0.20 to 0.99Ω / 0.01Ω / ±(15% of measurement + 10cts) 1.00 to 1.99Ω / 0.01Ω / ±(15% of measurement + 3cts) 2.00 to 39.99Ω / 0.01Ω / ±(10% of measurement + 3cts) 40.00 to 399.9Ω / 0.1Ω / ±(5% of measurement + 2cts) 400 to 3999Ω / 1Ω / ±(5% of measurement + 2cts)	
Calculation of I <sub>k</sub> Short-Circuit Current PFC (Z <sub>s</sub> ), I <sub>Sc</sub> PSCC (Z <sub>i</sub> )	Fault current and short-circuit current: 0.1A to 20kA	
Integrated Fuse Table	–	Yes
Voltage Drop ΔV% (Z <sub>i</sub> )	–	-40% to 40%
Others	Measurement of the resistive and inductive components of the Z <sub>s</sub> and Z <sub>i</sub> impedances	
<b>AC &amp; A-TYPE RCDs</b>		
Installation Voltage/Frequency	90 to 500V / 15.8 to 17.5Hz and 45 to 65Hz	
I <sub>Δn</sub>	10/30/100/300/500/650/1000mA (90 to 280V) or variable – 10/30/100/300/500mA (280 to 550V) or variable Ramp and pulse test	
No TRIP Test	at ½ I <sub>Δn</sub> – Duration: 1000 or 2000ms	
Ramp Mode	0.2 to 0.5 x I <sub>Δn</sub> (U <sub>f</sub> ) / 0.3 x I <sub>Δn</sub> to 1.06 x I <sub>Δn</sub> in increments of 3.3% x I <sub>Δn</sub>	
<b>TRIP TIME MEASUREMENT</b>		
Range/Resolution/Accuracy	0.50 to 40Ω / 0.01Ω / ±(2% of measurement + 10cts); 40Ω to 15kΩ / 0.1 to 1Ω / ±(2% of measurement + 2cts); 15 to 40kΩ / 10Ω / ±(10% of measurement + 2cts)	
<b>B-TYPE RCDs</b>		
Installation Voltage/Frequency	–	90 to 275V / 15.8 to 17.5Hz and 45 to 65Hz
I <sub>Δn</sub> : Ramp/Pulse 2 x I <sub>Δn</sub> Pulse 4 x I <sub>Δn</sub>	–	10/30/100/300/500mA and 10/30/100mA with pulse 4I <sub>Δn</sub> Duration: 150ms with 4 x I <sub>Δn</sub> or 300ms with 2 x I <sub>Δn</sub>
Test in Ramp Mode	–	0.2 x I <sub>Δn</sub> to 2.2 x I <sub>Δn</sub>
TRIP Test: 2 x I <sub>Δn</sub> & 4 x I <sub>Δn</sub>	–	I <sub>Δn</sub> ≤ 200mA: 2.2 x 2 x I <sub>Δn</sub> I <sub>Δn</sub> > 200mA: 1.1 x 2 x I <sub>Δn</sub> I <sub>Δn</sub> ≤ 100mA: 2.2 x 4 x I <sub>Δn</sub>

Specifications continued on next page.

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## MULTIFUNCTION INSTALLATION TESTERS

### SPECIFICATIONS - CONTINUED

MODELS	CA 6116N	CA 6117
<b>OTHER MEASUREMENTS</b>		
Current by Clamps C177	5.0mA to 199.9A	
Current by Clamp MN77	(1mA*) 5.0mA to 19.99A	
Voltage	0 to 550V <sub>ac/dc</sub> and 15.8 to 500Hz	
Frequency	10 to 500Hz	
Phase Rotation	20 to 500V <sub>ac</sub>	
Active Power	0 to 110kW single-phase – 0 to 330kW three-phase Simultaneous display of voltage and current waveforms	
Harmonics	Voltage and current/up to 50 <sup>th</sup> order / THD-F / THD-R	
<b>GENERAL SPECIFICATIONS</b>		
Display	Large 5.7" backlit graphic color, LCD screen, 320 x 240 points	
Storage/Communication	via USB for data transfer and report creation	
Power Source (rechargeable battery)	Lithium-ion 10.8V rated 5.8 Ah	
Battery Life	up to 30 hours	
Dimensions/Weight	11.02 x 7.48 x 5.04" (280 x 190 x 128mm) / 4.85lbs (2.2kg)	
<b>SAFETY</b>		
Safety Rating	IEC 61010 -1/600V CAT III & 300V CAT IV/IEC 61557	
Ingress Protection	IP53 / IK04	
EMC	IEC 61326-1	

\*If a voltage is connected to the instrument



DataView®

### PRODUCT INCLUDES

Carrying bag, US power cord and charger, Li-Ion battery pack, USB A/B cable, set of (3) 3-prong color-coded (red, blue, green) safety voltage leads, set of (3) color-coded (red, blue, green) test probes, set of (3) color-coded (red/blue/green) alligator clips, set of (2) color-coded (red/black) safety leads 4mm straight plug, 3-prong US measurement cord, remote test probe, wrist strap, hands-free strap, multilingual safety card, and a USB drive with DataView® software and a user manual.



### FEATURES

- Testing according to the international standards: IEC 60364-6, NF C 15-100, VDE 100, XP C 16-600, etc.
- Simple, reliable connection supported by contextual help for each function, including all the connection diagrams
- Suitable for all neutral systems (TT, TN, IT)
- Type-B RCD testing available (Model CA 6117)
- Li-Ion battery for a longer battery life
- Measurements: voltage, current via clamp, power, waveforms and harmonics
- Measurement of voltage drop for correct sizing of conductor diameters
- Loop measurement with 1mΩ resolution
- 3-level storage
- Includes DataView® analysis software for programming, downloading, storing and report generation of test data
- Integrated fuse table for quick reading of the results on the instrument

### SPECIAL ORDERS ONLY

CATALOG NO.	DESCRIPTION
2138.06	Multi-Function Installation Tester Model CA 6116N (US) (includes DataView® Software)
2138.07	Multi-Function Installation Tester Model CA 6117 (US) (includes DataView® Software)
2138.10	Multi-Function Installation Tester Model CA 6116N Kit (US) (includes C177A, DataView® Software)
2138.11	Multi-Function Installation Tester Model CA 6117 Kit (US) (includes C177A, DataView® Software)