

# 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 > 200 mA / 39.99 Ω / 0.01 Ω / ± (1.5 % of measurement + 2 cts); 12 mA / 39.99 Ω & 399.9 Ω / 0.01 & 0.1 Ω / ± (1.5 % of measurement + 5 cts) with beep	
Range/Resolution/Accuracy	4 kΩ / 1 Ω / ± (1.5 % of measurement + 5 cts); (40 to 400 kΩ) / (10 to 100 Ω) / ± (1.5 % of measurement + 2 cts)	
<b>INSULATION</b>		
Rated Voltage	50 V <sub>DC</sub> , 100 V <sub>DC</sub> , 250 V <sub>DC</sub> , 500 V <sub>DC</sub> , 1000 V <sub>DC</sub>	
Range/Resolution/Accuracy	0.01 MΩ to 2 GΩ / 10 kΩ to 1 MΩ / ± (5 % of measurement + 3 cts)	
Short-Circuit Current	≤ 3 mA	
<b>GROUND RESISTANCE</b>		
3-Point Range/Resolution/Accuracy	(0.50 to 40) Ω / 0.01 Ω / ± (2 % of measurement + 10 cts); 40 Ω to 15 kΩ / (0.1 to 1) Ω / ± (2 % of measurement + 2 cts); (15 to 40) kΩ / 10 Ω / ± (10 % of measurement + 2 cts)	
U <sub>fk</sub>	Complies with SEV 3569	
1-Point Selective Range/Resolution/Accuracy	(0.20 to 39.99) Ω to (40 to 399.9) Ω / (0.01 to 0.1) Ω / ± (10 % of measurement + 10 cts) (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 500) V / (15.8 to 17.5) Hz and (45 to 65) Hz	
<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 0.5) Ω / 0.001 Ω / ± (10 % of measurement + 20 cts); (0.5 to 3.999) Ω / 0.001 Ω / ± (5 % of measurement + 20 cts); (3.999 to 39.99) Ω / 0.01 Ω / ± (5 % of measurement + 2 cts); (39.99 to 399.99) Ω / 0.1 Ω / ± (5 % of measurement + 2 cts)	
No TRIP Mode (Z <sub>s</sub> (L-PE) only)	Test current: (6, 9, or 12) mA (as required) (0.20 to 0.99) Ω / 0.01 Ω / ± (15 % of measurement + 10 cts) (1.00 to 1.99) Ω / 0.01 Ω / ± (15 % of measurement + 3 cts) (2.00 to 39.99) Ω / 0.01 Ω / ± (10 % of measurement + 3 cts) (40.00 to 399.9) Ω / 0.1 Ω / ± (5 % of measurement + 2 cts) (400 to 3999) Ω / 1 Ω / ± (5 % of measurement + 2 cts)	
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: 0.1 A to 20 kA	
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 500) V / (15.8 to 17.5) Hz and (45 to 65) Hz	
IΔn	(10/30/100/300/500/650/1000) mA (90 to 280) V or variable – (10/30/100/300/500) mA (280 to 550) V or variable Ramp and pulse test	
No TRIP Test	at ½ IΔn – Duration: 1000 or 2000 ms	
Ramp Mode	0.2 to 0.5 x IΔn (U <sub>f</sub> ) / 0.3 x IΔn to 1.06 x IΔn in increments of 3.3 % x IΔn	
<b>TRIP TIME MEASUREMENT</b>		
Range/Resolution/Accuracy	(0.50 to 40) Ω / 0.01 Ω / ± (2 % of measurement + 10 cts); 40 Ω to 15 kΩ / (0.1 to 1) Ω / ± (2 % of measurement + 2 cts); (15 to 40) kΩ / 10 Ω / ± (10 % of measurement + 2 cts)	
<b>B-TYPE RCDs</b>		
Installation Voltage/Frequency	–	(90 to 275) V / (15.8 to 17.5) Hz and (45 to 65) Hz
IΔn: Ramp/Pulse 2 x IΔn Pulse 4 x IΔn	–	(10/30/100/300/500) mA and (10/30/100) mA with pulse 4 IΔn Duration: 150 ms with 4 x IΔn or 300 ms with 2 x IΔn
Test in Ramp Mode	–	0.2 x IΔn to 2.2 x IΔn
TRIP Test: 2 x IΔn & 4 x IΔn	–	IΔn ≤ 200 mA: 2.2 x 2 x IΔn IΔn > 200 mA: 1.1 x 2 x IΔn IΔn ≤ 100 mA: 2.2 x 4 x IΔn

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## SPECIFICATIONS - CONTINUED

MODELS	CA 6116N	CA 6117
<b>OTHER MEASUREMENTS</b>		
Current by Clamps C177	5.0 mA to 199.9 A	
Current by Clamp MN77	(1 mA*) 5.0 mA to 19.99 A	
Voltage	(0 to 550) V <sub>AC/DC</sub> and (15.8 to 500) Hz	
Frequency	(10 to 500) Hz	
Phase Rotation	(20 to 500) V <sub>AC</sub>	
Active Power	(0 to 110) kW single-phase – (0 to 330) kW 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 in backlit graphic color, LCD screen, 320 x 240 points	
Storage/Communication	Via USB for data transfer and report creation	
Power Supply (rechargeable battery)	Li-ion 10.8 V rated 5.8 A-h	
Battery Life	Up to 30 h	
Dimensions/Weight	(11.02 x 7.48 x 5.04) in (280 x 190 x 128) mm / 4.85 lb (2.2 kg)	
<b>SAFETY</b>		
Safety Rating	IEC 61010 -1/600 V CAT III & 300 V CAT IV/IEC 61557	
Ingress Protection	IP53 / IK04	
EMC	IEC 61326-1	

\*If a voltage is connected to the instrument

## 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 1 mΩ 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



**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 4 mm 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 user manual.



### SPECIAL ORDERS ONLY

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