

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



MODELS	CA 6116N	CA 6117
CONTINUITY / RESISTANCE		
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)	
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)	
INSULATION		
Rated Voltage	(50, 100, 250, 500, 1000) V _{dc}	
Range / Resolution / Accuracy	0.01 MΩ to 2 GΩ / 10 kΩ to 1 MΩ / ± (5 % of measurement + 3 cts)	
Short-Circuit Current	≤ 3 mA	
GROUND RESISTANCE		
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)	
U _{fk}	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) (<i>Isel via clamp</i>)	
LOOP IMPEDANCE (Z_s (L-PE) & Z_i (L-N or L-L)) / 1-POINT LIVE GROUND		
Live Ground Installation Voltage / Frequency	(90 to 500) V / (15.8 to 17.5) Hz and (45 to 65) Hz	
High-current mode with TRIP Z _s (L-PE) & Z _i (L-N or L-L) Range / Resolution / Accuracy	Max. test current: 7.5 A (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); (3.99 to 39.99) Ω / 0.01 Ω / ± (5 % of measurement + 2 cts); (39.9 to 399.9) Ω / 0.1 Ω / ± (5 % of measurement + 2 cts)	
No TRIP Mode (Z _s (L-PE) only) Range / Resolution / Accuracy	Test current: (6, 9, or 12) mA (<i>as required</i>) (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) (40.0 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 _k Short-Circuit Current PFC (Z _s), I _{Sc} PSCC (Z _i)	Fault current and short-circuit current: 0.1 A to 6 kA	
Integrated Fuse Table	–	Yes
Voltage Drop ΔV % (Z _i)	–	(-40 to 40) %
Others	Measurement of the resistive and inductive components of the Z _s and Z _i impedances	
AC & A-TYPE RCDs		
Installation Voltage / Frequency	(90 to 500) V / (15.8 to 17.5) Hz and (45 to 65) Hz	
IΔn	(6 / 10 / 30 / 100 / 300 / 500 / 650 / 1000) mA (90 to 280) V or variable – (6 / 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 _f) / (0.3 to 1.06) x IΔn in increments of 3.3 % x IΔn	
TRIP TIME MEASUREMENT		
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-TYPE RCDs		
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	–	(6 / 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 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

Specifications continued on next page.

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MODELS	CA 6116N	CA 6117
OTHER MEASUREMENTS		
Current by Clamps C177	5 mA to 199.9 A	
Current by Clamp MN77	(1 mA*) 5.0 mA to 19.99 A	
Voltage	(0 to 550) V _{AC/DC} and (15.8 to 500) Hz	
Frequency	(15.8 to 500) Hz	
Phase Rotation	(20 to 500) V _{AC}	
Active Power	(5 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 th order / THD-F / THD-R	
GENERAL SPECIFICATIONS		
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 (<i>rechargeable battery</i>)	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)	
SAFETY		
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
Consult factory for NIST Calibration prices.

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, 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

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

CAT. #	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, and DataView® Software) - SPECIAL ORDER ONLY
2138.11	Multi-Function Installation Tester Model CA 6117 Kit (US) (includes C177A, and DataView® Software) - SPECIAL ORDER ONLY