CLAMP-ON GROUND RESISTANCE TESTER
Models 3711 & 3731

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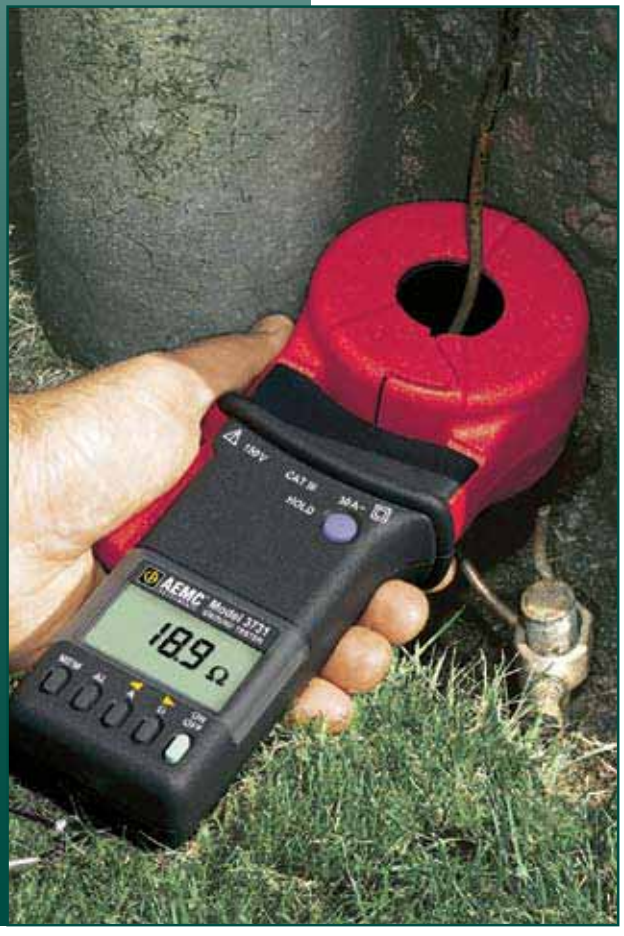
CHAUVIN ARNOUX GROUP



- Measure down to 0.1 Ω with resolution of 0.01Ω
- Fast settling time (approximately one second)
- High immunity to electrical noise for work around transmission towers and substations
- Extended battery life over 1000 tests (Auto-Off)
- Rugged jaw construction withstands heavy outdoor usage
- Smooth jaw matting surfaces easily cleaned to maintain reading accordingly
- US Patent Number 362,639

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Model 3731 performing a ground rod resistance check.

The Models 3711 and 3731 measure ground rod and grid resistance in any environment without the use of auxiliary ground rods. Clamp-on ground resistance testers are used on multi-grounded systems without disconnecting the ground under test. The Models 3711 and 3731 simply clamp around the ground conductor or rod and measures the resistance to ground fast and accurately.

By performing measurements on installed ground systems, the user also verifies the quality of the grounding connections and bonds. Resistance and continuity of grounding loops around pads and buildings may also be measured.

Both models include a current measurement function. The probe's high sensitivity enables measurement of leakage current flowing to ground or circulating in ground loops down to 1mA as well as neutral and phase currents to 30Arms. This feature provides additional information, which is vital in distribution ground networks carrying higher levels of noise and harmonics, that affect power quality.

The Model 3731 offers an alarm function and a memory (logging) function. In the alarm mode, the probe will audibly and visually indicate readings beyond set point. The user may also have the alarm initiated above or below the set point. This alarm feature permits quick field checks where "pass" or "fail" readings will suffice.

APPLICATIONS

- Measure electrical ground rod and grid resistance
- Use on multi-grounded systems without disconnecting the ground rod under test
- Measure resistance and continuity of grounding loops around pads and buildings
- Measure leakage current flowing to ground or circulating in ground systems
- Conduct field surveys and retrieve and analyze readings at a later time
- Use on cell towers and telecommunication sites
- Use on pools, spas and other consumer installations

FEATURES

- Simple and fast clamp-on operation — no leads, no auxiliary rods or spacing requirements
- Direct reading of ground resistance from 0.1 Ω to 1200 Ω
- Direct reading of continuity and ground loop resistance
- Direct reading of ground leakage or phase current from 1mA to 30Arms
- Jaw design with large 1.25" (32mm) window — accommodates up to 1000kcmil cables
- Auto-Off for power management
- Alarm function with adjustable set point and buzzer for quick field checks (Model 3731)
- Memory function to store 99 field measurements for later retrieval and analysis (Model 3731)
- Meets EN 61010, Cat. III
- CE Mark and UL approved and double insulated
- Rugged Lexan® head and body construction resists breakage
- Instrument's alarm settings and stored memory information saved during shutdown (Model 3731)
- Patented design

FUNCTIONS & FEATURES		
	3711	3731
Ohms Range	✓	✓
Arms Range	✓	✓
Hold Function	✓	✓
Self Test	✓	✓
Auto-Off	✓	✓
Battery Life Indicator	✓	✓
Noise Indicator	✓	✓
Open Jaw Indicator	✓	✓
Closed Loop Indicator	✓	✓
Multi-Tone Beeper	✓	✓
Alarm Function	–	✓
Memory (Logging)	–	✓

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CONSTRUCTION

The Models 3711 and 3731 bodies are built of Lexan ® (or equivalent polycarbonate) for rugged use. The probe heads are encapsulated in a double-walled shell for extra strength and reinforced for enhanced field reliability. Overall construction and mechanical design ratings such as drop test, shock, vibration and weather proofing against water penetration or dust, meet or exceed IEC standards. These products have also been designed to EN 61010, Cat. III and are UL approved and are CE Marked.

The probe head, (jaw) is a key component in the measurement and overall product performance. The large jaw thickness permits use on tight ground conductors on poles and in manholes. The 1.25"(32mm) opening accommodates not only ground rods, but also larger ground conductors (up to 1000kcmil) typically found in telecommunication buildings or railroad applications.

The inner jaw is composed of two independent and individually shielded magnetic cores, permitting measurement without noise interference or cross talk common to instruments with separate probes.

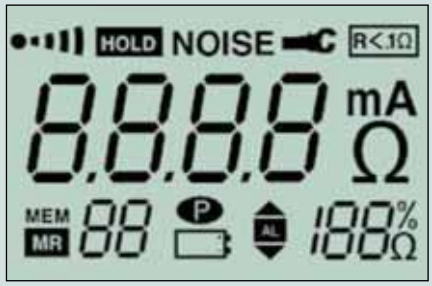
Thorough mechanical design, including small winglets, ensures reliable and repetitive jaw alignment for accuracy and prevents undesirable contaminations into the jaw spring assembly. The smooth head surfaces eliminate the build up of foreign particles that cause errors in reading.

CE requirements and design minimize electromagnetic inter ference near substations and tower sites.

The ergonomic body design permits one-handed operation. The guard provides additional strength, and prevents the hand from slipping or coming into contact with conductors under test. The LCD lens cover may be easily replaced if scratched. The sealed push-buttons directly access all test functions and are easily operated even with gloved hands.

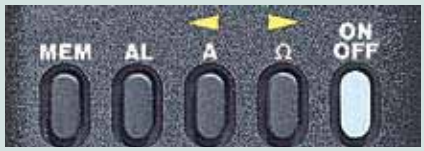
The smooth head surface eliminates build up of foreign particles and improves reading accuracy.

OVERVIEW OF FUNCTIONS



Ω	Displayed when measuring resistance
mA, A	Displayed when measuring current
100%	Percentage of battery life remaining
	Flashing indicates low battery condition
P	Indicates the Auto-Off feature is inactive
AL	Indicates Alarm Active Hi or Lo depending on which arrow is displayed
HOLD	HOLD pushbutton has been pressed
	Active beeper function
NOISE	Noise in the reading
	Probe jaws not closed properly
188Ω	Alarm set points
MEM	Memory function active
MR 88	Memory Recall (MR) and location (from 1 to 99)
R<.1Ω	Resistance measured is below .1 Ω

BUTTONS



ON/OFF
Power ON or power OFF. Activates display self test at power-up.

Ω (▶)
Resistance measurement. (Adjusts the alarm set point and the memory position when in programming mode.)

A (◀)
Current measurement. (Adjusts the alarm set point and the memory position when in programming mode.)

AL (Model 3731 only)
Activate/deactivate the alarm function. Access the value of the alarm set point when in programming mode.

MEM (Model 3731 only)
Activate the memory function or to read the stored values in MR (Memory Recall). Clears the memory when in programming mode.

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SPECIFICATIONS

MODEL S	3711 & 3731		
ELECTRICAL			
Ground Resistance Ranges	Measurement Range	Resolution	Accuracy (% of Reading)
Auto-Ranging 0.01 to 1200 Ω	0.10 to 1.00 Ω	0.01Ω	±(2% ± 0.02Ω)
	1.0 to 50.0 Ω	0.1Ω	±(1.5% ± 0.1Ω)
	50.0 to 100.0 Ω	0.5Ω	±(2% ± 0.5Ω)
	100 to 200 Ω	1Ω	±(3% ± 1Ω)
	200 to 400 Ω	5Ω	±(6% ± 5Ω)
	400 to 600 Ω	10 Ω	±(10% ± 10Ω)
	600 to 1200 Ω	50 Ω	Approx: 25% ± 50Ω
Current Measurement Ranges	Measurement Range	Resolution	Accuracy (% of Reading)
Auto-Ranging 1mA to 30.00 Arms	1 to 299mA	1mA	±(2.5% + 2mA)
	0.300 to 2.999A	0.001A	±(2.5% + 2mA)
	3.00 to 29.99A	0.01A	±(2.5% + 20mA)
Resistance Measurement Frequency		2403Hz	
Current Measurement Frequency	47 to 800Hz		
Current Overload	OL displayed above 29.99Arms		
Power Source	9V Alkaline battery (IEC 6LF22 or NEDA 1604A)		
Battery Life	Typical: 8 hours or approx. 1000 measurements of 30 seconds		
MECHANICAL			
Dimensions	9.25 x 3.94 x 2.17" (235 x 100 x 55mm)		
Weight	2.2 lbs (1kg)		
Jaw Window Diameter	1.25" (32mm)		
Jaw Opening	1.38" (35mm)		
U.S. Patent	No. 362,639		
UL File No.	E192383		
DISPLAY			
LCD	3¾ Digit, 1.73 x 1.10" (44 x 28mm)		
ENVIRONMENTAL			
Operating Temperature	14° to 131°F (-10° to 55°C)		
Operating Humidity	10 to 90%RH @ 14° to 104°F (-10° to 40°C), 75% RH @ 131°F (55°C)		
Storage Temperature	-22° to 158°F (-30° to 70°C)		
SAFETY			
Safety Rating	EN 61010-2-032 (Class 2) Double Insulation		
Double Insulation ⧈	Yes		
CE Mark	Yes		

Clamp-On Ground Resistance Tester Models 3711 & 3731 include a calibration loop, battery and user manual in a hard carrying case.

Calibration Check Loop (included)

ORDERING INFORMATION	CATALOG NO.
Ground Resistance Tester Model 3711 (Clamp-On) Includes 9V Alkaline battery, 25 Ω calibration check loop, hard carrying case and user manual	Cat. #2117.60
Ground Resistance Tester Model 3731 (Clamp-On) with memory and alarm Includes 9V Alkaline battery, 25 Ω calibration check loop, hard carrying case and user manual	Cat. #2117.61

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