

MEASURING INSTRUMENTS  
**LOW VOLTAGE**





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Sofamel S.L. is a Spanish company dedicated to the production of electrical material of connection as well as safety and electrical protection material.

Sofamel's main objective has been to reach a high degree of specialization with the aim of providing a global solution for our clients. The same backed up by strict quality standards and by important investments in machinery and design for the manufacturing of all those products that our factory produces. This has allowed us to offer one of the most extensive ranges of articles that exists on the market.

Our commitment with excellent quality work allows our company to own the quality management system certificate under standard UNE-EN ISO 9001:2015 and R+D+i certificate under standard UNE 166002:2021, both duly granted by the Spanish Association for Standardization and Certification (AENOR).





# MEASURING INSTRUMENTS LOW VOLTAGE






## 31009 Tester PTL-1000

### Optical & Acoustic

Non-contact voltage tester that is easy to handle and use. Adjustable voltage detection range. Automatically distinguishes neutral and phase wires. Distinct alarm sounds and different coloured LEDs to indicate high, medium and low voltage intensity. Suitable for a wide range of applications.

Code	Ref.	 Box
635330	Tester PTL-1000	1

#### Technical information

- **Alarm mode:** Acoustic and light
- **Measuring range:** 12 V<sub>AC</sub> - 1000 V<sub>AC</sub> / 48 V<sub>AC</sub> - 1000 V<sub>AC</sub>
- **Power supply:** 2 x 1.5 V AAA batteries
- **Frequency:** 50 Hz / 60 Hz
- **Overload category:** CAT III 1000 V / CAT IV 600 V
- **Certificates:** CE, RoHS
- **Torch:** White light LED lamp
- **Colour:** Yellow
- **Dimensions:** 156 x 20 x 20 mm
- **Weight:** 45 g

Supplied with a cardboard box for transport and storage.  
According with standards EN 61010-1, IEC 62321 and EN 61326-1.



## 31009 Tester BTL-600 with True RMS

### Optical & Acoustic

Compact and convenient, highly accurate digital multimeter. Manual and automatic range adjustment. Pen type design that is easy to hold and use. Very safe, non-contact voltage detector function gives the user more confidence. Illuminated screen and torch allow use in all working environments, including in the dark. Diode test and continuity test functions.

Code	Ref.	Box
635300	Tester BTL-600	1

#### Technical information

- PScreen: 2000 digits
- Measuring range: Automatic and manual
- Voltage range: DC 200 mV / 2 V / 20 V / 200 V / 600 V  
AC 200 mV / 2 V / 20 V / 200 V / 600 V
- Current range: DC 20 mA / 200 mA  
AC 20 mA / 200 mA
- Resistance range: 200 Ω / 2 kΩ / 20 kΩ / 200 kΩ / 2 MΩ / 20 MΩ
- Other functions: Diode test and Continuity test.  
Data storage function
- VCN mode: Non-contact voltage detection
- Category: CAT III 600 V
- Certificates: CE, RoHS
- Power supply: 2 x 1.5 V AAA batteries
- Colour: Yellow
- Dimensions: 248 x 42 x 34 mm
- Weight: 110 g

Supplied with a nylon case for transport and storage.  
According with standards EN61010-1, EN61010-2-033, EN61326 and IEC 62321.



## 31007 Tester BVD-1000

### Optical & Acoustic

This tester including test of AC/DC voltage (including three-phase AC), phase sequence indication of three-phase AC, RCD test, continuity test, simple voltage detection without battery power supply, overvoltage indication and low voltage indication, etc. The attached flashlight provides convenience for using the tester in dark environments.

Code	Ref.	Box
635430	Tester BVD-1000	1

#### Technical information

- **Operating voltage:** ≤1000 VAC/CC
- **Screen:** LED
- **Frequency range:** 40Hz~1kHz
- **Voltage polarity indication:** automatic LED light indication.
- **Range selection:** automatic
- **RCD test:** voltage 230V (40-500Hz), current: 30mA~40mA, testing time<10s, recovery time: 60s.
- **Continuity test:** ≤100kΩ buzzer.
- **Phase sequence test:** three-phase AC voltage range: 57V~400V, frequency 50Hz~60Hz.
- **Power supply:** 1.5V x 2 AAA batteries
- **Battery undervoltage indication:** about less than 2.5V. Short circuit the L1 and L2 probes in the power-on state, and check the status of the "-" LED indicator. If the indicator is lit, it indicates undervoltage.
- **Working temperature:** -5°C~+40°C
- **Storage temperature:** -20°C~+60°C
- **Working humidity:** ≤85%RH
- **Overvoltage protection level:** CAT IV 600V, CAT III 1000V Pollution level: Level 2
- **Waterproof and dustproof level:** IP65
- **Automatic shutdown:** Shut down automatically for about 30 seconds.

Supplied with a nylon case for transport and storage. According with standards IEC 61010-1, IEC 61243-3:2014, EN 60529, and EN 61326-1 for electronic testing instruments, and belongs to Class II pollution. The overvoltage standards are CAT IV 600V and CAT III 1000V.





## 31007 Tester BVD-1500

### Optical & Acoustic

The capability of this tester extends up to 1200 AC / 1500 DC, covering voltage tests in both alternating and direct current, including three-phase voltage in alternating current. Additionally, it provides phase sequence indication in three-phase alternating current systems, residual current device (RCD) tests, electrical continuity, voltage detection without the need for battery power, as well as overvoltage and undervoltage alerts, among other functions. The integrated flashlight provides convenient illumination for using the tester in dark environments.

Code	Ref.	Box
635440	Tester BVD-1500	1

#### Technical information

- **Operating voltage:** 1200 VAC/1500 VDC
- **Screen:** LCD
- **Frequency range:** 40Hz-1kHz, resolution 1Hz, error  $\pm$  (3%+5d).
- **Buzzer:** Supports two modes (buzzer and mute).
- **Voltage polarity indication:** automatic
- **Range selection:** automatic
- **RCD test:** voltage 230V (40-500Hz); Current: 30mA-40mA, testing time<10s, recovery time: 60s;
- **Continuity test:** <10k  $\Omega$  buzzer
- **Phase sequence test:** three-phase AC voltage range: 57V-400V, frequency 50Hz-60Hz.
- **Power supply:** 1.5V x 2 AAA battery  
Battery undervoltage indication: about less than 2.5V
- **Working temperature:** -5 °C~+40 °C
- **Storage temperature:** -20 °C~+60 °C
- **Working humidity:**  $\leq$  85% RH
- **Overvoltage protection level:** CAT IV 600V, CAT III 1000V
- **Pollution level:** Level 2
- **Waterproof and dustproof level:** IP65
- **Automatic shutdown:** Shut down automatically for about 30 seconds in no testing status.

Supplied with a nylon case for transport and storage. According with standards IEC 61010-1, IEC 61243-3:2014, EN 60529, and EN 61326-1 for electronic testing instruments, and belongs to Class II pollution. The overvoltage standards are CAT IV 600V and CAT III 1000V.



## 31009 Professional multimeter CTL-1000 with True RMS

Optical & Acoustic

Digital AC/DC, T-RMS clamp meter with automatic and manual ranges and a VFD frequency converter.

The CTL-1000 has a large 13 mm HD display with 6000 digits and a backlight for easy reading.

It has functions for measuring AC and DC voltage, AC and DC current, resistance, capacitance, temperature, low impedance voltage, continuity and NCV (non-contact voltage detection).

Code	Ref.	Box
635360	Multimeter CTL-1000	1

### Technical information

- Measurement of actual/real values
- Non-contact voltage detection (NCV)
- DC voltage: 6 V / 60 V / 600 V / 1000 V
- AC voltage: 6 V / 60 V / 600 V / 1000 V
- Alternating Current: 60 A / 600 A / 1000 A
- Direct Current: 60 A / 600 A / 1000 A
- Resistance: 600 Ω / 6 KΩ / 60 KΩ / 600 KΩ / 6 MΩ / 60 MΩ
- Capacitance: 60 nF / 600 nF / 6 uF / 60 uF / 600 uF / 6 mF / 60 mF
- Frequency: 100 Hz / 1000 Hz / 10 KHz
- Temperature measurements: °C/°F -20 ~ 1000°C / -4 ~ 1832°F
- Continuity Test
- LowZ DC: 1000 V / AC1000 V
- DCµA: 200 µA / VFD
- Clamp Ø: 40 mm
- LED lamp
- Memory Min / Max and peak values
- Low battery indicator
- Stores relative measurement data
- Backlight
- Weight: 314.5 g
- Size: 246 × 85 × 40 mm
- Power supply: 3 × 1.5 V AAA batteries

Supplied with a nylon case for transport and storage.

According with standards EN61010-1, EN61010-2-033, EN61326, CAT III 1000 V / CAT IV 600 V



Accessories included.

## 31009 IPR-400 Phase/Rotation Indicator

Optical

It is used to verify the direction of the magnetic field in three-phase systems and the rotation of the motor. Without cables or probes, simply by placing it on the motor aligned with the transmission axis. Durable, lightweight, and reliable, it is ideal for electrical tasks with motors or three-phase systems, and comes with various probes to suit any application.



Code	Ref.	Box
635320	IPR-400 Phase/Rotation Indicator	1

### Technical information

- Operating voltage: 120 V ~ 400 VAC
- Current consumption: ≤20 mA
- Frequency range: 2 Hz ~ 400 Hz
- Non-contact rotating field indication function
- Operating temperature: 0 °C a +40 °C
- Operating altitude: 2000 m
- Category: CAT III 600 V
- Certificates: CE, RoHS
- Power supply: 3 x 1.5 V AA batteries
- Dimensions: 128 x 70 x 30 mm
- Weight: 168 g

Supplied with a nylon case for transport and storage.  
According with standards EN61010-1, EN61010-2-032, EN61326 and IEC 62321.



Accessories included.



## 31009 Digital multimeter DM-600


### Optical

Portable digital multimeter with backlit LCD display which allows values to be read even in dark locations.

The whole system is based on integrated circuits, equipped with overload protection. Measures AC and DC voltage, AC and DC current, resistance, capacitance, frequency, diodes and perform continuity and NCV (non-contact voltage detection) tests.

Code	Ref.	Box
635380	Digital multimeter DM-600	1

#### Technical information

- Automatic range
- Operating voltage: 600 VDC/AC
- Resistance ranges: 20 MΩ
- Diode test
- Capacitance: 2mF
- Current: 10A
- NCV function
- Frequency: 20kHz
- Display: 3 1/2 LCD
- Overload protection: PTC protection circuit is used to measure resistance and frequency
- Data storage
- Maximum measurement
- Out of range indicator: OL
- Low battery indicator: 
- Auto power off: 15 minutes. Press "HOLD/BL" to activate.
- Operating conditions: 0~40 °C (32~ 104 °F); <80% HR
- Storage conditions: -10~50 °C (14~122 °F); <70% HR
- Power supply: 1 No. 9 V battery (type 6F22, 1604A)
- Safety requirements: IEC61010-1 600 V CAT III
- Dimensions: 147:5x74x42.5 mm, approx.
- Weight: 174 g approx.

Supplied with a nylon case for transport and storage.  
According with standards EN61010-1, EN61010-2-032, EN61326, IEC 62321.

### 31009 Ground Resistance tester IER-4000 Digital

The high-performance IER-4000 ground tester is a professional device that tests the grounding resistance using the 2-pole and 3-pole methods. It also allows the grounding voltage to be pre-tested, protecting the user from dangerous voltages. Designed and manufactured in compliance with the safety requirements set forth in IEC61010-1 standards for electronic testing instruments.



Accessories included.

Digital

Code	Ref.	Box
635340	Ground resistance tester IER-4000	1



Accessories included.

#### Technical information

- **Screen:** Digital LCD
- **Data storage:** 100 groups
- **Resistance ranges:** 0 Ω ~ 29.99 Ω / 30 Ω ~ 99.9 Ω / 100 Ω ~ 999 Ω / 1 kΩ ~ 4 kΩ
- **Voltage ranges:** 0 V ~ 200 V (50/60 HZ)
- **Continuity check**
- **Values:** MAX/MIN/PRO, relative measurements
- **Results recorded in memory**
- **Auto power off, display backlight and low battery indicator**
- **Category:** CAT III 600 V
- **Certificates:** CE, RoHS
- **Power supply:** 6 x 1.5 V AA batteries
- **Dimensions:** 180 x 140 x 65 mm
- **Weight:** 950 g

Supplied with a case for transport and storage.  
According with standards EN61010-1, EN61010-2-032, EN61326 and IEC 62321.

## 31009 Digital insulation tester CIT-10

Digital

Used to measure the quality of the electrical insulation of cables, motors, transformers, etc. in new installations and during both basic and specialist maintenance.

It also detects DC voltage, AC voltage and performs continuity checks.

Designed and manufactured to comply with the safety requirements of IEC61010-1 for electronic test instruments.

Designed and manufactured in compliance with the safety requirements set forth in IEC61010-1 standards for electronic testing instruments.



Accessories included.

Code	Ref.	Box
635390	Digital insulation tester CIT-10	1



Accessories included.

### Technical information

- **Display:** LCD with backlight
- **Resistance Range:** 0.01 MΩ – 10.00 GΩ
- **Insulation Tests:** 50 V, 100 V, 250 V, 500 V and 1000 V
- **Automatic power off to save energy**
- **Data storage**
- **Timer function for insulation test**
- **Lock function for insulation test**
- **Power supply:** 6 x 1.5 V AA batteries
- **Dimensions:** 190 x 145 x 70 mm
- **Weight:** 855 g (without batteries)

Supplied with a case for transport and storage.

According with standards EN61010-1, EN61557-1, EN61326-1 CAT. III 1000V  
CAT. IV 600V




## 31009 Clamp earth resistance tester CRT-1200

### Optical & Acoustic

The clamp can test grounding in hard-to-reach spaces, including indoor or fully paved areas where auxiliary test rods cannot be used. The meter can identify the resistance with no need to disconnect and reconnect the grounding installation. Ideal for use in the field of electrical power distribution, telecommunications, construction and industrial electronic equipment.

Code	Ref.	Box
635370	Clamp CRT-1200	1

#### Technical information

- Resistance ranges: 1200 MΩ
- Test voltage: 3700 V
- Current: 40 A
- Electric clearance: 6.5 mm  
(meet IEC1010 double insulation CAT III 600 V)
- Limiting overload: 40 A RMS current
- Mean consumption: 50 mA
- Range: automatic
- Display type: 4 digits, 9999 counting, liquid crystal display display symbol 
- Power shortage:
- Power supply: 9 V 6F22
- Single measurement time: 1s
- Working temperature: -10°C to 50°C (14°F to 122°F)
- Storage temperature: -20°C to 60°C (-4°F to 140°F)
- Conductor size: Ø 32mm
- Dimensions: 54 x 104 x 32 mm
- Weight: approximate 1050 g (include the batteries)

Supplied with a nylon case for transport and storage.  
According with standards EN61010-1, EN61010-2-033, EN61326, CAT III 600 V



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