# Decade resistance boxes

REF. R80


REF. R4

- Safety terminals
- Double insulation
- Frequency range: 0 to 500 kHz at an accuracy 0.5%.

**RESISTANCES**

Power : 0.5 W permanent

Type : 0.1 et 1Ω coils / 10Ω to 1MΩ metal film to 50 ppM.

CEI1010 CATIII 1000Vrms pol2

| Ref. | Nb of decades | Resistances | Dims. (mm) |
|---|---|---|---|
| R0 | 1 | 10x0,1Ω | 82x82x60 |
| R1 | 1 | 10x1Ω | 82x82x60 |
| R2 | 1 | 10x10Ω | 82x82x60 |
| R3 | 1 | 10x100Ω | 82x82x60 |
| R4 | 1 | 10x1kΩ | 82x82x60 |
| R5 | 1 | 10x10kΩ | 82x82x60 |
| R6 | 1 | 10x100kΩ | 82x82x60 |
| R7 | 1 | 10x1MΩ | 82x82x60 |

| Ref. | Nb of decades | Resistances | Dims. (mm) |
|---|---|---|---|
| R80 | 8 | de 10x0,1Ω à 10x1MΩ | 490x80x60 |
| R70 | 7 | de 10x1Ω à 10x1MΩ | 490x80x60 |
| R60 | 6 | de 10x1Ω à 10x100kΩ | 490x80x60 |
| R50 | 5 | de 10x1Ω à 10x10kΩ | 420x80x60 |
| R40 | 4 | de 10x1Ω à 10x1kΩ | 290x80x60 |

# Decade inductor boxes

REF. L70


REF. L2

- Safety terminals
- Double insulation

**TYPE OF COILS**

Coils-wound on ferrite cores, with a central core, which ensures a high Q factor. L70-AR coils without core hence best accuracy & inductance independent of the frequency

CEI1010 CATIII 1000Vrms pol2

| Ref. | Nb of decades | Accuracy | Inductance | Dims. (mm) |
|---|---|---|---|---|
| L70 | 7 | 10% | 10x1µH à 10x1H | 490x80x60 |
| L50 | 5 | 10% | 10x100µH à 10x1H | 420x80x60 |
| L40 | 4 | 10% | 10x1mH à 10x1H | 290x80x60 |
| L1 | 1 | 10% | 10x1µH | 82x82x60 |
| L2 | 1 | 10% | 10x10µH | 82x82x60 |
| L3 | 1 | 10% | 10x100µH | 82x82x60 |
| L4 | 1 | 10% | 10x1mH | 82x82x60 |
| L5 | 1 | 10% | 10x10mH | 82x82x60 |
| L6 | 1 | 10% | 10x100mH | 82x82x60 |
| L7 | 1 | 10% | 10x1H | 82x82x60 |
| L70-AR | 7 | 5% | 10x1µH à 10x1H | 490x80x60 |

| Ref | Decade | 10x1µH | 10x10µH | 10x100µH | 10x1mH | 10x10mH | 10x100mH | 10x1H |
|---|---|---|---|---|---|---|---|---|
| L70 | I | 250mA | 180mA | 150mA | 100mA | 70mA | 50mA | 30mA |
| 10% | R in Ω | 10 x 0.003 | 10 x 0.05 | 10 x 0.02 | 10 x 1.5 | 10 x 12 | 10 x 100 | 10 x1k |
| L70-AR | I | 1A | 1A | 1A | 400mA | 125mA | 40mA | 12mA |
| 5% | R in Ω | 10 x 0.005 | 10 x 0.05 | 10 x 0.5 | 10 x 5 | 10 x 50 | 10 x 500 | 10 x 5k |

# Laboratory inductors


These inductors, without magnetic core, are wound on insulating material chucks, giving them a good stability on a wide frequency range.

- Shock-proof plastic box with safety terminals.
- Dimensions : 82 x 82 x 64 mm

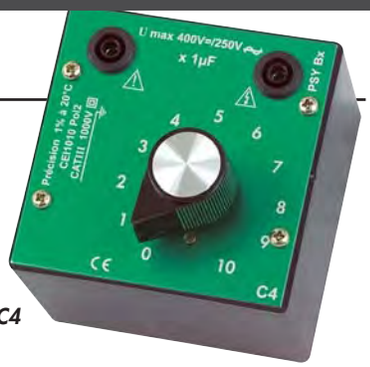
CEI1010 CATIII 1000Vrms pol2

| Ref. | Inductance | Accuracy* | Current | Resistance at 20°C |
|---|---|---|---|---|
| LA01 | 0.1H | 5% | 400mA | 36.0 ohms |
| LA1 | 1H | 5% | 125mA | 380.0 ohms |
| LA5 | 5H | 5% | 50mA | 2100 ohms |

* 1% à 1kHz

# Decades capacitors boxes

| Ref. | Nb of decades | Accuracy 20°C | Capacitance | Dims. (mm) |
|---|---|---|---|---|
| C50 | 5 | 1% | from 10x100pF to 10x1µF | 420x80x60 |
| C1 | 1 | 1% | 10x1nF | 82x82x60 |
| C2 | 1 | 1% | 10x10nF | 82x82x60 |
| C3 | 1 | 1% | 10x100nF | 82x82x60 |
| C4 | 1 | 1% | 10x1µF | 82x82x60 |



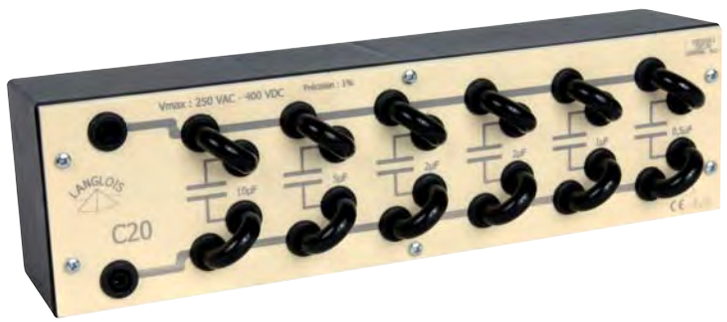
***REF. C4***

- Capacitors are plastic film, non polarisated.
- Operating voltage : 400 VDC or 250 VAC
- Temperature drift : 80 ppM / °C
- Safety terminals
- Double insulation
- CEI1010 CATIII 1000Vrms pol2


***REF. C50***

# Capacitor link boxes

- Capacitors are plastic film, non polarisated.
- Operating voltage : 400 VDC or 250 VAC
- Temperature drift : 80 ppM / °C
- Safety terminals
- Double insulation
- CEI1010 CATIII 1000Vrms pol2



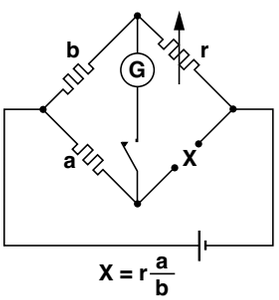

| Ref. | Nb of link | Accuracy 20°C | Capacitance | Dims. (mm) |
|---|---|---|---|---|
| C30 | 5 | 5% | from 5µF to 105µF | 170x135x110 |
| C20 | 6 | 1% | from 0,5µF to 20,5µF | 190x110x60 |
| C10 | 6 | 1% | from 0,05µF to 2,05µF | 190x110x60 |

# Box with 7 positions of ratio

The K7 box is made up of two arms « a » and « b » of a Wheatstone Bridge. The two other arms form the resistance « X » to be measured and the calibrated variable resistor « r ».

- At balance X = r a / b
- Number of scales k = a / b: 7 positions
  0.001 - 0.01 - 0.1 - 1 - 10 - 100 - 1000
- Dimensions: 82 x 82 x 60mm.
- Double insulation
- Safety connectors
- CEI1010 CATIII 1000Vrms pol2

ref. K7





# Zeroing galvanometer

- Suitable for assembling in Wheatstone or Thomson bridge.
- Length of the scale: 90mm
- Safety sockets 4mm
- Protection at all ranges
- 1 fuse HBC 600V / 500mA
- IEC 6110-1 CAT III 600V Pol 2 Double insulation

ref. GAL

| FUNCTIONS | RANGES | INTERNAL RESISTANCE | ACCURACY |
|---|---|---|---|
| VDC | - 100mV 0 + 100mV | 4 kΩ | 1.5 % |
| IDC | - 30µA 0 +30µA | 1.7 kΩ | 1.5 % |
| IDC | - 3 mA 0 +3 mA | 40 Ω | 1.5 % |

# TRMS AC+DC wattmeter 70kHz


ref. DIGIWATT

CEI1010 CATIII 600Vrms pol2 / CEI1010 CATII 1000Veff pol2

DIGIWATT is a digital multimeter with floating inputs simultaneously displaying the 3 electric values: voltage, current and power. DIGIWATT measures the TRMS effective values of the U I W measurements, possibly with direct component superimposed.
The wide bandwidth of the apparatus allows measurements to be made from DC to 70kHz or on chopped signals (frequency converters, industrial choppers, rectified supplies etc.).
The apparatus voltage and current inputs are insulated between each other and relative to earth.
DIGIWATT measures single phase and balanced three phase powers.

| Function | U | I | W |
|---|---|---|---|
| Ranges | 400Vrms single-phase<br>700Vrms 3-phase | 20Arms | 0.2 - 2 - 20kW |
| Accuracy<br>in %<br>of reading | 1% from 0 to 70kHz | 2% 0 ~ 20kHz<br>3% 20 ~ 70kHz | 2% 0 ~ 20kHz<br>3% 20 ~ 30kHz<br>5% 30 ~ 70kHz |
| Protection | Electronic breaker | 20A delayed fuse | |
| Impedance | 1.5MΩ | <5mΩ | |
| Recopy<br>outputs | 10VDC/1000Vrms | 10VDC/20Arms | 10VDC/<br>0,2kW - 2kW - 20kW |

**DISPLAY:**
By two 3 1/2 and one 4 1/2 digits displays, height of digits 15mm.
Power ranges are switched automatically.

**INPUTS**
Voltage inputs: Three floating potential voltage terminals, situated at the rear of the apparatus allowing either the application of an alternating, continuous or composite voltage, or a balanced three phase voltage. These inputs are electronically protected against over voltages.
Max. voltage: 400Vrms single phase, 700Vrms three phase
Current inputs: Two floating potential current terminals, situated at the rear of the apparatus allowing the application of an alternating, continuous or composite current. Imax = 20A. The current input is protected by a delay fuse, allowing measurements on starting up a motor

**RECOPY OUTPUTS**
Voltage output: 0 to 10V DC signal for 0 to 1000Vrms entering.
Current output: 0 to 10V DC signal for 0 to 20Arms entering.
Power output: 0 to 10V DC for 0 to 0.2kW - 0 to 2kW - 0 to 20kW; these three ratings are switched automatically.
Important: these three outputs are insulated from the voltage and currents applied to the input terminals of the apparatus.

**OTHER CHARACTERISTICS**
A switch on the front panel selects the mode single or three-phase.
A diode informs the user that an overvoltage has been applied to the voltage input; he must remove it and reset the voltage circuit.
Input and outputs through 4mm safety terminals
Dims: 375 x 80 x 275 mm - 5kg
Supply: 220V 50Hz 30VA.

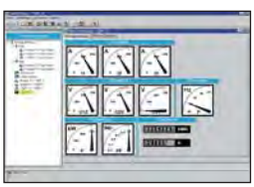
# Measuring unit

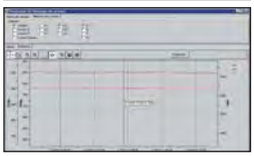
## MULTI-FUNCTION MEASURING UNIT


ref. CMM-2


The multi-function measuring unit is very easy to use, thanks to the keys at the front and its large, high-bright-ness screen. It is connected to a three-phase power supply and measures the following electrical quantities.
- the current in each phase
- the phase-to-ground and composite voltages
- the frequency
- the active, reactive and apparent power, in total and for each phase
- the THD (total harmonic distortion) for current and voltage
- the active, reactive and apparent energy on 4 dials.

**GENERAL FEATURES**
- max. measuring voltage: 450VAC
- max current per phase: 20A
- fuse protection.
- 220V AC 50Hz power supply.
- Dimensions: 230x200x120mm





An RS232/USB interface is connected to the rear of the multi-function measuring unit and communicates remotely with a PC using Windows® compatible software. This PC
- collates and displays the measurements
- creates load curves
- shows the third to fif-teenth rank of harmonics in the form of bar charts.

# Single-phase digital wattmeter


ref. WECO

- Auto ranging mode
- Accuracy specified in the 40 Hz – 400 Hz frequency range for sine wave signals.
- It has an alarm with adjustable upper and lower set points.
- Voltmeter input impedance: 10 MΩ
- Circuit intensity resistance: 10 mΩ
- 4 mm safety connector terminals
- Dimensions: 240 x 100 x 280 mm. LCD display: 93 x 52 mm
- CEI1010 CATIII 300Vrms pol2
- Supply: 6x 1.5V AA Batteries (mains adapter ref. ADAX in option)

The WECO wattmeter is a multimeter able to measure the following values:

- Active power
- Apparent power
- Power factor
- DC and AC voltage or intensity
- Resistance
- Frequency
- Energy

**MEASURING CHARACTERISTICS**

WECO displays up to 4 values at the same time, e.g.
U – I – W - PF or U – I – VA – Hz
The WECO energy meter displays the energy consumed in the load in real time in Wh – kWh and elapsed time in hours, minutes, and 1/10 min.

| FUNCTION | RANGES | RESOLUTION | ACCURACY |
|---|---|---|---|
| WATT | 6000W | 1W | 1.5% + 1dgt |
| VA | 99.99 VA | 0.01 VA | 1.5% + 1dgt |
| | 999.9 VA | 0.1 VA | 1.5% + 1dgt |
| | 9999 VA | 1 VA | 1.5% + 1dgt |
| Power factor | 1.00 | 0.01 | 1.5% + 2dgt |
| VDC | 299.9 V | 0.1 V | 1% + 1dgt |
| | 600 V | 1 V | 1% + 1dgt |
| VAC | 299.9 V | 0.1 V | 1% + 1dgt |
| | 600 V | 1 V | 1% + 1dgt |
| IDC | 10.00 A | 0.01 A | 1% + 1dgt |
| IAC | 10.00 A | 0.01 A | 1% + 1dgt |
| OHM | 9999 ohms | 1 ohm | 1% + 1dgt |
| | 19.99 kohms | 10 ohms | 1% + 1dgt |
| Hz | 10.0 ~ 99.9 Hz | 0.1 Hz | 1% + 1dgt |
| | 999 Hz | 1 Hz | 1% + 1dgt |
| Wh | 10Wh ~ 10MWh | as per range | 1% + 1dgt |

## MAINS ADAPTER (OPTION)

The wattmeter WECO works with 6x1.5V batteries in standard, but it has a 9V DC input. With this mains adapter (European plug - CEE 7/17), WECO can be supplied from mains 230VAC 50/60Hz

ref. ADAX

# Safety wattmeter switch


The COWAT11 is a wattmeter switch enabling the measurement of power on an unbalanced network, with a single wattmeter. 3 positions on the unit:

1 - Measure the current on phase R with voltage between R & T
2 - Wattmeter out of work.
3 - Measure the current on phase S with voltage between S & T.

- An inversion switch with fine lead wires is built-in to the case.
- Operating voltage: 400V 3-phase + N
- Cutting power at power factor 0.3=10A power factor 1=16A
- Safety terminals.
- Plastic case: 145x185x100mm
- Weight 1kg.
- CEI1010 CATIII 1000Vrms pol2

ref. COWAT11

# RMS AC+DC Wattmeters


REF. PSY12


REF. P7401


REF. PSY13

The PSY wattmeters measure true RMS and instantaneous power, DC, single phase, balanced three-phase, alternating signal with or without DC offset in the frequency range DC up to 2kHz.

**ACCURACY** : 0.5 %

**PROTECTION**
- All PSY wattmeters are guaranted within their accuracy limits for 5 years.
- A fuse to protect the voltage circuit and another for the current.
- The fuses can be accessed from the outside of the meter.

**EASY TO READ**
- A single scale graduated from 0 to 100.
- The reading on the scale shows the maximum values:
  I max = 1.5 x I  V max = 1.5 x V
- A lookup table for three phase power can be found on the back of the unit.

**EXAMPLE READING**
- For instance we wish to measure the power dissapated in a load with 0.6A at 125V.
- Put the selector knobs to 1A and 100V.
- The needle moves to the marking corresponding to 75W.
- The reading is direct.
- The 100V scale is not overloaded. (V max = 1.5 x V therefore 150V).

**GENERAL SPECIFICATIONS**
- Voltage circuit resistance: 150Ω/V
- Length of scale: 110 mm
- Dimensions 154 x 210 x 86mm.
- Weight: 1.5kg
- CEI1010 CATIII 1000Vrms pol2

## UF30 FUSES OPTION

Spare voltage fuse for
PSY10 to PSY16

ref. UF30

| Ref. | CONTINUOUS - SINGLE PHASE | | 3-PHASE | INTENSITY FUSE | VOLTAGE |
|---|---|---|---|---|---|
| | I (I max = 1.5 x I) | V (V max = 1.5 x V) | V (V max = 1.5 x V) | 5 x 20 mm | FUSE |
| PSY10 | 100 - 200mA | 10 - 20 - 50 - 100 - 200 - 400V | 380 - 220 - 100 - 50 - 20V | 315mA temp. | UF30 |
| PSY11 | 500mA - 1A | 10 - 20 - 50 - 100 - 200 - 400V | 380 - 220 - 100 - 50 - 20V | 2A temp. | UF30 |
| PSY12 | 1 - 2A | 10 - 20 - 50 - 100 - 200 - 400V | 380 - 220 - 100 - 50 - 20V | 3,15A temp. | UF30 |
| PSY13 | 2.5 - 5A | 10 - 20 - 50 - 100 - 200 - 400V | 380 - 220 - 100 - 50 - 20V | 8A temp. | UF30 |
| PSY14 | 5 - 10A | 10 - 20 - 50 - 100 - 200 - 400V | 380 - 220 - 100 - 50 - 20V | 16A temp. | UF30 |
| PSY15 | 10 - 20A | 10 - 20 - 50 - 100 - 200 - 400V | 380 - 220 - 100 - 50 - 20V | / | UF30 |
| PSY16* | 500mA-1-2.5-5-10-25A | 10 - 20 - 50 - 100 - 200 - 400V | 380 - 220 - 100 - 50 - 20V | / | UF30 |

* only measures in AC current

| Ref. | CONTINUOUS - SINGLE PHASE | | INTENSITY FUSE | WITH OPTION BOX OD41 FOR 3-PHASE |
|---|---|---|---|---|
| | I (I max = 1,5 x I) | V (V max = 1,5 x V) | 5 x 20 mm | |
| P7401 | 500mA - 1A | 100 - 200 - 400 | 2AT. | 400 - 200 - 100 |
| P7402 | 1 - 2A | 100 - 200 - 400 | 3.15AT. | 400 - 200 - 100 |
| P7403 | 2,5 - 5A | 100 - 200 - 400 | 8AT. | 400 - 200 - 100 |
| P7404 | 5 - 10A | 100 - 200 - 400 | 16AT. | 400 - 200 - 100 |
| P7405 | 10 - 20A | 100 - 200 - 400 | / | 400 - 200 - 100 |

# Electrodynamic wattmeter


ref. PSY44

PSY44 measures the true RMS active power of single phase AC, balanced three phase alternating current signal with or without DC offset.
PSY44 has 44 ranges to measure from 1.2W full scale to 6kW.

| | |
|---|---|
| RANGES | |
| INTENSITY | 200mA - 1A - 5A - 10A |
| VOLTAGE | 6 - 12 - 24 - 36 - 48 - 60 - 120 - 240 - 360 - 480 - 600V |
| ACTIVE POWER | 1.2W to 6kW in 44 ranges |

- Frequency range: DC and 15Hz ~ 500Hz
- Accuracy 1%
- Protection : one fuse on each intensity input

**READING**

- A single scale graduated from 0 to 120 and a lookup table shows the factor to apply to the reading according to the selected intensity and voltage ranges.

**GENERAL CHARACTERISTICS**

- Voltage circuit resistance: 333Ω/V
- Length of scale: 120mm
- Dimensions: 150 x 200 x 72 mm
- Weigh: 1,2kg
- CEI1010 Pol2 CATIII 600Vrms

# Power factor meter


ref. PSYPHI

**PSYPHI** measures the power factor of single phase and three phase circuits.
No source of energy (battery or mains) is needed for it to operate.

- Spread of power factor measurement: -0.4 - 1 - 0.4
- Current ranges: 1A 5A 10A
- Single phase voltage ranges: 30 - 100 - 240 - 380V
- Three phase voltage ranges: 120 - 240 - 380V
- Accuracy: 2.5%

**Protection by 2 current circuit fuses.**

- Safety terminals
- Dimensions: 200 x 150 x 70mm.
- Weight: 1.7kg
- CEI1010 CATII 300Vrms pol2

# 1MHz AC Millivoltmeter

GVT417 is a millivoltmeter for the measuring of sinusoidal voltages from 10µV to 100V, in the 10 Hz to 1MHz band. The dial is graduated in volts and dB for the direct measurement of amplifier increases.

| | |
|---|---|
| RANGES V | 300 µV - 1 - 3 - 10 - 30 - 100 - 300mV 1 - 3 - 10 - 30 - 100V |
| RANGES dB | -70 -60 -50 -40 -30 -20 -10 0 +10 +20 +30 +40 dB |
| ACCURACY | 3 % from 20 Hz to 200kHz - 10% from 10 Hz to 1MHz |
| IMPEDANCE | 1 MΩ - 40 pF |
| OVERLOAD | from 300µV to 0,3V: 150VAC / from 1 to 100 VAC: 300 VAC |

**OUTPUT**

A 100mVrms copy output for the full deviation allows the GVT417 to be used as an attenuator/ amplifier at a constant signal input level.

**OTHER FEATURES**

Power supply: 115–230VAC 50Hz.
Dim. 142 x 210mm. Depth: 235mm
Weight: 3kg
CEI1010 CATII CL1 300Vrms pol2


150,00 € HT

# Magnetoelectric Ammeter & Voltmeter

## VOLTMETER


ref. PSY600V

This magneto-electric voltmeter measures DC and sinusoidal AC voltages. The apparatus has full overload protection by gas tube and an ultra-fast response time fuse with a low resistance to avoid changes in precision as a result of replacement.

**EASY TO READ**

To use the same scale for both AC and DC the PSY600V is equipped with a step-up transformer. The 0-100 scale is located above the antiparallax mirror, the 0-30 scale (with 60 divisions) below it.

| | |
|---|---|
| DC | 30-100-300mV - 1-3-10-30-100-300-600V<br>Accuracy 1.5% / Impedance 30kΩ/V |
| AC | 1-3-10-30-100-300-600V<br>Accuracy 1,5% / Impedance 5kΩ/V |
| PROTECTED | yes |

**OTHERS CHARACTERISTICS**

- Safety terminals
- Anti-flash switch with silver contacts
- The 2mm space between contacts protects the switch from arcing due to voltage overload.
- Taut band mechanism
- Scale length 125 mm with antiparallax mirror
- Dimensions 196 x 147 x 70 mm.
- Weight 1.4kg

## AMMETER


ref. PSY30UA

This magneto-electric ammeter measures DC and sinusoidal AC currents. A novel gas tube based protection system and high power diodes provide very effective protection against overloading, even on very low ranges, e.g. 380V on the 30 µA range.

**EASY TO READ**

Economically priced ammeters often have two scales for AC and two for DC, as a result of the absence of a step-up transformer to compensate for the non-linear behaviour of the rectifying diodes. The pupil has to choose which of the four scales to read.

The PSY30UA, equipped with a multi-primary step-up transformer uses the same scale for both AC and DC. The 0-100 scale is located above the antiparallax mirror, the 0-30 scale (with 60 divisions) below it.

| | | | |
|---|---|---|---|
| DC | 30-100-300µA 1-3-10-30-100-300mA - 1-3A | 10-20A | Accuracy 1.5% |
| AC | 100mVDC for the use of external shunts | | |
| AC | 1-3-10-30-100-300mA - 1-3A | 10-20A | Accuracy 2.5% |
| Protected | yes | see below | |

**RANGES 10A and 20A**

Designed for tests on rotary machines, these ranges support permanent nominal currents of 10 and 20A. They are unprotected, but take the following overloads without being destroyed:

- 10A range: 20A for 5 minutes, 40A for 5 seconds
- 20A range: 40A for 5 minutes, 80A for 5 seconds

**OTHERS CHARACTERISTICS**

- Safety terminals
- Anti-flash switch with silver contacts
- The 2mm space between contacts protects the switch from arcing due to voltage overload.
- Scale length 125 mm with antiparallax mirror
- Taut band mechanism
- Dimensions 196 x 147 x 70mm  Weight 1.4kg

# Magnetoelectric voltmeter

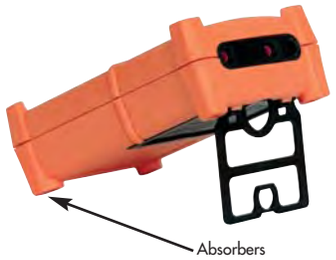
**V1001** is an analog voltmeter, shock resistant thanks to a sturdy ABS body surrounded by a soft moulded holster. The four salient corners act as shock absorbers. All ranges are selected by one rotary switch.

| FUNCTIONS | RANGES | ACCURACY |
|---|---|---|
| VDC | 100mV - 1 - 3 - 10 - 30 - 100 - 300 - 1000V | 1.5 % |
| VAC | 3 - 10 - 30 - 100 - 300 - 1000V | 2.0 % |

Internal resistance 20 000 Ω/V in DC – 6300 Ω/V in AC

ref. V1001

- Length of the scale: 90mm
- Safety sockets 4mm
- Protection at all ranges
- Fuse HBC 600V / 500mA
- Norm IEC 6110-1 CAT III 500V Pol 2 double insulation
- Sturdy ABS housing, protected by a shock resistant soft moulded holster, waterproof (IP65)
- Dimensions 170 x 110 x 53 mm / Weight 0.5 kg





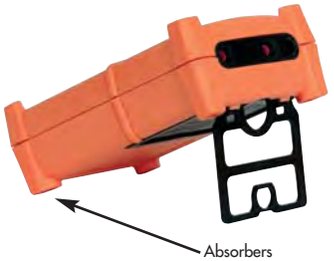
# Magnetoelectric ammeter

**A11** is an analog ammeter, shock resistant thanks to a sturdy ABS body surrounded by a soft moulded holster. The four salient corners act as shock absorbers. All ranges are selected by one rotary switch.

| FUNCTIONS | RANGES | ACCURACY |
|---|---|---|
| IDC | 100 – 300 µA - 1 - 3 - 10 - 30 - 100 - 300 mA - 1 – 3 - 10A | 1.5 % |
| IAC | 10 - 30 - 100 - 300 mA - 1 – 3 - 10A | 2 % |
| mV | 100 mV (current measuring with a 100mV shunt) | 1.5 % |

ref. A11

- Length of the scale: 90mm
- Safety sockets 4mm
- Protection at all ranges
- 2 fuses HBC 500V / 3A and HBC 500V / 10A
- Norm IEC 6110-1 CAT III 600V Pol 2 double insulation
- Sturdy ABS housing, protected by a shock resistant soft moulded holster, aterproof (IP65)
- Dimensions 170 x 110 x 53 mm / Weight 0.5 kg





# Wheatstone bridge

B23A is a portable Wheatstone bridge used for measuring resistances of between a few milliOhms and a few megaOhms.

- Very sturdy ABS case, with unhingeable cover.
- Resistors in the aged managanin arms
- Internal battery. Can take an external battery.
- The momentary-action push-buttons can be locked in the depressed position.
- Dimensions: 258 x 213 x 137mm. Weight: 3kg without batteries. Batteries: 3 x 1.5V, R20 type

| RANGE | 11,110 Ω | 111,10 Ω | 1,1110 kΩ | 11,110 kΩ | 111,10 kΩ | 1,1110 MΩ | 11,110 MΩ |
|---|---|---|---|---|---|---|---|
| RESOLUTION | 1 mΩ | 10 mΩ | 100 mΩ | 1 Ω | 10 Ω | 100 Ω | 1 kΩ |
| ACCURACY | 0,5% | 0,2% | 0,1% | 0,1% | 0,1% | 0,2% | 0,5% |

Sensitivity of the galvanometer : 40µA, impedance 1kΩ.
Damping time : < 4s.

ref. B23A

# Moving-iron voltmeters & ammeters (true RMS)


Used for measuring TRMS values in DC, AC, DC with alternative component, rectified single and double alternation, square wave currents, hatched currents. This ammeter has one semi-linear scale with a precision of 0.5% from 0 to 500Hz, and of 2% up to 2kHz. Its resistance to surges is excellent as it has a single coil wound with high-capacity copper wire.

- Safety terminals
- Lenght of scale 110mm.
- Dim. 154 x 210 x 86mm.
- Weight 1.5kg.

| DC & AC | | | AC ONLY* |
|---|---|---|---|
| REF. P7478 | REF. P7480 | REF. PSY12A | REF. P7481 |
| 750mA | 75mA | 1.2A | 600mA-1.2A |
| 1.5A | 150mA | 3A | 3A-6A |
| FUSE : 5x20mm 3,15AT | FUSE : 5x20mm 2,5AT | 6A | 12A-30A |
| | | 12A | |

**Special case of the P7481 : this ammeter uses a current transformer. As a result, it only measures in AC current.*


Used for measuring TRMS voltages in DC, AC, AC with offset, rectified currents, chopped currents, squares.... This voltmeter is particulary good for electro-mechanical measurements, such as rotary machines, thyristors, rectifiers. It has a very good surge suppression and can withstand prolonged overvoltages.

- Safety terminals.
- Lenght of scale 110mm.
- Dim. 154 x 210 x 86mm.
- Weight 1.5kg.

| Ref. | P7475 | P7476 |
|---|---|---|
| RANGES | 7.5-15-30-60V | 75-150-300-600V |
| ACCURACY DC to 500Hz | 0.5% | 0.5% |
| PRECISION 500Hz to 2kHz | 2% | 2% |

# Varmeters


- VAR varmeters measure the reactive power absorbed by a 50Hz sinusoidal curve.
- Varmeters VAR01 to VAR05 are protected against any overloads in their current and voltage circuits, by fuses.
- Scale length: 110mm graduated from 0 to 100.
- Dimensions: 154 x 210 x 86mm.
- Weight: 1.5kg.

***CEI1010 CATIII 1000Vrms pol2***

| Ref | I (Imax=1.5 x I) | V (Vmax=1.5 x V) |
|---|---|---|
| VAR01 | 500 mA - 1 A | 100 - 200 - 400 V |
| VAR02 | 1 A - 2 A | 100 - 200 - 400 V |
| VAR03 | 2.5 A - 5 A | 100 - 200 - 400 V |
| VAR04 | 5 A - 10A | 100 - 200 - 400 V |
| VAR05 | 10 A - 20A | 100 - 200 - 400 V |

# Solar analyser


- Current/voltage graph drawing (characteristics of the solar panel)
- Autoscan search of the solar panel maximum power – Pmax (60V – 6A)
- Maximal voltage Vmaxp at Pmax power
- Maximal voltage Imaxp at Pmax power
- Opened circuit voltage Vopen
- Short-circuit opened Ishort
- I = f(V) graph with a cursor
- Efficiency calculation in %
- Power by area unit (in W/m2)
- Manual test for a particular point
- Range 10V / accuracy 0.001V
  Range 60V / accuracy 0.01V
  Range 1A / accuracy 0.1mA
  Range 6A / accuracy 1mA
  Accuracy 1% + 18dgt

Delivered with carrying case, power supply, batteries (8x LR6 / AA), connection cables for solar panel, USB cable and software.

ref. VA200

# Pyranometer


The PYR1307 pyranometer measures the power of solar radiation in watts per m2: W/m2

- Ratings: 199.9 W/m2 and 1,999 W/m2
- Measuring error: < 10W/m2 or 5% of the reading
- Display: 2,000 pixel LCD
- Captures min. and max. values
- "Hold" key allows one to freeze the display
- Backlighting
- Supplied with a carry case
- Dimensions: 162 x 63 x 28mm
- Weight: 250g

ref. PYR1307

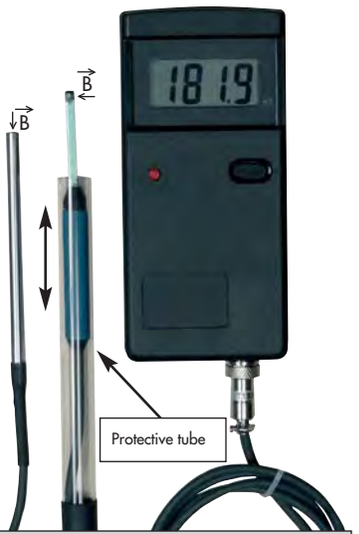
# 4-20mA loop calibrator


- in % of the output span to supply a typical intensity like 4 – 8 – 12 – 16 or 20mA
- linear ramps with low and high selectable levels as well as timing
- programming of manual ramps step by step with selectable amplitude
- programming of auto ramps by steps with selectable amplitude and timing
- Beeper warning when output is open
- Display: 5 digits
- Carry case, user's manual, external battery Pack (for 6x 1.5V AA batteries)
- Input for mains adapter DC 12V (not included)
- Dimension: 88 x 168 x 26mm
- Weight: 330g

ref. VA100

# Teslameter / Gaussmeter

This portable teslameter measures the magnetic field intensity of few hundred micro teslas until 2 teslas. The meter is supplied with two probes. The axial probe measures the field in the axis of a solenoid, the side probe in a gap, or more generally next to a magnet.




- Accuracy: 0,5%
- Display: 2000 counts LCD screen
- Polarity indicator
- One 9V batery (6LR61 type)
- Dim : 150x70x25mm / 170g

2 probes included (length of the cable: 1.5m). Axial probe Ø6.5mm . Side probe, 4mm large, 1mm thick. Delivered with a protective tube

ref. ST640

# 3-Phase tester

ST850 is a simple and robust tester allowing the detection of a voltage on a line and the order of the phases.

- Voltage sensing
- 3 lamps indicate the presense/absense of a voltage on each of the three 3 phases
- Phase order
- The circle turns clockwise, if the phases are connected in the right order
- Maximum voltage 1600 VAC for 1 min
- Box fully isolated 130x80x43mm. Weight. 550g.
- CEI1010 CATII 600Vrms pol2 / CEI1010 CATIII 300Vrms pol2


ref. ST850


ref. ST6605

# Gigohmmeter - Megohmmeter

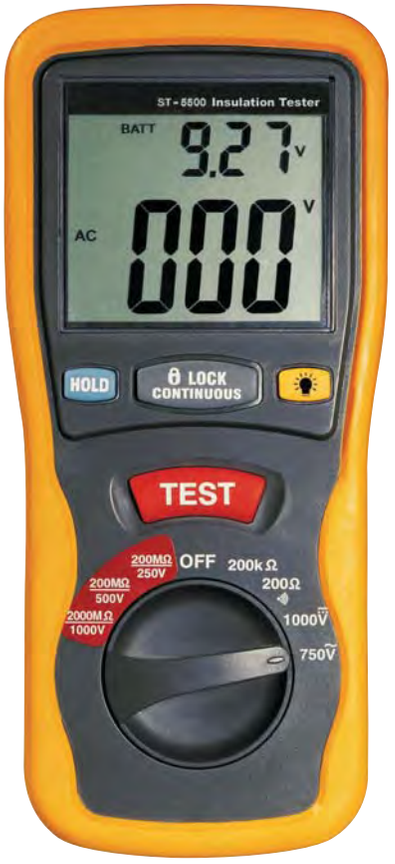
The ST6605 Gigohmmeter is a resistance insulation tester designed to measure high values of insulation resistance according to 4 test voltages: 500V, 1000V, 2500V and 5000V. It displays at the same time the insulation resistance in the middle of the screen (large digits), the instant test voltage and the total time since the beginning of the test.

- 6000 counts LCD display with bar graph and backlight
- Testing button with lock function
- Auto power off
- Power supply: 8 battery 1.5V (R14 type / UM2 / C)
- Dimensions / weight: 198 x 148 x 86 mm / 1.4 kg
- Supplied accessories: 3 test leads + crocodile clips, 1 high voltage test lead, mains adapter, and a transport case
- CEI1010 cat IV 600V pol2

| TEST VOLTAGE | RANGES | | | |
|---|---|---|---|---|
| 500VDC | 0 to 6.000 MΩ | 6 to 60.00MΩ | 60 to 600.0MΩ | 600 to 6000MΩ |
| 1000VDC | 0 to 6.000 MΩ | 6 to 60.00MΩ | 60 to 600.0MΩ | 600 to 6000MΩ |
| 2500VDC | 0 to 60.00MΩ | 60 to 600.0MΩ | 600 to 6000MΩ | 6 to 60.00GΩ |
| 5000VDC | 0 to 60.00MΩ | 60 to 600.0MΩ | 600 to 6000MΩ | 6 to 60.00GΩ |
| | | | | |
| ACCURACY | 2.5% + 15dgt | 3% + 15dgt | 4% + 15dgt | |

| FUNCTION | RANGES | | ACCURACY |
|---|---|---|---|
| VDC or VAC | 0 à 600.0 VDC ou 0 à 600.0VAC | | 1.5% + 5dgt |
| OHM .))) | 0 à 600.0Ω | 600 à 6000Ω | 1.5% + 10 dgt |

Max - Min & relative measurements
Automatic discharge function




ref. ST5500

# Insulation tester

The ST5500 megohmmeter has 4 measuring functions: insulation resistances with 3 test voltages (250V, 500V, 1000V), resistors, DC voltage and AC voltage.

| FUNCTION | RANGES | RESOLUTION | Withstanding voltage /current | ACCURACY |
|---|---|---|---|---|
| MΩ | 200 - 2000MΩ | 100kΩ - 1MΩ | 250 – 500 – 1000V/1mA | 3.5% + 5dgt |
| Ω | 200Ω - 200kΩ | 0.1Ω - 100Ω | < 8V | 1% + 2dgt |
| .))) | Ring for R < 40Ω | | 200 mA when R < 40Ω | |
| VDC | 1000V | 1V | | 0.8% + 3 dgt |
| VAC | 750V | 1V | | 1.2% + 10 dgt |

**TECHNICAL CHARACTERISTICS**

- Insulation tests: 1mA rated current using the rated test voltage for fast-charging of the capacitors.
- .))) in the ohmmeter position, the unit will make a sound if the tested resistance is less than 40Ω. In this case, the 200mA current is used to detect a poor connection.
- The HOLD key locks the display, and the LOCK key maintains the test voltage in the high-capacity wires which take longer to charge.
- Batteries: 6 x 1.5V (AA type)
- Dimensions: 200 x 92 x 50mm. Weight: 700g.
- Supplied accessories: test leads and case
- CEI1010 cat III 1000V pol2


# Earth resistance tester

**ST 5300** is an earth resistance meter which measures using the auxiliary earths method.

- Large display for measuring and an auxiliary display for battery voltage
- HOLD key to freeze the display
- "Lock" key for continuous test
- Dimensions/Weight: 200 x 92 x 50mm / 700g
- CEI1010 CAT. III 1000V

ref. ST5300

## Supplied accessories

- 4 earth pegs
- 4 linking cables or free coupling connectors
- 1 carry case

| FUNCTIONS | RANGES | ACCURACY |
|---|---|---|
| EARTH RESISTANCE | 10 - 100 - 1000Ω | 2% + 3dgt |
| RESISTANCE | 200kΩ | 1% + 2dgt |
| CONTINUITY TEST | Ring for <40Ω | |
| VAC | 750VAC | 1.2% + 10dgt |
| VDC | 1000VDC | 0.8% + 3dgt |


# Clamp for measuring earth in an electric network

**VA5601** is a clamp used for measuring earth, even in complex network, with no need to use pegs, or to open the circuit. VA5601 facilitates analysis by measuring each earth individually. VA5601 can also measure the leakage current in the earth conductor.

ref. VA5601

**EARTH MEASUREMENT: The clamp has 9 ratings which are automatically switched.**

| RANGES in Ω | 0,025 to 0,250 | 0,251 to 1,000 | 1,001 to 9,999 | 10,00 to 50,00 | 50,01 to 100,0 | 100,1 to 200,0 | 200,1 to 400,0 | 400,1 to 600,0 | 500,1 to 1500 |
|---|---|---|---|---|---|---|---|---|---|
| RESOLUTION | 0,002 | 0,02 | 0,02 | 0,04 | 0,04 | 0,4 | 2 | 5 | 20 |
| ACCURACY | 1,5% | 1,5% | 1,5% | 1,5% | 1,5% | 3% | 5% | 10% | 20% |

**MEASUREMENT OF THE LEAKAGE CURRENT: The clamp has 7 ratings which are automatically switched.**

| | In mA | In mA | In mA | In mA | In A | In A |
|---|---|---|---|---|---|---|
| RANGES | 0,20 to 1,000 | 1,001 to 10,00 | 10,01 to 100,0 | 100,1 to 1000 | 0,20 to 15,00 | 15,01 to 30,00 |
| RESOLUTION | 0,001 | 0,01 | 0,1 | 1 | 0,01 | 0,01 |
| ACCURACY | 2% | 2% | 2% | 2% | 2% | 3% |

- Adjustable upper and lower thresholds, for systematic controls.
- 116 measurements memory
- Dimensions : 257 x 100 x 47 mm
- Weight : 640 g
- Supplied with a calibrated resistor
- Supplied with a carry case
- CEI1010 CAT III 300V pol2


# Leakage current clamp

Multimeter with very good resolution in the measure of alternative currents.
The small range 40mA allows to measure AC currents of some hundred µA.

ref. ST9809

**4.000 counts**

- Peak hold function: max & min
- Bargraph
- Dim : 210 x 62 x 35mm
- Test leads and carry case
- Auto power off after 40min
- Standard battery 9V
- Weight : 200g
- CEI1010 CAT III 300V

| FUNCTION | RANGES | ACCURACY | PROTECTION |
|---|---|---|---|
| IAC | 40 - 400mA- 4 - 40 - 100A | 2.5% + 15dgt | 400A |
| VAC | 400V | 2% + 4dgt | 800VAC |
| OHM | 400Ω | 1% + 2dgt | 600VAC |

# Residual current circuit breaker tester

**CONTROLDIF**, which was designed to test in the domestic and business premises environment in accordance with standard NFC15-100, measures the trigger time and current at IΔn and 5IΔn, the contact voltage on the PE conductor, the earth loop resistance (without triggering), the short-circuit resistances in phase-neutral, phase-phase and phase-conductor PE and the short circuit currents. Choice of test on the negative or the positive alternation.

**CONTROLDIF** can be operated with AC, A and delayed trigger residual circuit breakers, for all IΔn ratings from 10mA to 1A.

**CONTROLDIF** has storage space for 1999 sets of 8 measurements. This makes it possible to allocate a number to each point in a building to be monitored and save all of the measurements for each one. The data is transferred to a PC via the RS232 output. Using the SMART software (available as an option), you can compile a sheet of results and export this data to a spreadsheet.

ref. CONTROLDIF (with accessories)

ref. CONTROLDIF-SMART software option

| FUNCTIONS | RANGES | | | | ACCURACY |
|---|---|---|---|---|---|
| Nominal trip out current I Δ n | 10 - 30 - 100 - 300 - 500 - 1000 mA | | | | |
| Contact voltage at I n/2 in V | 0.00 ~ 19.99 | 20.0 ~ 99.9 | | | 0 ~ 10% |
| Loop earth resistance in Ω | 0.00 ~ 19.99 | 20.0 ~ 199.9 | 200 ~ 1999 | | 0 ~ 10% |
| RCD trip out time in ms | 0 ~ 40 (on 5xIΔn) | 0 ~ 300 (on 1/2xIΔn) | | | 3ms |
| RCD trip out time (selective) in ms | 0 ~ 150 (on 5xIΔn) | 0 ~ 500 (on 1/2xIΔn) | | | 3ms |
| Trip out current I Δ n | 0.2IΔn on 1.1IΔn | | | | 0.1xIΔn |
| short circuit resistance PE-phase in Ω | 0.00 ~ 19.99 | 20.0 ~ 199.9 | 200 ~ 1999 | | 5% |
| Short circuit resist. phase-phase in Ω | 0.00 ~ 19.99 | 20.0 ~ 199.9 | 200 ~ 1999 | | 5% |
| Short circuit current PE-phase in A | 0.06 ~ 19.99 | 20 ~ 199.9 | 200 ~ 1999 | 2.00 ~ 19.99kA | 5% |
| Short circuit current phase-phase in A | 0.06 ~ 19.99 | 20 ~ 199.9 | 200 ~ 1999 | 2.00 ~ 19.99kA | 5% |
| Phase/PE or phase/N voltage in V | 0 ~ 440V | | | | 3% |

# Earth tester

**EARTH** is a tester which can perform three types of earth measurements in accordance with standard NCF15-100.

- 4-wires measurement (the most reliable because it avoids contact problems).
- Selective measurement of an earth connection in parallel with others, using a clamp.
- Selective measurement of an earth connection, without an auxiliary earth connection, using two clamps.
- Measurement of ground resistance
- Measurement of the effective intensity of stray currents in a multiple earth network

**EARTH** is equipped with a memory that can store up to 250 measurements. The data is transferred to a PC via the RS232 output. The optional SMART software can be used:
to compile a sheet of results and export this data to a spreadsheet.

ref. EARTH (with accessories)

ref. EARTH-PA set of 2 clamps

ref. EARTH-SMART option software

Option EARTH-PA

| MEASURE / METHOD | IN | RANGES | | | | | ACCURACY |
|---|---|---|---|---|---|---|---|
| RESISTANCE / 4 WIRE | Ω | 0.00 ~ 19.99 | 20.0 ~ 199.9 | 200 ~ 999 | 1.000 ~ 1.999k | 2.00 ~ 19.99k | 2% reading+3dgt |
| RESISTANCE / 1 CLAMP | Ω | 0.00 ~ 19.99 | 20.0 ~ 199.9 | 200 ~ 999 | 1.000 ~ 1.999k | | 2% reading+3dgt |
| RESISTANCE / 2 CLAMPS | Ω | 0.0 ~ 19.9 | | | | | 10% reading+3dgt |
| RESISTIVITY | Ωm | 0.01 | 0.1 | | | | - |
| CURRENT | mA | 0.0 ~ 99.9 | 100 ~ 999 | 1.00 ~ 9.99A | 10.0 ~ 19.9A | | 5% reading |

# Electrical installation tester

The XE electrical installation tester brings together in a single piece of equipment the majority of the functions which are necessary for checking domestic and business premises in accordance with standard NFC15-100. In particular: current, voltage, earth measurement, earth continuity, trigger current and time of differentials, insulation resistance, calculation of short-circuit and fault currents, resistance of the mains and earth loop, calculation of fuses and phase rotation, etc.
The graphical screen displays the results and the measurement settings numerically. By simply pressing the HELP key, the connection diagram(s) corresponding to the position of the switch will appear on the screen.
XE has 2 ports: RRS232 and USB to be connected to a PC. The software, which is supplied as standard, can be used to export data from the memory of the XE to a spreadsheet, or to edit a measurement report.
The unit is supplied with a storage case and all of the accessories required to undertake all measurements, except for a blind clamp ammeter and the luxmeter unit (available as an option)
CEI1010 CAT III 600V POL2

ref. XE (with accessories)

ref. LUX1172 Luxmeter unit


## CLAMP OPTION

This precision clamp is used either for measuring a leakage current (in the PE conductor for instance), or for measuring the current in a phase. It can be used in the 40Hz to 5kHz band.

ref. P1018

***Supplied accessories***

| FUNCTIONS | RANGES | | | | | ACCURACY |
|---|---|---|---|---|---|---|
| INSULATION RESISTANCE in MΩ<br>Test voltages: 250-500-1000VDC | 0.000 ~ 1.999 | 2.00 ~ 99.99 | 100.0 ~ 199.9 | 200.0 ~ 999.9 | | 5% reading + 3dgt |
| AC VOLTAGE in VAC | 0 ~ 1200 | | | | | 3% reading + 3dgt |
| CONTINUITY (low impedance source) in Ω<br>I >200mA for 2Ω. Vmax = 9VDC | 0.00 ~ 19.99 | 20.00 ~ 99.9 | 100 ~ 1999 | | | 3% reading + 3dgt |
| CONTINUITY in Ω<br>Imax = 8mA Vmax = 9VDC | 0.0 ~ 99.9 | 100 ~ 1999 | | | | 5% reading + 3dgt |
| RCD test in mA | 10 - 30 - 100 - 300 - 500 - 1000 mA | | | | | |
| CONTACT VOLTAGE in VAC | 0.0 ~ 9.9 | 10.0 ~ 99.9 | | | | 10% reading + 2dgt |
| RCD trip out time in ms | 0 ~ 300(IΔn) | 0 ~ 150(2xIΔn) | 0 ~ 40(2xIΔn) | | | 3ms |
| Delayed RCD trip out time in ms | 0 ~ 500(IΔn) | 0 ~ 200(2xIΔn) | 0 ~ 150(2xIΔn) | | | 3ms |
| RCD trip out current in IΔn | 0.2 ~ 1.1 | 0.2 ~ 2.2 | | | | 0.1 x IΔN |
| Earth loop resistance in Ω | 0.00 ~ 19.99 | 20.0 ~ 99.9 | 100 ~ 1999 | | | 5% reading + 3dgt |
| Earth loop defective current estimated A | 0.00 ~ 19.99 | 20.0 ~ 99.9 | 100 ~ 999 | 1.00 ~ 9.99 kA | 10.0 ~ 24.4kA | |
| EARTH MEASUREMENT in Ω | 0.00 ~ 19.99 | 20.0 ~ 99.9 | 100 ~ 1999 | | | 2% reading + 3dgt |
| AC RMS CURRENT in mA and A | 0.0 ~ 99.99mA | 1.00 ~ 999mA | 1.00 ~ 19.99A | | | 5% reading + 3dgt |
| Resistance of mains line in Ω | 0.00 ~ 19.99 | 20.0 ~ 99.9 | 100 ~ 1999 | | | 5% reading + 3dgt |
| Short circuit current estimated in A | 0.00 ~ 19.99 | 20.0 ~ 99.9 | 100 ~ 999 | 1.00 ~ 9.99 kA | 10.0 ~ 24.4kA | |
| LUXMETER ( optional probe) in lux | 0.01 ~ 19.99 | 20.0 ~ 199.9 | 200 ~ 1999 | 2.00 ~ 19.99klux | | 5% reading + 2dgt |

# Contact and non-contact tachometer


The DT2236 and AT8 tachometers combine in one case a light-sensing detector and a sensor for measurement by contact. A microprocessor switches between ranges automatically, eliminates non-significant zeroes and controls a memory which records the maximum, minimum and average value. Both references are delivered with one rubber cone for direct measuring by contact on shafts, and one disk for the scrolling measuring (band in movement).

| REF | DT2236 | AT8 |
|---|---|---|
| DISPLAY : 5 DIGITS | LED 10mm | LCD 11mm |
| LIGHT SENSOR MEASUREMENT | 5 ~ 100 000 rpm | 2 ~ 100 000 rpm |
| CONTACT MEASUREMENT | 0,5 ~ 20 000 rpm | 2 ~ 20 000 rpm |
| ACCURACY | 0,05% lecture + 1dgt | 0,05% lecture + 1dgt |
| MEASUREMENT UNITS | rpm m/min | rpm m/min Hz m |
| SAMPLE TIME | < 1s | 0,5s |
| DETECTION DISTANCE | 50 ~ 300mm | 50 ~ 500mm |
| TIME BASE | Quartz | Quartz |
| MEMORY | 1 measurement | 10 measurements |
| MIN MAX AVERAGE VALUE | For the measurement | For each measurement |
| DIMENSIONS | 215x65x28mm 700g | 210x58x36mm 180g |


# Stroboscopes

**STA10K and STA269** are both stroboscopes with the same flash lighting circuits.

**COMMON FEATURES**

- Stroboscopes with xenon lamp, a flash duration of approximately 60µs and a power of 40W.
- LED digital display indicating the rotation speed in revolutions/minute (RPM)
- 230V AC mains power supply.
- Ventilated focussing lens to protect the flash tube. Parabolic mirror.
- Power supply 230VAC 50/Hz
- Dimensions: 210 x 120 x 120mm. Weight: 1kg.
- ABS housing


ref. STA10K

External synchro

ref. STA269

| Réf | Rotation speed * | Accuracy | Functions | Nb dgts | Ext trigger | Memory | RS232 output |
|---|---|---|---|---|---|---|---|
| STA10K | 100 to 10000 rpm/min | 0.05% | rpm | 4 | / | / | / |
| STA269 | 5 to 12500 rpm/min | 0.01% | rpm & Hz | 5 | pulse 5V | 10 memories | yes |

# Current transformer

TI50A is a current transformer which can be connected to much larger values of AC from 2.5 to 50A with a sample ammeter.

ref. TI50A

- Accuracy: 0.2%
- Secondary power: 5VA
- Operating voltage: 600Vmax. 50/60Hz
- Safety connectors.
- Dims: 110 x 202 x 50mm

| | RANGES |
|---|---|
| PRIMARY | 2,5 - 5 - 10 - 25 - 50A |
| SECONDARY | 1A |

# Shunts

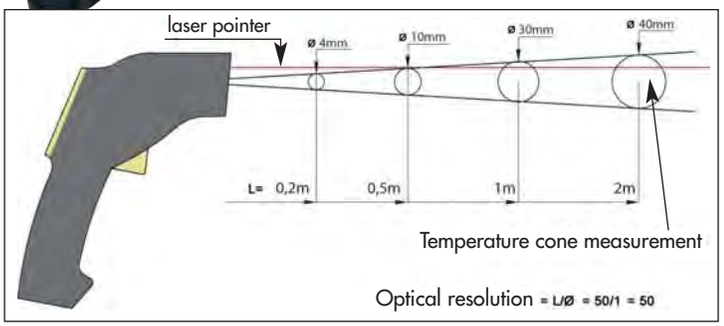
Accuracy measuring SHUNT, modified safety model, fully protected to comply with IEC1010 safety standard and fitted with safety terminals. Accuracy: 0.5%.

| Ref. | Current | Drop Voltage |
|---|---|---|
| HU10-100 | 10A | 100mV |
| HU20-100 | 20A | 100mV |
| HU25-100 | 25A | 100mV |
| HU40-100 | 40A | 100mV |
| HU60-100 | 60A | 100mV |

# Spot infrared thermometer

ST8829 measures temperatures remotely – beyond two metres – with a very narrow measuring cone. This special feature means that the temperature in an area measuring just a few millimetres in diameter can be taken. This makes it possible to measure the connection temperature of a poorly tightened terminal, fuse or electric cable, etc.
A red laser beam parallel to the axle of the measuring cone points to the area where the temperature is to be taken.
Dim.: 230 x 100 x 56 mm. 290 g

ref. ST8829




| | |
|---|---|
| RANGE | - 50°C to 1000°C |
| RESOLUTION | 0.1°C up to 200°C<br>1°C from 200 to 1000°C |
| ACCURACY | 1.5% of reading |
| TIME BASE | < 1 sec |
| OPTICAL resolution* | 50/1 |

* Optical resolution = L/Ø

# Dual thermoimeter


ST613 is a thermometer with two inputs for thermocouple type K. The range of measuring temperature is – 40°C to 1300°C. Within the range – 50 °C to 1000 °C the resolution is 0.1°C
The dual displays shows temperature of each probes, or the difference of temperature between the two probes.

ref. ST613

| | ACCURACY | |
|---|---|---|
| RANGE | T1 & T2 | ΔT = T1-T2 |
| -50 to -100°C | 0.5% + 2°C | 0.5% + 1°C |
| -100 to 1300°C | 0.15% + 1°C | 0.5% + 1°C |

- Display: 10000 counts
- Unit of temperature : °C or °F or °K
- Max & Min hold function
- Average of temperatures recorded during a time adjustable from 1s to 99min 59s
- Supply: 9V battery (type 6F22)
- Auto power off
- Large digits 17mm
- Dimensions: 165 x 76 x 43mm. Weight: 0.4kg

**Accessories**: 2x type K thermocouple: stainless steel tube with handle: Ø3.2mm

# Sound level meter


***This sound level meter measures the acoustic pressure. The purpose is to determine and control the noise pollution in the working area, in conformity with the norm CEI61672-1 Class 2.***

ref. ST8852

**ST8852** measure in dB the acoustic pressure
- According two integrating periods: slow (S: 1s) or fast (F: 250 ms)
- With 2 frequency correction filter: A (human sensibility) or C (materials)

- Frequency range: 31.5 Hz to 8 kHz / Accuracy: +/- 1.4 dB
- Auto range: 30dB to 130 dB
- Display: 4 digits, 0.1dB resolution, backlight function
- Functions: MAX/MIN – HOLD – Alarms
- USB interface (data in formats .txt or .xls)
- Application software: Curve drawing, cursors, measuring charts, stats.
- Analogical output: in AC: 1Vrms, DC = 10mV/dB
- Auto power off after 15min
- Supply: 9V battery
- Dims/weight: 278 x 76 x 50mm / 350g

**Supplied accessories :** software, USB cable, tripod, mains adapter

# Digital luxmeter


LX337 is a compact luxmeter with autoranging that can be manually overridden.

- Accuracy: 3% of the rdg + 5 dgt
- Response time: 0.5 seconds
- Response curve: maximum sensitivity centred around 570 nm
- Auto & manual power off
- Power supply: 9v battery
- Dimensions: 196 x 54 x 33mm.
- Weight: 180g

ref. LX337

| RANGES in lux | RESOLUTION |
|---|---|
| 39.99 | 0.01 |
| 399.9 | 0.1 |
| 3999 | 1 |
| 39990 | 10 |