

TEST & MEASUREMENT

2025
2026

 CHAUVIN
ARNOUX



Chauvin Arnoux

Test & Measurement:

French expertise at the service of measurement

For over a century, Chauvin Arnoux has embodied French excellence in the field of electrical measurement.

An international benchmark, the Chauvin Arnoux® brand offers a comprehensive range of portable measuring instruments renowned for their reliability and performance.

Our portable measuring instruments, designed and manufactured in France, combine reliability, durability and innovation. Thanks to our in-house production, we guarantee professional quality.

A FEW FIGURES

More than 130 years of continuity	10 subsidiaries worldwide
120 million euros turnover	
1000 employees	8 production sites
6 design offices worldwide	3 in Normandy
11% of sales invested in R&D	1 in Lyon
	1 in Montpellier
	1 in Milan (Italy)
	1 in Dover (USA)
	1 in Shanghai (China)

Solutions for every need

With hundreds of products, our range covers many sectors: industry, services, residential, laboratories, infrastructure, and education. They are suitable for a wide range of applications, including:

- Preventive and corrective maintenance
- Energy efficiency and audits
- Electrical safety and control
- Environmental monitoring and air conditioning

Our flagship ranges of measuring devices

- Mesure électrique générale : multimètres, testeurs, pinces, oscilloscopes.
- Sécurité électrique : contrôleurs d'isolement, de terre, d'installation, micro-ohmmètres.
- Analyse de puissance et d'énergie : enregistreurs, wattmètres, analyseurs de qualité réseau.
- Mesures climatiques et environnementales : mesure de température, humidité, son, lumière, etc.
- Grandeurs électrochimiques : pH, conductivité, potentiel d'oxydoréduction, etc.
- Oscilloscopes.
- Capteurs de courant et accessoires.

Innovation in the service of education completes this range, with laboratory instruments and teaching solutions designed for education and training.

Trust Chauvin Arnoux to optimise your performance and meet your technical challenges with measuring instruments that match your ambitions.



Diagnostics & control

To carry out measurement campaigns in compliance with regulations.
To verify the safety of people and property.



Education

For secondary schools, higher education (universities and engineering schools), continuing education and vocational training centres. To understand and comprehend theoretical phenomena through practical application.



Energy efficiency

For a comprehensive assessment of energy consumption (audit) with a view to proposing solutions aimed at reducing consumption (financial and environmental impacts).



Transport

To ensure continuity of service, proper operation and safety, Chauvin Arnoux offers portable field measuring devices for applications in aeronautics, road and rail.



Tertiary & residential

For electricians, heating engineers, air conditioning engineers and building services engineers Chauvin Arnoux supports you with a range of professional measuring devices for electrical, heating/air conditioning and lighting applications.



Industries

For optimum productivity, implementation of industrial process monitoring plans through inspection and maintenance operations on installations or machines.



Production, transport & distribution

To take measurements in the field, follow the path of electrical energy from the power plant to the distribution points.



Laboratory & metrology

For laboratories, engineers and technicians responsible for the design and qualification of various systems: machines, electrical cabinets, lifts, vehicles, lifting tools, etc.
For technicians responsible for quality control and process systems.

Test & Measurement Catalogue 2025 / 2026

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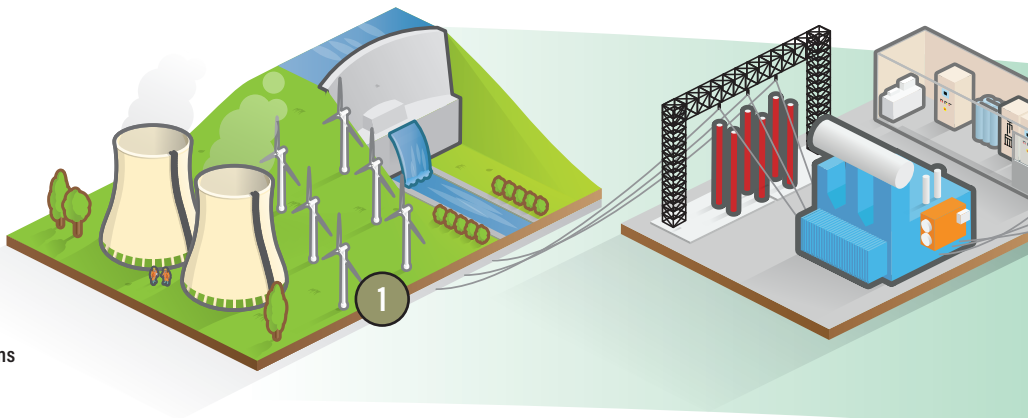


You can also find us at www.chauvin-arnoux.com

APPLICATIONS: GENERATION, TRANSMISSION & DISTRIBUTION

EARTHING CONTROL

- 1  Soil resistivity and earth measurement
CA 6470N
- 2  Measurements on pylons
CA 6474
- 3  MV/HV lines
CA 6472

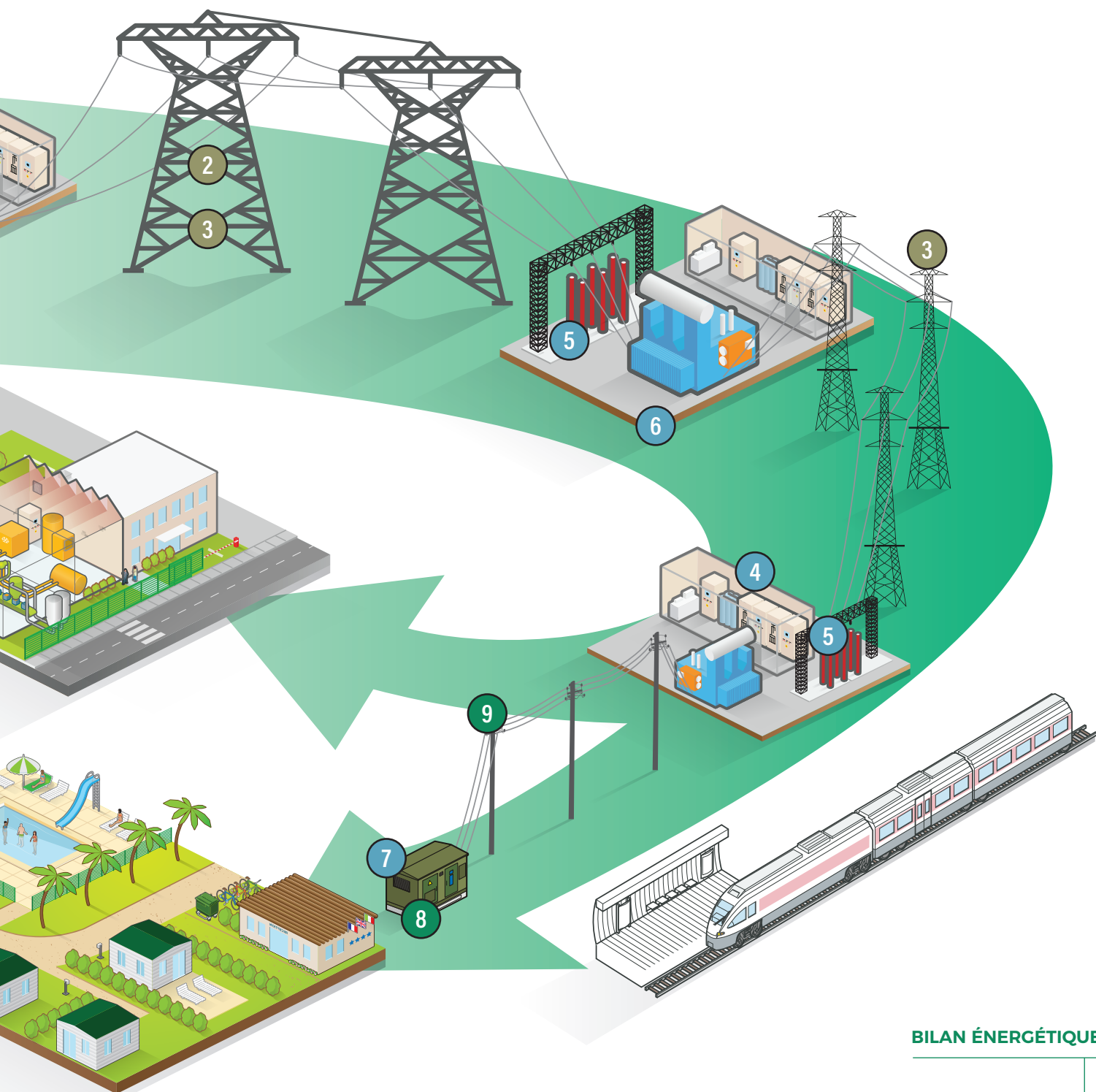


MAINTENANCE AND INSPECTION OF INSTALLATIONS

- 4  Consignment of installations, checking absence of voltage, checking phase order
CA 773
- 5  Checking circuit breakers and equipotential bonding
CA 6240 - CA 6292
- 6  Insulation check 15 kV
CA 6555

- 7  Current measurements
MA4000D





Controlling
electricity
consumption

PEL115



8

Analysis of electrical network quality
(flicker, over- and undercurrent/
voltage/harmonics)

CA 8345



9

BILAN ÉNERGÉTIQUE

APPLICATIONS: INDUSTRY

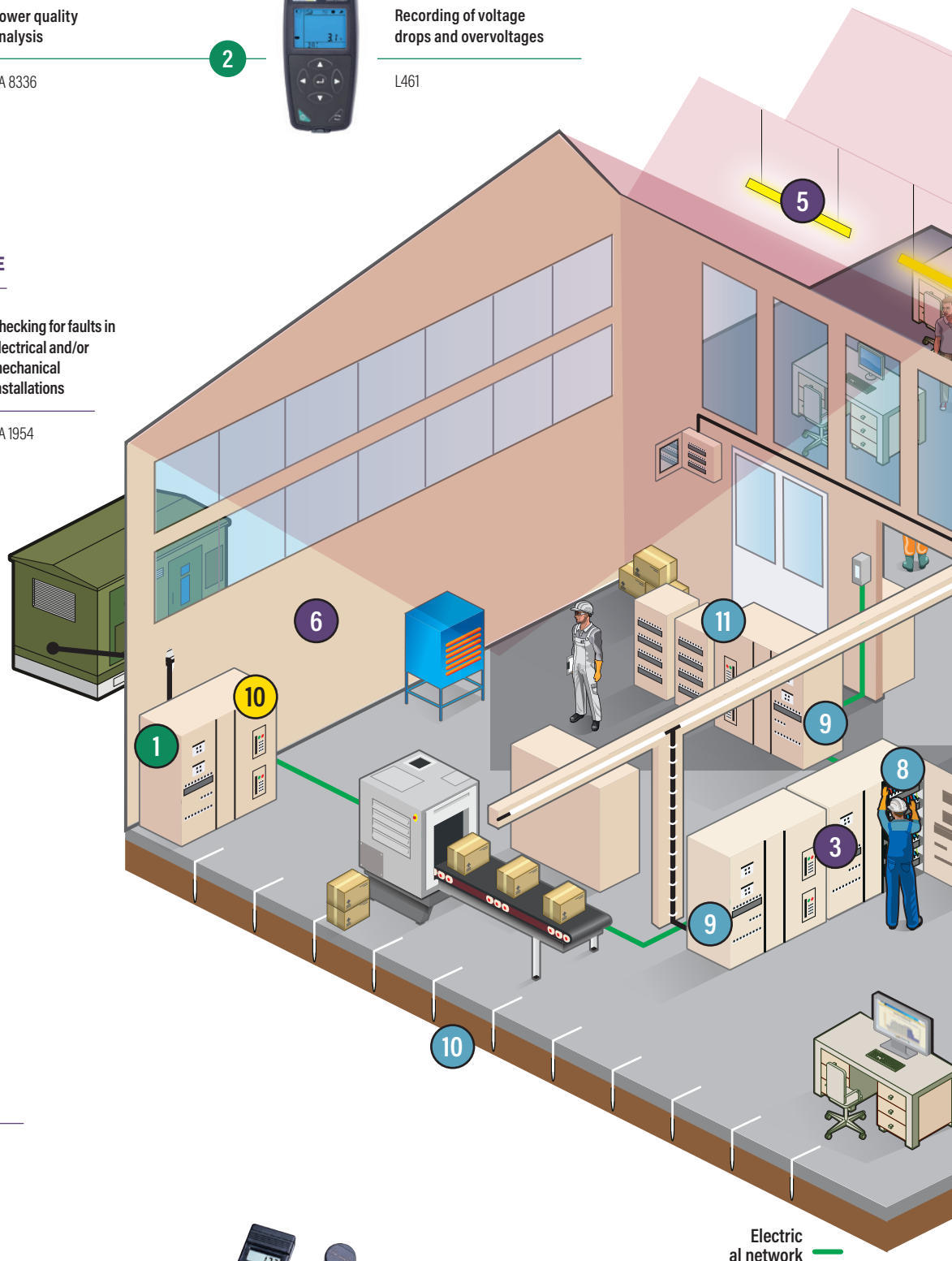
SEARCH FOR ELECTRICAL DISTURBANCES

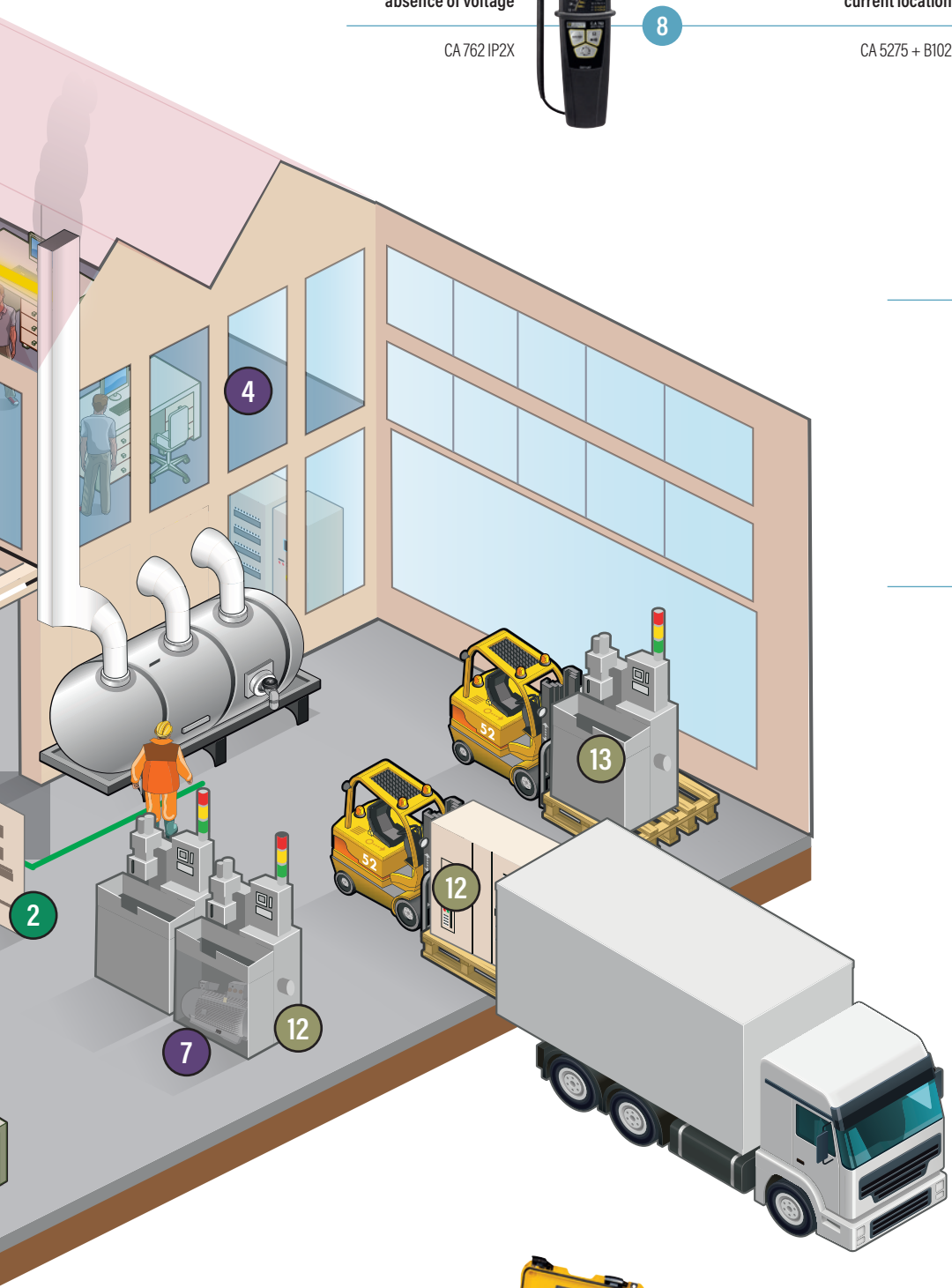


INDUSTRIAL MAINTENANCE



REGULATORY CONTROLS OF THE WORKING ENVIRONMENT





Checking for
absence of voltage

CA 762 IP2X



8

Leakage
current location

CA 5275 + B102



9

Earth control

CA 6417



10

Insulation check

CA 6524



11

Inspection
of industrial machinery

CA 6163



13

Control of electrical cabinets

CA 6161



12

PERSONAL SAFETY

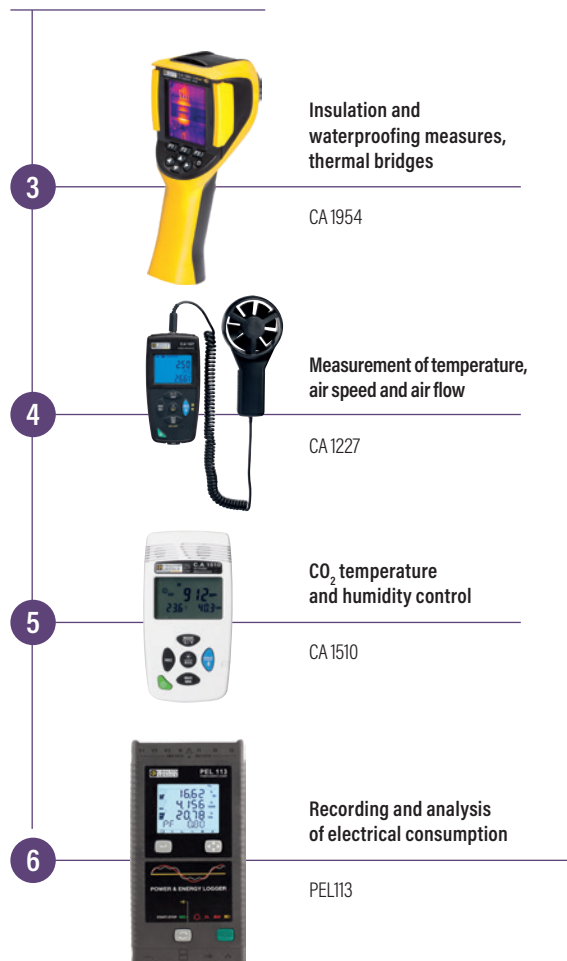
QUALITY CONTROL QUALITY CONTROL

APPLICATIONS: RESIDENTIAL & COMMERCIAL

REGULATORY CONTROL IN ACCORDANCE WITH NF C 15-100



ENERGY EFFICIENCY





GENERAL ELECTRICAL RENOVATION

Checking power supply and continuity
of electrical connections

CA 755



7

Search for
and location
of metallic
cables and
conductors

CA 6683



8

Verification of
electrical voltages
and continuity

F201



9

Measurement
of ionisation
current on gas boiler

CA 5277



10

DDT/VAT and testers

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Tester

CA 732

1000 V
CAT III

Simple and practical

- No contact phase detection
- Built-in torch
- Moulded body for exceptionally comfortable handling



CA 732	
Detection threshold	195 V _{AC} ≤ U ≤ 265 V _{AC}
Operating frequency	50/60 Hz
Standards	IEC 61010 1000 V CAT III
Power supply	2 x 1.5 V LR03 batteries
Dimensions / weight	176 x 26 mm / 48 g



1 CA 732 tester delivered
in blister pack with:

- 2 x 1.5 V LR03 batteries



To order

CA 732
Reference: P01191745Z

Tester

TX 01

600 V
CAT III

Essential electrical testing
and diagnostic tool

- Checks AC and DC voltages and electrical continuity with audible and visual indication
- Self-test function to check the condition of the device and the battery
- High-intensity LEDs
- Removable test probe with standard Ø 4 mm banana plug



TX 01	
Voltage test	12 V to 690 V (7 diodes)
Audible alarm	U > 50 V
Phase identification	Flashing "Ph" diode for U > 100 V
Operating frequency	DC ... 400 Hz
Diode polarity test	"+" and "-"
Audible continuity	Yes
Resistance	2 kΩ to 300 kΩ (3 diodes)
Power supply	1 x 9 V 6F22
Safety électrique	600 V CAT III
Dimensions / weight	193 x 47 x 36 mm / 170 g
Other	Built-in 1.2 m lead with Ø 2 mm test probe + Ø 2 mm removable test probe



1 TX 01 tester supplied with:

- 1 removable test probe
- 1 9 V battery
- 1 operating instructions

To order

TX 01
Reference: TX0001-Z



Testeurs

CA 745N - CA 755 - CA 757

600 V
CAT III

IP 54



CA 745N

No risk of tripping high-sensitivity RCDs during phase/earth testing.

	CA 745N
Voltage test	12 V to 690 V _{AC} (7 segments)
Audible beep	U > 50 V _{AC}
Impedance	400 kΩ
Phase/neutral identification	Flashing 'Ph' diode and intermittent audible beep for U > 100 V _{AC}
Frequency of use	DC and 50/60 Hz
Polarity test	"+" and "-" symbols
Voltage protection	Up to 1,100 V
Continuity sound test	R < 2 kΩ
Resistance test	2 kΩ to 300 kΩ (3 segments)
Standards	IEC 61010 600 V CAT III
Power supply	2 x 1.5 V LR03 batteries
Dimensions / Weight	180 x 52 x 45 mm / 200 g

CA 755 and CA 757

- Measurements up to 1,000 V
- Backlit digital display
- Built-in compartment for stowing test probes in casing
- CA 757: MiniFlex® current measurement accessory supplied



	CA 755	CA 757
Measurement range via current sensor		500 mA to 300 A (2 Calibration)
Resolution		0.01 A to 0.1 A
DC voltage	3 mV to 1,000 V – 4 Calibration	
Resolution	1 mV to 1 V	
AC voltage	100 mV to 1,000 V – 4 Calibration	
Resolution	1 mV to 1 V	
Operating frequency	DC and 50/60 Hz	
Impedance	10 MΩ	
No-contact voltage detection	230 V 50/60 Hz at a distance of approx. 5 cm	
Audible continuity test	R ≤ 30 Ω	
Resistance test	0.3 Ω to 30 MΩ – 6 Calibration	
Resolution	0.1 Ω to 0.01 MΩ	
Capacitance test	400 pF to 30 mF	
Resolution	0.001 nF to 0.01 mF	
Standards	600 V CAT III, IEC 61010-1, IEC 61010-031, IEC 61010-032, IEC 61010-033	
Power supply	2 x 1.5 V LR03 batteries	
Battery life	100 hours with alkaline batteries – Automatic standby after 10 minutes	
Dimensions / weight	180 x 52 x 45 mm / 200 g	



CA 745N delivered in a blister pack with :

- 2 x 1.5 V LR03 batteries,
- 2 removable test probes (red/black)

CA 755 delivered with :

- 1 set of extra-fine test probes CAT III/CAT IV (red/black)
- 2 x 1.5 V LR3 alkaline batteries



CA 757 delivered with :

- 1 set of extra-fine test probes CAT III/CAT IV (red/ black),
- 2 x 1.5 V LR3 alkaline batteries,
- 1 MiniFlex® sensor with a loop length of 250 mm and a connection cable 1 m long
- 1 specific connector for CA 757, 1 Velcro strap

To order

CA 745N Reference: P01191743Z

CA 755 Reference: P01191755

CA 757 Reference: P01191757

Recommended accessories



P01298074
Bag compatible with MultiFix accessory, 120 x 200 x 60 mm



P01191748Z
CA 753 universal measuring adapter for 2P+E sockets



Bipolar voltage detectors

CA 742 – CA 742 IP2X – CA 762 – CA 762 IP2X



600 V
CAT IV

IP 65

IEC
61243-3

NF C
18-510



Essential before any intervention

- Full integrated Autotest
- Voltage test up to 690 Vac (16 2/3 – 800 Hz) / 750 Vdc
- Phase-sequence testing up to 400 Hz
- Removable test probe and lead

Indoor and outdoor use

- Protection rating exceeds recommendations
- IP65 allows indoor and outdoor use from -15 °C (type N)

	CA 742	CA 762
Display	LEDs	LEDs
Voltage detection		Yes
Hazardous voltage indication		Yes
Phase / Neutral identification		Yes
Continuity & Resistance		Yes
Extended continuity test	-	2 kΩ, 60 kΩ, 300 kΩ
Phase rotation	-	2-wire method
Ph/Ph voltage		50 V ≤ U ≤ 690 V _{AC} (45 - 400 Hz)
Buzzer	Intermittent beep for voltage detection and continuous beep for continuity	
Voltage	12 V _{AC} ≤ U ≤ 690 V _{AC} // 12 V _{DC} ≤ U ≤ 750 V _{DC}	
Frequency	DC, 16 2/3 à 800 Hz	
Impedance	> 300 kΩ	> 400 kΩ
Max. current	3,5 mA RMS	
Repetitive indication of dangerous voltage	The red ELV (Extra Low Voltage) LED indicates when the voltage is higher than the SELV (Safety Extra Low Voltage); the higher the voltage, the faster it flashes.	
Polarity indication	Above 120 V (45 - 65 Hz) Above 400 V (16 2/3 - 45 Hz)	
Continuity	100 Ω typical (150 Ω max.)	
Standards and Safety électrique	IEC/EN 61243-3	
	IEC 61010 600 V CAT IV	
Ingress protection	IP65	
Climatic conditions	-15 °C to +45 °C / 20 to 95% HR	
Battery life	7,500 x 10 s measurements	7,000 x 10 s measurements
Dimensions / weight	163 x 64 x 40 mm / 210 g	



1 voltage detector delivered with:

- 1 black Ø 2 mm test-probe lead with crystal safety cap
- 1 red Ø 2 mm test-probe lead with crystal safety cap
- 1 wrist-strap
- 2 x 1.5 V LR03 batteries

The IP2X version is delivered with:

- 2 x Ø 4 mm IP2X test probes (red/black)
- 1 black cable 1.10 m long equipped with a probe-holder system
- 1 wrist strap
- 2 x 1.5 V LR03 batteries

To order

CA 742 DDT/VAT	Reference: P01191742Z
CA 742 IP2X DDT/VAT	Reference: P01191742D
CA 762 DDT/VAT	Reference: P01191762Z
CA 762 IP2X DDT/VAT	Reference: P01191762D

Recommended accessories



P01298065Z
Carrying case



P01101997Z
CA 751 - Adapter for 2P+T socket



Bipolar voltage detectors

CA 771 - CA 771 IP2X | CA 773 - CA 773 IP2X



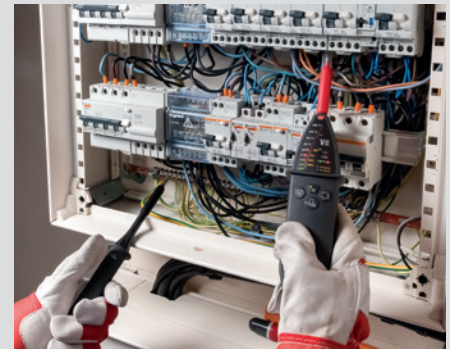
IP 65

1000 V
CAT IVIEC
61243-3

The CA 771 and CA 773 feature phase sequence control using the '2-wire method' up to 400 Hz, which works with isolation transformers and generator sets.

- A comprehensive built-in self-test
- Extended class: for extreme environments, the CA 771 allows measurements from -30 °C to +60 °C (type S).
- Audible and visual continuity up to 100 Ω complies with the recommendation in Annex B of the standard.
- The test probes are removable to meet specific requirements or the legislation of certain countries.

	CA 771	CA 773
Display	LEDs	LEDs
Voltage detection		Yes
Polarity indication		Yes
Stray voltage detection		Yes
Differential protection trip		Yes
Repetitive indication of dangerous voltage		Yes
Phase / Neutral identification		Yes
Continuity & Resistance		Yes
Phase rotation	Yes (2-wire method)	
Ph/Ph voltage	50 V $\leq U \leq 1000$ V _{ac} (45 - 400 Hz)	
Buzzer	Yes	
Voltage	12 V _{ac} $\leq U \leq 1000$ V _{ac} // 12 V _{dc} $\leq U \leq 1400$ V _{dc}	
Frequency	DC, 162/3 to 800 Hz	
Impedance	> 500 k Ω	
Max. current	3,5 mA RMS	
Repetitive indication of dangerous voltage	La LED ELV (Extra Low Voltage) indique une tension supérieure à la TBT (Très Basse Tension de Sécurité) avec une vitesse de clignotement proportionnelle à la tension	
Phase / Neutral identification	Au delà de 50 V (45 - 65 Hz) Au delà de 150 V (16 2/3 - 45 Hz)	
Continuity	100 Ω typique (150 Ω max.)	
Extended continuity test, Resistance	2 k Ω , 60 k Ω , 300 k Ω	0,5 Ω to 2,999 k Ω
Buzzer	Bip discontinu pour la détection de tension / Bip continu pour la continuité	
Standards and Safety électrique	IEC/EN 61243-3 IEC 61010 1000 V CAT IV	
Climatic conditions	-30 °C to +60 °C (extended "Class S")	-15 °C to +45 °C ("Class N")
Autonomy	> 5,000 x 10s measurements	> 2,500 x 10s measurements
Dimensions / weight	228 x 60 x 39 mm (without test probe) / 350 g approx.	



1 voltage detector delivered with:

- 1 set of red/black $\varnothing$ 2 mm removable test probes with crystal safety cap
- 1 test-probe protector
- 1 Velcro strap
- 2 x 1.5 V LR03 batteries

The IP2X version is delivered with:

- 1 set of red/black IP2X $\varnothing$ 4 mm removable test probes with crystal safety cap
- 1 Velcro strap
- 2 x 1.5 V LR03 batteries

To order

CA 771 DDT/VAT

Reference: P01191771

CA 771 DDT/VAT IP2X

Reference: P01191771A

CA 773 DDT/VAT

Reference: P01191773

CA 773 DDT/VAT IP2X

Reference: P01191773A

Recommended accessories



P01298076
Bag



P01191748Z
CA 753 universal measuring
adapter for 2P+E sockets

Accessories for testers

■ Accessories ■ Included in original delivery condition

	Item code	Description	CA 732	TX 01	CA 745N	CA 755	CA 757	CA 742 CA 762 CA 742 IP2X CA 762 IP2X	CA 771 / IP2X CA 773 / IP2X
	P01103061Z	Removable red test probe with locking pin for tester or remote control probe / 600 V CAT IV / for CA 745, TX01, remote control probe		■					
	P01102152Z	Set of 2 test probes / 4 mm male plug / 1,000 V CAT IV for CA 745N, CA 755, CA 757			■	■	■		
	P01102153Z	Set of 2 Ø2 test probes with crystal cap / 4 mm male plug / 300V CAT II for CA 745N, CA 755, CA 757			■	■	■		
	P01102154Z	Set of 2 Ø4 mm test probes with crystal cap / Ø4 mm male plug / 300V CAT II for CA 745N, CA 755, CA 757			■	■	■		
	P01102008Z	Removable red touch tip for DDT-VAT / Connection via insulated 4 mm female plug / Compliant with IEC 61243-3						■	
	P01102123Z	Set of 2 touch probes for DDT/VAT (1 red, 1 black) / Ø4 mm female plug / 1000V CAT IV							■
	P01102124Z	Set of 2 D2 mm touch probes with crystal cap for DDT/VAT (1 red, 1 black) / Ø4 mm female plug / IEC 61243-3 1000V							■
	P01102125Z	Set of 2 D4 mm test probes for DDT/VAT (1 red, 1 black) / Ø4 mm female plug / IEC 61243-3 1000V							■
	P01102127Z	Set of 2 IP2X touch probes for DDT/VAT (1 red, 1 black) / Female plug Ø4 mm / 1000V CAT IV						■	■
	P01102128Z	Set of 2 touch probes Ø4 mm IP2X for DDT/VAT (1 red, 1 black) / Female plug Ø4 mm / IEC 61243-3 1000V						■	■
	P01102009Z	PVC cord with black touch tip for DDT-VAT / Insulated angled Ø4mm female plug / Length 0.85 m / IEC 61243-3						■	
	P01102121Z	Accessory kit for DDT/VAT CA 74x/xN, CA 76x/ xN / 1 black cord 1.10 m with insulated male 4-pin plug and angled 4 mm female plug / 2 IP2X Ø4 RD/BK test probes, IEC 61243-3 1000 V						■	
	P01295285Z	Set of 2 IP2X cords for DDT/VAT with IP2X test probe D4 female angled plug Ø4 mm, length 0.25 m (red) and 0.85 m (black), compliant with IEC 61243-3 1000V						■	

Accessories for testers

	Item code	Description	CA 732	TX 01	CA 745N	CA 755	CA 757	CA 742 CA 762 CA 742 IP2X CA 762 IP2X	CA 771 / IP2X CA 773 / IP2X
	P01295462Z	Set of 2 IP2X cords for DDT/VAT (1 red, 1 black) / IP2X test probe Ø4 mm-angled female plug Ø4 mm / 15 A / 1.5 m / IEC 61243-3 1000V						■	
	P01295463Z	Set of 2 PVC IP2X cords for DDT/VAT / IP2X test probe D2 mm - angled female plug Ø4 mm / 15 A / 1.5 m / 600V CAT IV - 1000V CAT III						■	
	P01101997Z	CA 751 Test adapter for 2P+T socket. Accessory for DDT/VAT CA 74x, CA 76x						■	
	P01191748Z	CA 753 Measuring adapter for 2P+T EU socket (type E and F). For safe measurement of P (Phase), N (Neutral) and PE (Earth) with all test probes. Indicator light for P-N voltage (> 200 V) and phase position.		■	■	■	■		■
	P01120591	MA101-250 Flexible 300A AC current sensor replacement for the 757 AC tester					■		
	P01298012	Soft bag No. 10 for transport and storage, useful dimensions 180x75x45 mm						■	
	P01298065Z	Carrying and storage case, one compartment with useful dimensions of 200 x 100 x 40 mm with belt attachment						■	
	P01298074	Bag equipped with an internal pocket, a strap and can be combined with the MultiFix accessory. Useful internal dimensions: 120 x 200 x 60 mm			■	■	■	■	
	P01298076	Bag equipped with an internal pocket, a strap and can be combined with the MultiFix accessory. Useful internal dimensions: 120 x 320 x 60 mm							■
	P01102100Z	MultiFix mounting accessory. Combined with measuring devices (multimeters, etc.) and MultiFix-compatible cases and bags, it allows for transport and mounting for greater ease of use.			■	■	■		
	P01102113	Set of 5 Velcro® straps, useful length 180 mm, width 15 mm for storing and organising cables, flexible sensors, etc.			■	■	■		
	P01102033	Set of 10 replacement crystal safety caps for thin touch tips with a diameter of 2 mm						■	■
	P01102126Z	Replacement touch point protectors for DDT/VAT models CA 771 and CA 773							■

Multimeters

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Digital multimeters

Selection guide



	CA 702	CA 703	MTX 202	MTX 203	MTX 204	CA 5231	CA 5233	CA 5273	CA 5275	CA5277	MTX 3290	MTX 3291	CA 5292	CA 5293	MTX 3297Ex
Colour graph													■	■	
2,000 dot display	■	■													
4,000 dot display			■												
6,000 dot display				■	■	■	■	■	■	■	■				
60,000 dot display												■			■
100,000 dot display													■	■	
Simultaneous display(s)	1	1	1	1	1	1	1	2	2	2	2	2	4	4	2
Bar graph / central 0 bar graph						■ / -	■ / -	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■
Backlight			■	■	■	■	■	■	■	■	■	■	■	■	■
AVG measurement method	■	■													
TRMS measurement method			AC/DC	AC/DC	AC/DC / AC+DC	AC/DC	AC/DC	AC/DC	AC/DC / AC+DC	AC/DC / AC+DC	AC/DC / AC+DC	AC/DC / AC+DC	AC/DC / AC+DC	AC/DC / AC+DC	AC/DC / AC+DC
Bandwidth			1 kHz	1 kHz	1 kHz	1 kHz	1 kHz	3 kHz	10 kHz	10 kHz	20 kHz	20 kHz	100 kHz	200 kHz	20 kHz
AC / DC voltage	600 V	600V	750 V _{AC} / 1000 V _{DC}	750 V _{AC} / 1000 V _{DC}	750 V _{AC} / 1000 V _{DC}	1000 V	600 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V
VLowZ / VLowZ+FPB / PB filter			■ / - / -	■ / - / -	■ / - / -	■ / - / -	■ / - / -	- / ■ / -	- / ■ / -	- / ■ / -	■ / - / ■	■ / - / ■	■ / - / ■	■ / - / ■	■ / - / ■
No-contact voltage detection	■	■	■	■	■	■	■								
AC / DC current		200 mA	10 A	10 A	10 A		10 A	10 A	10 A	10 A	10 A	10 A	10 A	10 A	10 A
Current via clamp						■					■	■	■	■	■
µA rating		■							■	■	■	■	■	■	■
Resistance / Continuity / Diode	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■
Frequency					■		■	■	■	■	■	■	■	■	■
Capacities			■	■	■		■	■	■	■	■	■	■	■	■
Temperature			■	■			TcK	TcK		TcK	Pt100 / Pt1000	Pt100 / Pt1000	Pt/TcK / TcI	Pt/TcK / TcI	Pt100 / Pt1000
Communication											Isolated USB	Isolated USB	Isolated USB	Isolated USB	Isolated USB (safe zone)
ATEX / IEC Ex															■
CAT III 600 V			■	■	■		■								
CAT III 1,000 V	■	■				■		■	■	■	■	■	■	■	■ (safe zone)
CAT IV 600 V	■	■				■	■	■	■	■	■	■	■	■	■ (safe zone)
Tightness			IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP67	IP67	IP67	IP67	IP67

Pocket digital multimeters

CA 702 - CA 703

600 V
CAT IVIEC
61010-2-033Practical and indispensable
instruments for
basic measurements

- Pocket size
- Solid touch counts
- Handy and safe
- Built-in torch



	CA 702	CA 703
Display	2000 counts	
Calibre selection	Automatic (AUTORANGE)	
V _{DC} / Accuracy	2,000 V ; 20.00 V ; 200.0 V ; 600 V / $\pm 1.2\%$ L + 3 D > 600 V / out of specification	
V _{AC} / Accuracy (40-400 Hz)	2,000 V ; 20.00 V / $\pm 1.0\%$ L + 8 D 200.0 V ; 600 V / $\pm 2.3\%$ L + 10 D > 600 V / out of specification	
No-contact voltage detection	Yes	
I _{DC} / Accuracy / Protection	-	200.0 μ A ; 2,000 μ A / $\pm 2.0\%$ L + 8 D 20.00 mA ; 200.0 mA / $\pm 2.0\%$ L + 8 D 200 mA / 500 V electronic fuse protection
I _{AC} / Accuracy / Protection	-	200.0 μ A ; 2,000 μ A / $\pm 2.5\%$ L + 10 D 20.00 mA ; 200.0 mA / $\pm 2.5\%$ L + 10 D Protection 200 mA / 500 V
Resistance / Accuracy / Protection	200.0 Ω / $\pm 0.8\%$ L + 5 D 2,000 k Ω , 20.00 k Ω , 200.0 k Ω / $\pm 1.2\%$ L + 5 D 20.00 M Ω / $\pm 5.0\%$ L + 5 D 20.00 M Ω / $\pm 10.0\%$ L + 5 D • 600 Vrms	
Diode test / Test signal / Protection	1,999 V / V _{Test} $\leq$ 1.5 V / I _{Test} $\leq$ 1 mA • 600 Vrms	
Audible continuity / Buzzer / Protection	199.9 Ω / R < approx. 60 Ω / 600 Vrms	
Torch	Yes	
Standards	IEC 61010 1000 V CAT III / 600 V CAT IV	
Power supply	2 x 1.5 V LR03 batteries	
Various	Touch-tip leads attached to the device	
Dimensions / weight	104 x 55 x 32.5 mm / 145 g	



1 pocket multimeter supplied with:

- 2 x 1.5 V LR03 batteries

To order

CA 702

Reference: P01191739Z

CA 703

Reference: P01191740Z

Recommended accessory

P01298065Z
Carrying case

Compact digital multimeters

CA 5231 - CA 5233



IP 54

1000 V
CAT III600 V
CAT IVIEC
61010-2-033

TRMS

This series of digital multimeters has all the functions expected by electricians for the maintenance of residential and tertiary equipment and installations.

2 «Off» positions for greater efficiency and a compact case covered in No-slip, protective material for excellent grip.

CA 5231 and CA 5233

- Compact and ergonomic
- Exceptional readability thanks to 6000 counts backlit display with bar graph
- AC/DC voltage up to 1,000 V
- AC/DC current up to 600 A with 1,000/1 current clamp (optional)

	CA 5231	CA 5233
Display	6000 counts display+ bargraph 61 segments	
Backlight	Yes	
Acquisition	True RMS AC	
Autorange / Manual range	Yes / Yes	
Better accuracy	0.02 %	
AC voltage LowZ	Yes	
Audible continuity / Diode test	Yes / Yes	
No-contact voltage detection (NCV)	Yes	
Display memory (Hold)	Yes	
Relative mode	-	Yes
Min-Max	-	Yes
Power supply	1 x 9 V battery 6LR61	
Degree of tightness	IP54 RATING	
Standards	IEC 61010-1, IEC 61010-2-033 CAT IV 600 V / CAT III 1000 V	IEC 61010-1, IEC 61010-2-033 CAT IV 600 V / CAT III 600 V
Dimensions / weight	155 x 75 x 55 mm / 320 g	

AC voltage	6 ranges / 1,000 V / resolution: 0.01 mV / bandwidth: 45 Hz ... 1 kHz	
DC voltage	6 ranges / 1,000 V / resolution: 0.01 mV	
AC/DC current	With 1 optional AC or DC clamp (1 mV/A) 1 rating: 600 A / Resolution: 0.1 A	2 ratings: 10 A / 6 A Resolution: 0.001 A
Resistance measurement	6 Calibration / 60 MΩ / Resolution : 0,1 Ω	
Capacity	-	6 ratings / 1,000 μF Resolution: 0.01 nF
Temperature	-	2 ranges -20 °C to 760 °C -4 °F to 1,400 °F Resolution: 0.1°



1 CA 5231 multimeter supplied with:

- 1 set of red/black touch-tip cords
- 1 x 9 V battery 6LR61

The CA 5231 is also available complete with its 100 Aac clamp ammeter, model MINI 03 (P01196734)

1 CA 5233 multimeter supplied with:

- 1 set of red/black test leads
- 1 TC-K adapter for DMM
- 1 K wire thermocouple
- 1 9 V battery 6LR61

To order

CA 5231

Reference: P01196731

CA 5233

Reference: P01196733

CA 5231 with MINI 03 clamp

Reference: P01196734

Recommended accessories



P01102100Z
MULTIFIX accessories



P01295459Z
Accessory kit for electricians

Compact digital multimeters

MTX 202, MTX 203, MTX 204



600 V
CAT III

IEC
61010-2-033

IP 54

TRMS

For measurements on electrical networks and installations up to 600 V CAT III, the MTX 200 series multimeters are professional, general-purpose measuring instruments.

- Compact case with multi-purpose cable storage sleeve, magnetic mounting for metal cabinets and shock protection with MULTIFIX system
- Blue backlight with torch for optimum viewing in dark environments

	MTX 202	MTX 203	MTX 204
Acquisition	TRMS AC/DC	TRMS AC/DC	TRMS AC/DC/AC+DC
Display resolution	4,000 counts	6,000 counts	6,000 counts
Auto power off	30 min / Permanent mode		
Basic accuracy (Voc)	0.20 %		
Bandwidth	1 kHz		
Audible continuity	Yes		
Frequency and duty cycle			2 Hz to 1 kHz
Diode test	Yes	Yes	Yes
Capacity (ranges)	1 nF to 100 mF	1 nF to 100 mF	1 nF to 100 mF
HOLD	■	■	■
Min/MAX	-	-	■
ΔREL	-	-	■
Power supply / Battery life	2 x 1.5 V / 500 h batteries	2 x 1.5 V / 500 h batteries	2 x 1.5 V / 500 h batteries
Dimensions / Weight	170 x 80 x 50 mm / 320 g	170 x 80 x 50 mm / 320 g	170 x 80 x 50 mm / 320 g
Safety électrique	IEC 61010-2-033 600 V CAT III	IEC 61010-2-033 600 V CAT III	IEC 61010-2-033 600 V CAT III
High resistance enclosure	IP 54	IP 54	IP 54
Warranty	2 years	2 years	2 years
Measurement range	Measurement range from 10 mV to 750 V _{AC} / 1,000 V _{DC}		
AC voltage / DC voltage (ranges)	400 mV to 600 V / 600 V	600 mV to 750 V / 1,000 V	600 mV to 750 V / 1,000 V
AC/DC current (ranges)	20 mA to 10 A	10 μA to 10 A	10 μA to 10 A
Resistance (ranges)	1 Ω to 40 MΩ	1 Ω to 60 MΩ	1 Ω to 60 MΩ
No-contact voltage detection NCV	230 V / 50 Hz	230 V / 50 Hz	230 V / 50 Hz
Temperature	-55 °C to 1,200 °C	-55 °C to 1,200 °C	No



1 MTX 202 or MTX 203 multimeter supplied with:

- 1 set of 2 safety leads with touch points
- 2 x 1.5 V AA batteries
- 1 wired K thermocouple
- 1 elastomer sheath with stand
- Operating instructions

1 MTX 204 multimeter supplied with:

- 1 set of 2 safety leads with touch points
- 2 x 1.5 V AA batteries
- 1 magnetised elastomer sheath with lever handle
- Operating instructions

To order

MTX202 delivered in blister pack
Reference: MTX202-Z

MTX203 delivered in blister pack
Reference: MTX203-Z

MTX204 delivered in blister pack
Reference: MTX204-Z

Recommended accessories

HX0052B
Bag

P01102107Z
K thermocouple

HX0064
SMD clip banana cord

Industrial digital multimeters

CA 5273, CA 5275, CA 5277

1000 V
CAT III600 V
CAT IVIEC
61010-2-033

IP 54

TRMS

**A full-featured range
for inspection control,
maintenance or expertise**

CA 5273

- Temperature and capacitance measurements
- Central bar graph zero mode
- Min/Max memory

CA 5275 and CA 5277

- 10 μ V resolution
- Current measurement from μ A
- Measurement of ionisation currents
- Min / Max / Peak+ / Peak- acquisition

	CA 5273	CA 5275	CA 5277
Display	2 x 6000 counts backlit		
Bar graph	63-element dual mode (full scale / centre zero)		
Acquisition	TRMS AC / DC	TRMS AC / DC / AC+DC	
Measurement rate	5 measurements / second		
Calibration Automatics / Manuels	Yes / Yes		
AC voltage LowZ	Low impedance position with Low Pass Filter		
Audible continuity / Diode test	Yes / Yes		
Hold	Yes		
Min / MAX (100 ms)	Yes		
Peak+ / Peak- (1 ms)	No	Yes	
Differential (Δ X) / RELative (Δ X/X%) measurement	No		Yes
Automatic switch-off	Yes (disengageable)		
Safety	IEC 61010-1, IEC 61010-2-033 CAT IV 600 V / CAT III 1000 V		
Protection class and d'étanchéité	IP54		
Power supply	1 x 9V 6LR61 battery		
Dimensions / weight	90 x 190 x 45 / 400 g		
AC/DC voltage	600.0 mV / 6.000 V / 60.00 V / 600.0 V / 1,000 V		
AC/DC/AC+DC voltage	60.00 mV / 600.0 mV / 6 V / 60.00 V / 600.0 V / 1,000 V		
Typical accuracy (Voc)	0.2% + 2 cts	0.09% + 2 cts	
Bandwidth (V _{AC})	40 Hz to 3 kHz	40 Hz à 10 kHz	
AC/DC current	6.000 A / 10.00 A (20 A/30 s)	-	-
AC/DC/AC+DC current	-	6,000 µA / 60.00 mA / 600.0 mA / 6.000 A / 10.00 A (20A/30s)	
Ionisation current		0.2 µA to 20.0 µA _{DC}	
Resistance measurement	600.0 Ω / 6,000 Ω / 60.00 kΩ / 600.0 kΩ 6.000 MΩ / 60.00 MΩ	600.0 Ω / 6,000 Ω / 60.00 kΩ / 600.0 kΩ 6.000 MΩ / 60.00 MΩ	
Audible continuity / Diode test	Yes / Yes		
Frequency	600.0 Hz / 6.000 kHz / 20.00 kHz	600.0 Hz / 6.000 kHz / 20.00 kHz	
Capacity	8 cal. : 6,000 nF to 60,00 mF	6,000 nF / 60 nF / 600 nF / 6 µF / 60 µF / 600 µF / 6 mF / 60 mF	
Temperature	-59,6 °C to +1,200 °C -4 °F to 2,192 °F	No	-59,6 °C to +1,200 °C -4 °F to 2,192 °F

**CA 5273 supplied with:**

- 1 set of banana cords
- 1 set of test probes
- 1 9 V battery 6LR61
- 1 K thermocouple temperature sensor

CA 5275 supplied with:

- 1 set of banana leads
- 1 set of test probes
- 1 x 9 V battery
- 1 carrying case
- 1 MultiFix mounting accessory
- 1 start-up guide

CA 5277 same as CA 5275 plus:

- 1 K thermocouple temperature sensor

To order

1 CA 5273 multimeter

Reference: P01196773

1 CA 5275 multimeter

Reference: P01196775

1 CA 5277 multimeter

Reference: P01196777**Recommended accessories**

P01295459Z
Electrician's accessory kit



P01298076
Carrying case

Industrial digital multimeters

MTX 3290 - MTX 3291



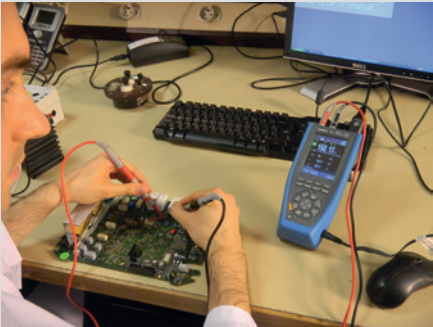
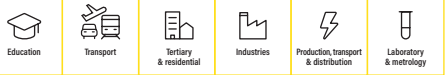
- 1 000 V
CAT III
- 600 V
CAT IV
- IP 67
- IEC
61010-2-033
-

Multimeters designed for the field, a single high-performance, comprehensive diagnostic instrument that's above all easy to use!

- Each main measurement is instantly accessible via one of the 6 dedicated keys

	MTX 3290	MTX 3291*
Display type	LCD with backlight*, and 14 mm digit height Dual 60,000-dot* or 6,000-count display	
DC, AC and AC+DC voltages	600 mV to 600 V (5 ranges)	60 mV to 1 000 V (6 ranges)
DC accuracy	0.3 %	0.05 %
AC bandwidth AC+DC	20 kHz	100 kHz
Current DC, AC, AC+DC	600 µA at 10 A /20 A (30 s max)*	
DC accuracy	1.2 %	0.8 %
Frequency	60 Hz to 600 kHz	
Resistance	600 Ω to 60 MΩ (5 ranges)	
Audible continuity	600 Ω SIGNAL < 30 Ω ±5 Ω < 5 V	
Diode test	3 V resolution 1 mV	
Capacities	6 nF to 60 mF (8 ranges)	
Temperature PT100/1000	-200 °C to +800 °C	
Other functions		
Monitoring	MAX/MIN / AVG time-stamped or PEAK ±, on all main positions	
REL	Relative value REL+ secondary display: the reference measured value*	
PWM filter	Low-pass 300 Hz, 4th order for measurement on induction motor drives	
Direct reading V output clamp function	Ratio integration 1/1, 1/10, 1/100, 1/1,000 mV/A	
Secondary functions or measurements	dBm and VA resistive power, duty cycle +/-, and pulse width*	
Central zero	Selectable or automatic* bar graph in V _{OC} and I _{OC}	
General characteristics		
PC interface	-	Optical USB connector and SX-DMM software
Power supply	4 x 1.5 V AA or Ni-MH batteries	
Safety	Safety according to IEC 61010-2-033 1000 V-CAT III/600 V CAT IV* or 600 V CAT III / 300 V CAT IV	
Environment	Storage -20 °C to +70 °C - Use -10 °C to +55 °C	
Mechanical specifications	Dimensions (W x D x H) : 196 x 90 x 47.1 mm - Weight : 570 g	

(*) MTX 3291 seulement



Multimeter supplied with:

- 4 x 1.5 V alkaline batteries
- 1.5 m straight/straight cable, red
- 1.5 m straight/straight cable, black
- CAT IV 1 kV probe, red
- CAT IV 1 kV test probe, black
- Operating instructions CD and paper start-up guide
- USB cable and remote programming manual for communicating version (MTX 3291 + SX-DMM software)

To order

MTX 3290

Reference: MTX3290

MTX 3291

Reference: MTX3291

Recommended accessories

HX0056-Z
Optical/USB cable

HX0052B
Carrying case for MTX 329x multimeter

Graphic digital multimeters

CA 5292 - CA 5293

1000 V
CAT III600 V
CAT IVIEC
61010-2-033

IP 67



- Bandwidth 100 kHz to 200 kHz
- TK/TJ or PT temperature measurement from -200 °C to +1200 °C
- Current measurement by direct reading clamp (ratio integration)
- Numerous additional measurement functions: low-pass PWM filter (inverter), and low impedance VLowZ (500 kΩ), dB/dBm measurement, duty cycle, pulses, diode measurements: zener or led, etc.
- Simplified settings for number of measurements, interval (from 0.2 s to 24 h), duration and memory capacity...
- Zoom function on curve in memory

	CA 5292	CA 5293
Display	4 x 100,000 TRMS counts	
Bar graph	40 elements or central zero mode	
Measurement rate	5 measurements / second	
DC, AC and AC+DC voltages		
Measurement range	10 µV to 600 V _{AC} /1,000 V _{DC}	
Range	100 mV* / 1,000 mV / 10 V / 100 V / 1,000 V	
Bandwidth AC AC+DC	100 kHz	200 kHz
Basic accuracy AC AC+DC	0.3 %	0.3 %
Basic accuracy DC	0.03 %L	0.02 %L
Impedance in VLowZ AC	500 kΩ	
Current DC, AC, AC+DC		
Measurement range	100 µA to 20 A (30 s)	
Range	1,000 µA / 10 mA / 100 mA / 1,000 mA / 10 A 10 A / 20 A (30 s max)	
Bandwidth AC AC+DC	50 kHz	
Frequency		
Measurement range	1 Hz to 5 MHz	
Frequency range	10 Hz / 100 Hz / 1 kHz / 10 kHz / 100 kHz / 1 MHz / 5 MHz	
Resistance and continuity		
Ranges	100 Ω* / 1 kΩ / 100 kΩ / 1,000 kΩ / 10 MΩ / 100 MΩ	
Continuity detection	< 20 Ω	
Diode test		
Voltage measurement	Open circuit diodes < 26 V _{max} at 10 mA	
Capacities		
Measurement range	1pF to 10mF	
Ranges	1 nF / 10 nF / 100 nF / 1,000 nF / 10 µF / 100 µF / 1 mF / 10 mF	
Temperature Pt100/1000 and TK/TJ		
Operating range	-200 °C to +800 °C for Pt and -40 °C to +1,200 °C for TK	
Other functions		
MAX/MIN/AVG - PEAK	On all time-stamped main quantities - Secondary measurement	
REL	Relative value REF - Main measurement	
PWM filter	Low-pass 300 Hz 4th order for measurement on induction motor drives	
SPEC	Measurement tolerance display+ Smin+ Smax	
GRAPH	Main measurement trend based on variable time from 1 min 28 s to 1 h 13 min 20 s	
WAVEFORME	Graphical display of a signal up to 600 Hz auto mode	
Secondary measurements	3 measurements+ main measurement	
Measurement memory	10,000	30,000
General characteristics		
Display type	Colour graphics (70 x 52) with backlight, black background on 4 x 100,000 counts displays	
PC interface*	Optical USB connector	
Power supply	Charger or 4 AA or Ni-MH batteries	
Safety / EMC	IEC 61010-2-033 - 1,000 V CAT III - 600 V CAT IV EMC according to EN61326-1	
Environment	Storage -20 °C to +70 °C - Use 0 °C to +40 °C	
Mechanical characteristics	Dimensions (W x D x H): 196 x 90 x 47.1 mm / Weight: 570 g	
Protection class	IP67	

CA 5292,
and CA 5293
supplied with:

- 1 case
- 4 Ni-MH batteries
- 1 USB charger
- 1 set of 2 red/black 1.5 m straight/straight cables
- 1 set of CAT IV 1 kV red/black test probes
- 1 USB optical cable
- 1 SX-DMM software

To order

1 CA 5292 multimeter **Reference: P01196802**1 CA 5293 multimeter **Reference: P01196803**

Recommended accessory

P01120401
MN08 current clamp

Intrinsically safe multimeter

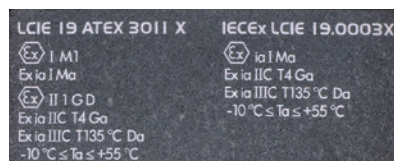
MTX 3297Ex

600 V
CAT IVTRMS
AC+DC

IP 67



- TRMS AC+DC acquisition
- Display resolution of 60,000 counts
- 100 kHz bandwidth
- Voltage resolution of 1 µV and current resolution of 0.01 µA
- Large 5.7" backlit digital display
- Secure terminal block with clear marking of connections to prevent any risk of error



Tensions DC, AC and AC+DC		
V DC	Measurement range	0.001 mV to 1000.0 V DC
	Uncertainty	0.05 % + 25 cts
V AC, V AC+DC	Measurement range	0.001 mV to 1000.0 V AC or AC+DC
	Uncertainty AC, AC+DC / Bandwidth	0.05 % + 25 cts, 0.05% + 40 cts / 100 kHz
V _{LOWZ}	Measurement range	0.01 mV to 1000.0 V
	Uncertainty / Bandwidth	0.05 % + 25 cts / 300 Hz
Measurement range certified in ATEX Zone		0.001 mV to 65.00 Vrms
DC, AC & AC+DC currents (fused)		
A DC	Measurement range	0.01 µA to 10.00 A DC (max. 20 A/30 s)
	Uncertainty	0.8 % + 20 cts
A AC, A AC+DC	Measurement range	0.01 µA to 10.00 A AC or AC+DC (max. 20 A/30 s)
	Uncertainty / Bandwidth	1.0 % + 25 cts / 20 kHz
Certified measurement range in ATEX Zone ⁽³⁾		0.01 µA to 5.00 A
with external sensor (clamp)		up to 6000 A depending on sensor, transformation ratio 1, 10, 100, 1000 mV/A
Frequency		
Hz	Measurement range	10.00 Hz to 200.0 kHz (in V), 20.00 kHz (in A)
	Uncertainty	0.1 % + 1 cts
Resistance & Continuity, Diode		
Ω	Measurement range	0.00 Ω to 60.000 MΩ
	Uncertainty	0.1 % + 20 cts
Continuity		Audible signal< 30 ± 5 Ω / < 5 V, I< 1,1 mA
Diode test		3.000 V, 1%+ 30 cts / U< 5 V, I< 1.1 mA
Capacitance		
nF/µF/mF	Measurement range	0.100 nF ;to 60.000 mF
	Accuracys	1 % + 10 cts
Temperature Pt100/Pt1000		
°C/°F	Measurement range	-200.0 °C to +800.0 °C
	Uncertainty	0.1 % ± 1.5°C
Other measurements		
Secondary measurements		Duty cycle, Pulse width, Resistive power (U ² /R), dBm
Functions		
MAX/Min/AVG, Peak+/Peak-		On all main measurements 100 ms except Peak 1 ms
ΔREL, ΔREL/R		Differential value, Relative value
PWM filter		Low-pass filter 300 Hz 4th order
General characteristics		
Display		Dual 60,000-dot LCD display with 3-level backlighting
Power supply		4 AA/FR6 Li-FeS2 ATEX-qualified batteries / 350 h operating time
Compliance outside ATEX zone		IEC 61010-2-033 1000V CAT III/600V CAT IV, EN 61326-1 class B
Sealing / Environment		IP 67 ⁽²⁾ / Storage -20°C to +70°C, Use -10°C to +55 °C
Mechanical specifications		Dimensions (W x D x H): 196 x 90 x 47.1 mm - Weight: 715g
Warranty		3 years

(1) In «safe zone» (non-ATEX zone). (2) IP67 when not in use. (3) Current measurement in hazardous areas must be carried out using the Ampere input.



+ The extra

Outside the ATEX zone, the MTX 3297Ex is also a high-performance 1,000 V CAT III/ 600 V CAT IV industrial multimeter.



MTX3297 supplied with:

- 1 set of 2 1.5 m straight/coiled leads
- 1 set of probe tips
- 1 start-up guide (18 languages) including information (link & QR code) for free download of the operating manual
- 1 ATEX safety manual
- 1 set of 4 batteries (pre-installed in the device) 1.5V AA/ FR6 Li-FeS2 ATEX qualified

To order

Multimeter MTX 3297Ex

Reference: MTX3297

Recommended accessories

	HX0091 Pt100 / Pt1000 adapter
	HX0056-Z Optique/USB cable
	P01105105Z MINI05 current clamp

Spare parts Certified in Explosive Environment :

AT0097
ATEX fuse 10x38 10 A 1000 V / 30 kA (unit)

HX0097
Set of 4 ATEX Batteries 1.5V AA/FR6 Li-FeS2

P01295451Z
Set of 2 overmoulded red/black PVC cords, straight/angled

P01295454Z
Set of 2 red/black overmoulded touch tips

Calibration software

ACC SOFT - ACC CAL

Calibration software for optimum measurement accuracy

The software enables you to carry out periodic checking and/or adjustment operations on the «closed case» instruments. The software allows you to carry out periodic checks and/or adjustments on «closed-case» instruments using RS or USB serial communication (depending on the model), simply and efficiently.

Without having to go through the tedious process of acquiring in-depth technical knowledge of the Instrument, users will be able to carry out the «manufacturer's» procedures or devise their own. Without entering into a tedious process of in-depth technical knowledge of the instrument, the user can carry out the «manufacturer's» procedures or draw up his own procedures, in compliance with quality monitoring standards, while ensuring the reverse traceability of his processes, data back-up and the printing of readings.

List of multimeters supported and associated software

- Associated software HX0059B for:
MTX 3292B and MTX 3293B
- Associated software P01196770 for :
 - MTX 3291
 - MTX 3297Ex
 - MX 5060
 - CA 5271, CA 5273
 - CA 5275, CA 5277

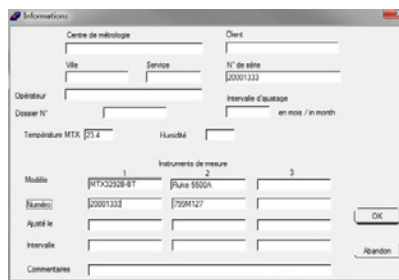
To order

Calibration software (depending on model)
Références : HX0059B or P01196770

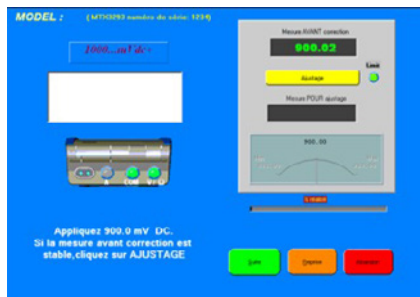


The software can be used to generate adjustment and verification statement files and a verification report.

Adjustment points can be recorded and stored, with product traceability information:



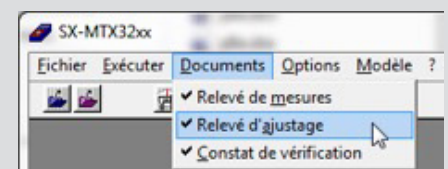
Step-by-step instructions for connections and adjustments are given so that you can follow the steps in the right order:



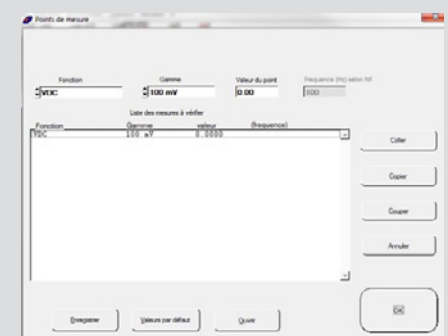
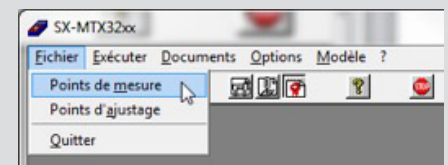
E.g.: extract from the test.txt file

Ranges	Adjustment value	Max deviation	Measured deviation	Tolerance (%)
Offset V...	0.0000	unadjusted		
100... mVdc+	90.000	unadjusted		
100... mVdc-	-90.000	unadjusted		
1000...mVdc+	900.00	0.7202	-0.0300	4.16
1000...mVdc-	-900.00	0.7202	0.0000	0.00

Tolerance error (%) indicates the error in the general tolerance of the MTX.
Here the adjustment error is 4.16 % of the maximum tolerance.



The programme is useful for checking basic measurements. The verification results are available in a file.



Oscilloscope multimeters

CA 922 - CA 942

HANDSCOPE
3 in 1
**600 V
CAT III**

**TRMS
AC+DC**


For maintenance and troubleshooting, view signals in the field

- 20 or 40 MHz 2-channel isolated oscilloscope
- Dual 8000-point multimeter
- Dual harmonic analyser

	CA 922	CA 942
HMI		
Display type	3"5 colour TFT - 320x240 resolution - LED backlighting	
Display mode	2500 real acquisition points on screen	
Curves displayed on screen	2 curves+ 2 references+ memory trace or mathematical calculation	
Controls	Direct settings on front panel & on-screen menus via navigator (main & secondary without "hidden menus")	
Interactive on-board help	14 languages: French, English, German, Spanish, Italian, Swedish, Romanian, Russian, Finnish, ...	
OSCILLOSCOPE MODE		
Vertical deflection		
Bandwidth	20 MHz	40 MHz
Bandwidth limiter	1.5 MHz, 5 kHz	
Number of channels	2 fully isolated channels	
Input impedance	1 MΩ ±0.5%, approx. 17 pF	
Maximum input voltage	600 V CAT III - Derating -20 dB per decade from 100 kHz	
Vertical sensitivity	5 mV to 200 V/div	
Horizontal deviation		
Scanning speed	From 25 ns/div to 200 s/div - Roll mode from 100 ms to 200 s/div	
Horizontal zoom	zoom coefficient: x1, x2, x5	
Triggering		
Mode	Automatic, triggered, single shot & Roll triggered	
Type	Front, Pulse width (20 ns - 20 s)	
Coupling	AC or DC (depending on trigger channel coupling), HF, LF or noise rejection	
Sensitivity	≤ 12 divisions p-p up to 20 MHz	≤ 12 divisions p-p up to 40 MHz
Digital memory		
Maximum sampling rate	2 GS/s in ETS - 50 MS/s in single shot on each channel	
Vertical resolution	9 bit	
Memory depth	2500 points per channel	
User memory	2 MB for storing files: trace (.trc), text (.txt), configuration (.cfg), image files (.bmp)	
GLITCH mode	Duration≥ 20 ns - 1250 Min/Max torques	
Display modes	Envelope, Averaging (Factors 2 to 64) and XY (vector)	
Other functions		
MATH functions	Channel inversion, addition, subtraction, multiplication and division (adjustable scaling)	
Cursor measurements	2 cursors: V, T, dV, dt simultaneous - 4-digit resolution display	
Automatic measurements	18 time or level measurements and Phase measurement	
MULTIMETER MODE		
General characteristics	2 channels, 8000 point display+ bar graph min/max - Graphical recording of 2700 measurements (5 min to 1 month)	
Operating modes	Absolute or relative display (absolute, deviation, ref, ref%) - Monitoring (instantaneous, Min, Max, Avg)	
AC, DC, AC+DC voltages	Ranges from 600 mV to 600 VRMS, 800 mV to 800 VDC - VDC accuracy 1%L+20D - 50 kHz bandwidth	
Resistance	Range from 80 Ω to 32 MΩ - accuracy 2%L+10D - Fast continuity test 10 ms	
Capacitors	Ranges from 5 nF to 5 mF - basic accuracy 2%L+10D	
Other measurements	Frequency, rotation speed, 3.3 V diode test, temperature measurement (by K thermocouple and infrared probe)	
POWER		
Measurements	Single-phase and balanced three-phase active power (with or without neutral), simultaneous display of current - PF	
HARMONIC MODE		
Multi-channel analysis	2 channels, 31 rows, fundamental frequency from 40 to 450 Hz	
Simultaneous measurements	Total VRMS, THD and selected rank (%fundamental, phase, frequency, VRMS)	
GENERAL CHARACTERISTICS		
Copies d'écran	Up to 100 files in standard ".bmp" format, displayable on the instrument	
Communication PC	Isolated optical USB interface - Optional "SX-Metro" PC application software	
Power supply	6 LR06 or 6 AA Ni-MH batteries - Battery life up to 8.5 hours JACK/USB cable with adaptor - Fast charge in 3 hours	
Safety / CEM	Safety: 600 V CAT III, IEC 61010-2-033 / EN 61000-3 & EN 61326-1	
Mechanical specifications	214 x 110 x 57 mm - 1,2 kg with batteries - elastomer-moulded case	



For stable measurement on signals seen by the motor at the drive output, a PWM kit is available.

+ The extra

- 1 single connector for all modes: 2 BNC inputs for probe or BNC/banana adaptor supplied



CA 922 and CA 942:

- BNC-Banana adaptors, 2 for CA 922, 1 for CA 942
- Sets of 1.5 m PVC moulded straight-curved banana leads R/N, 2 for CA 922, 1 for CA 942
- Set of crocodile clips R/N, 2 for CA 922, 1 for CA 942
- 1 probe 1/10 600 V for CA 942
- Set of CAT IV 1000V touch probes R/N, 2 for CA 922, 1 for CA 942
- Jack-USB cable+ WALLPLUG USB
- USB optical lead
- Carrying case

To order

CA 922

Reference: P01192200

CA 942

Reference: P01194200

Recommended accessory



P01102188

1 PWM kit: one PWM voltage filter probe + one E27 current clamp

Analogue multimeters

Selection guide



	CA 5001	CA 5003	CA 5005	CA 5011
Analogue	■	■	■	■
Digital				■
Antiparallax mirror	■	■	■	
4000 dot display				■
Backlight				■
Measurement method TRMS AC+ DC				■
Max				■
Low impedance rating (LowZ)	■	■	■	
AC and DC current	■	■	■	■
Current via clamp			■	
µA rating	■	■	■	
5 A rating	■			
10 A rating			■	■
15 A rating		■		
Resistance	■	■	■	■
Sound continuity	■	■	■	■
Frequency				■
dB	■	■	■	■
Fuse control light	■	■	■	■
Ohmmeter voltage presence indicator		■	■	■

Analogue multimeter

MX 1

600V
CAT III

IP65



Thanks to its pointer display, the MX 1 multimeter offers rapid display of measurement results

- Audible alarm to protect the ohmmeter function
- Parallax mirror for accurate measurements
- Faulty fuse indicator

MX1

Display	Analogue with parallax mirror / 80 mm length scale
DC voltage	10 mV to 600 V
Ratings	150 mV / 0.5 V / 1.5 V / 5 V / 15 V / 50 V / 150 V / 500 V / 1.5 kV ⁽¹⁾
Accuracy class	2
AC voltage	10 mV to 600 V
Ratings	5 V / 15 V / 50 V / 150 V / 500 V / 1.5 kV ⁽¹⁾
Accuracy class	2.5
DC current	2 µA to 10 A
Ratings	50 µA / 500 µA / 5 mA / 150 mA / 500 mA / 1.5 A / 10 A
Accuracy class	2
AC current	20 µA to 10 A
Ratings	500 µA / 5 mA / 150 mA / 500 mA / 1.5 A / 10 A
Accuracy class	2.5
Resistance	Voltage presence audible alarm
Ratings	x1 / x10 / x100
Midpoint	200 Ω / 2 kΩ / 20 kΩ
Accuracy class	2.5
Sound continuity	< 150 Ω
Other measurements	Diode test, dB
Tightness	IP 65
Power supply	1 x 1.5 V AA / LR06
Electrical safety	600 V CAT III according to IEC / EN 61010-1 Edition 2
Dimensions / weight	40 x 98 x 150 mm / 420 g

(1) Use limited to 600 Vmax



MX1 with:

- 1 set of test leads with touch-points
- 1 x 1.5 V battery
- 1 operating manual in 5 languages

To order

1 MX 1

Reference: MX1

1 MX1 supplied with 1 TX 01 voltage tester and a carrying case

Reference: MX0001-T

1 MINI01 current clamp

Reference: P01105101Z

1 MN09 current clamp

Reference: P01120402



	MINI 01	MN 09
Clamping Ø	10 mm	20 mm
Measurement range	2 A to 150 A _{AC}	0.5 A to 200 A _{AC}
Transformation ratio	1 000/1	1 000/1

Analogue multimeters

CA 5001 - CA 5003 - CA 5005

600 V
CAT III

IP 53



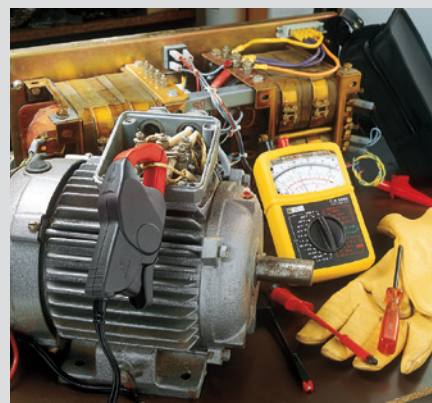
For analogue fans a range of multimeters to meet all the measurement needs of electricians and electrical technicians

- "Fus" indicator: check HPC fuses
- Volttest® indicator™: presence of ohmmeter voltage
- Automatic ohmmeter calibration
- µA calibrators
- Compact, shock-proof case with multi-purpose articulated stand "Multistand™".

* for CA 5003 and CA 5005

	CA 5001	CA 5003 ⁽¹⁾	CA 5005 ⁽¹⁾
DC voltage	8 ratings: 100 mV / ... / 1,000 V ⁽²⁾		
AC voltage	5 ratings: 10 V / ... / 1,000 V ⁽²⁾		
Internal resistance	20 kΩ/V		
Operating frequency	10 Hz ... 100 kHz depending on rating		
DC current	5 cal.: 50 µA / ... / 5 A	7 cal.: 50 µA / ... / 15 A	6 cal.: 50 µA / ... / 10 A
AC current	4 cal.: 5 mA / ... / 5 A	5 cal.: 1,5 mA / ... / 15 A	5 cal.: 3 A / ... / 300 A ⁽³⁾
Resistor	2 cal.: 10 kΩ and 1 MΩ		
Audible continuity test	R < 50 Ω		
Scale in dB for Vac	0 ... +22 dB		
Typical accuracy ⁽⁴⁾	1,5 % in VDC • 2,5 % in VAC and AAC • 10 % in Ω		
Power supply	1 x 1.5 V LR06 battery	1 x 9 V 6LR61 battery	
Battery life	10,000 measurements of 15 s	10,000 measurements of 10 s	
Safety électrique ⁽⁵⁾	IEC 61010-1 Edition 2 600 V CAT III		
Protection ⁽⁶⁾	HPC fuses 0,5 A and 5 A	HPC fuses 1,6 A and 16 A	HPC fuses 1 A and 10 A
Degré d'étanchéité	IP 40	IP 53	
Conditions climatiques	-10 °C ... +55 °C and HR < 90 %		
Dimensions / weight	160 x 105 x 56 mm / 500 g		

(1) Additional «Volttest™» function to check for the presence of resistance voltage and audible continuity test - (2) Use limited to 600 V max. (3) Limited to 240 A max. by MN 89 mini clamp - (4) In % of full scale - (5) Pollution degree 2 - (6) Electronic protection and HPC fuses for current ratings with fuse control indicator.



+ The extra

- Also available complete in a case:
CA 5001 case P01196521F
CA 5003 case P01196522F
CA 5005 case P01196523F
- The CA 5005 comes with a current clamp for measurements up to 200 A_{AC}



CA 5001 supplied with:

- 1 set of silicone cords straight banana plug/angled banana plug
- 1 set of safety pins
- 1 x 1,5 V LR06 battery

CA 5003 supplied with:

- 1 set of silicone cords, straight banana plug/angled banana plug
- 1 set of safety pushbuttons
- 1 x 9 V battery 6LR61

CA 5005 supplied with:

- 1 MN89 AC clamp ammeter
- 1 set of silicone leads, straight banana plug/angled banana plug
- 1 set of safety touch-points
- 1 x 9 V battery 6LR61

To order

1 CA 5001 multimeter	Reference: P01196521E
1 CA 5003 multimeter	Reference: P01196522E
1 CA 5005 multimeter	Reference: P01196523E

Analogue digital multimeter

CA 5011

600 V
CAT IV

IP 53

TRMS



The CA 5011 gives the true RMS value regardless of whether the signal is sinusoidal or distorted

It is suitable for all types of installation, even those with non-linear loads.

- Enhanced safety with 2 LEDs:
«Fus»: control of HPC fuses, «Voltest™»: presence of ohmmeter voltage.
- Two complementary readings:
Digital for accuracy, with backlighting and analogue for reading speed
- Automatic AC/DC recognition
- Compact, shockproof enclosure with multipurpose Multistand™ articulated lever handle



+ The extra

- Also available complete in case:
CA 5011 case **P01196311F**

CA 5011 supplied with:

- 1 set of silicone cords straight banana plug / angled banana plug
- 1 set of safety touch points
- 1 x 9 V battery 6LR61

To order

1 CA 5011 multimeter
Reference: **P01196311E**

Recommended accessories



P01295459Z
Accessory kit for electrician



P01295456Z
PVC cord with touch point,
insulated angled male plug
Ø 4 mm (x 2)



P01298036
Carrying case no. 5

	CA 5011
DC and AC voltage	2 x 5 ratings 400 mV / ... / 1,000 V ⁽¹⁾
Impedance	10 MΩ
Operating frequency ⁽²⁾	20 Hz / ... / 10 kHz
DC and AC current	2 x 6 ratings: 400 μA / ... / 10 A
Resistance ⁽³⁾	6 ratings: 400 Ω / ... / 40 MΩ
Audible continuity test ⁽³⁾	R < 400 Ω
Frequency	3 ratings: 4 kHz / ... / 100 kHz
dB scale for Vac	-20 dB ... +16 dB
Maximum value	Over 500 ms
Typical accuracy ⁽⁴⁾	1% in Vac and Ω, 1,5 % in Aac
Power supply	1 x 9 V 6LR61 battery
Battery life	300 hours
Electrical safety ⁽⁵⁾	IEC 61010-1 Edition 2 600 V CAT IV
Protection ⁽⁶⁾	HPC 1 A and 10 A fuses
Tightness level	IP 53
Climatic conditions	-10 °C ... +55 °C and HR < 90 %
Dimensions / Weight	160 x 105 x 56 mm / 500 g

(1) Use limited to 600 V max. (2) Crest factors ≤ 5 - (3) Additional Voltest™ function to check for possible presence of voltage (4) In digital. In analogue: 2.5% - (5) Pollution degree 2 - (6) Electronic protection and HPC fuses for current ratings with fuse check indicator.

Accessories for multimeters

	Item code	Description	CA 702 CA 703	MTX 202 MTX 203	MTX 204	CA 5231	CA 5233	CA 5273	CA 5275	CA 5277	MTX 3290	MTX 3291	CA 5292 CA 5293	MTX 3297 Ex	CA 922 CA 962	MX1	CA 5001 CA 5003 CA 5005	CA 5011
	P01295454Z	Set of 2 moulded touch-points (1 red / 1 black) for CAT III & IV 1,000 V installations		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	P01295458Z	Set of 2 moulded touch-points 4 mm (1 red and 1 black) for CAT II 300 V installations		■	■	■	■	■	■	■	■	■	■		■	■	■	■
	P01295460Z	Set of 2 moulded touch-points 2 mm (1 red and 1 black) for CAT II 300 V installations		■	■	■	■	■	■	■	■	■	■		■	■	■	■
	P01295491Z	Ø2 mm test probes 1,000 V CAT IV 10 A - Suitable for IP2X contacts on modular switchboards - Ø4 mm insulated female connector - Set of 2 (1 red/1 black) - UL certified		■	■	■	■	■	■	■	■	■		■		■	■	■
	P01295455Z	Set of 2 PVC touch point leads (1 red, 1 black) / Insulated Ø4mm straight male plug / 15 A / 1.5 m / 1,000 V CAT IV				■	■	■	■	■						■	■	■
	P01295456Z	Set of 2 PVC push-pull leads (1 red, 1 black) / Ø4 mm insulated angled male plug / 15 A / 1.5 m / 1,000 V CAT IV		■	■	■	■	■	■	■	■	■	■			■	■	■
	P01295461Z	Set of 2 IP2X multimeter leads (1 red, 1 black) / IP2X touch point - Ø4 mm angled male plug / 15 A / 1.5 m / IEC 61010 600 V CAT IV		■	■	■	■	■	■	■	■	■	■			■	■	■
	P01295451Z	Set of 2 moulded PVC cords (1 red, 1 black) / Ø4 mm insulated straight male plug - Ø4 mm insulated angled male plug / 15 A / 1.5 m / 1,000 V CAT IV		■	■	■	■	■	■	■	■	■	■	■		■	■	■
	P01295453Z	Set of 2 moulded silicone leads (1 red, 1 black) / Ø4 mm insulated straight male plug - Ø4 mm insulated angled male plug / 15 A / 1.5 m / 1,000 V CAT IV		■	■	■	■	■	■	■	■	■	■			■	■	■
	P01295459Z	Kit of measuring accessories for electricians including 2 moulded CAT IV test probes, 2 moulded PVC cords (red/black) with rightangle male-male plugs 1.5 m, 2 alligator clips, 2 D4mm overmoulded CAT II test probes		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	P01295474Z	Accessory kit, 2 PVC RD/BK cords, insulated 4mm straight male plug-insulated 4mm angled male plug, 15 A, 1.5 m, 600V CAT IV, 2 moulded Ø 2 test probes, 4mm female plug, CAT II 300 V		■	■	■	■	■	■	■	■	■	■			■	■	■
	P01295475Z	Accessory kit 2 PVC RD/BK leads, insulated 4 mm straight male plug - insulated 4mm angled male plug, 15 A, 1.5 m, 600 V CAT IV, 2 Ø 4 moulded touch points, 4mm female plug, CAT II 300V		■	■	■	■	■	■	■	■	■	■			■	■	■
	HX0091	HX0091 Pt100/Pt1000 probe adaptor lead for multimeter 4 mm dia. insulated male plugs									■	■	■	■				
	P01102106Z	Set of 2 safety thermocouple adapters for multimeters / Thermocouple female plug - Ø 4 mm insulated male plugs (red/black) with 19 mm centres					■	■		■			■					
	P01102107Z	K thermocouple temperature probe for multimeters and multimeter clamps fitted with a temperature measurement gauge with 19 mm centre distance banana plugs. Measurement range from -50°C to +450°C. Sensor length: approx. 100 cm.		■			■	■		■			■					
	P01191748Z	CA 753 Measuring adapter for 2P+T EU socket (E and F type). For safe measurement of P (Phase), N (Neutral) and PE (Earth) with all test probes. Indicates presence of P-N voltage (> 200 V) and phase position.	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	P03295509	CM1214S Current cord fitted with a 2P+T French mains plug for safely connecting an ammeter in series or measuring current with a clamp ammeter without stripping the outer sheath of the cable power cable					■	■	■	■	■	■	■			■	■	■

Accessories for multimeters

	Item code	Description	CA 702 CA 703	MTX 202 MTX 203	MTX 204	CA 5231	CA 5233	CA 5273	CA 5275	CA 5277	MTX 3290	MTX 3291	CA 5292 CA 5293	MTX 3297 Ex	CA 922 CA 962	MX1	CA 5001 CA 5003 CA 5005	CA 5011
	P01295457Z	Set of 2 alligator clips (1 red and 1 black) 15 A for CAT III & IV 1,000 V installations		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
	P01102053Z	Set of 2 rigid alligator clips (1 red / 1 black) / 20 A / 1,000 V CAT III		■	■	■	■	■	■	■	■	■	■		■	■	■	■
	P01102055Z	Set of 2 wire clips (1 red and 1 black) for very low voltage use (30 V AC, 60 V DC)											■	■		■	■	■
	HX0064	SMD clamp for multimeter / Gold-plated copperberyllium contacts / Ø 4 mm male plug / 120 m lead / SELV		■	■				■	■	■	■	■	■	■			
	AE0236	Carrying case to replace the one supplied with clamp multimeters models MX350 and MX355																
	HX0052B	Soft case, protective bag, transport and storage for MTX 329x multimeters dim 245x120x60 mm		■	■						■	■		■				
	HX0104	Protective carrying case for Metrix multimeters type ASYC II dim 220 x 110 x 40 mm			■													
	P01298033	Carrying case with strap for multimeter and multimeter clamp. Useful dimensions 225 x 270 x 70 mm															■	■
	P01298036	No5 carrying case. For storing the instrument and its leads. Usable dimensions 180 x 220 x 75 mm															■	■
	P01298065Z	Carrying and storage case, one compartment, useful dimensions 200 x 100 x 40 mm with belt attachment	■															
	P01298074	Carrying case with inside pocket, hand strap and MultiFix accessory. MultiFix accessory. Useful internal dimensions 120 x 200 x 60 mm	■			■	■											
	P01298076	Bag with inside pocket, hand strap and MultiFix accessory. MultiFix accessory. Useful interior dimensions 120 x 320 x 60 mm						■	■	■			■					
	P01102100Z	MultiFix attachment accessory. For use with measuring devices (multimeters, etc.), MultiFix-compatible cases and panniers, it can be transported and attached for greater for greater ease of use.		■		■	■	■	■	■	■	■	■	■				
	P01298037	Storage case for analogue multimeters models CA 5001, CA 5003, for digital and analogue multimeter CA 5011															■	■
	HX0056-Z	Opto-isolated USB link cable for CA 647x, CA 655x, Handscope with driver Windows compatible										■	■	■	■			
	SX-DMM2	Windows compatible PC data acquisition software for SX-DMM portable and bench multimeters										■	■	■	■			

DEPART CLIENT

Multimeter clamps

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Multimeter clamps

Guide de choix



	F65	MX 350	MX 355	F201	F203	F205	MX 650	MX 655	MX 670	MX 675	F402	F404	F406	F407	F604	F606	F607
AC current	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
DC current			■		■	■		■		■		■	■	■	■	■	■
Leakage current	■																
Photovoltaic												■	■		■	■	
True frequency measurement (TRMS)		AC	AC/DC	AC	AC/DC	AC/DC/AC+DC		AC/DC	AC	AC/DC	AC	AC/DC	AC/DC/AC+DC	AC/DC/AC+DC	AC/DC	AC/DC/AC+DC	AC/DC/AC+DC
Clamping Ø 26 mm		■															
Clamping Ø 28 mm	■																
Clamping Ø 30 mm			■														
Clamping Ø 34 mm				■	■	■											
Clamping Ø 36 mm							■										
Clamping Ø 40 mm								■		■							
Clamping Ø 42 mm									■								
Clamping Ø 48 mm											■	■	■	■			
Clamping Ø 60 mm															■	■	■
6,000-stitch drawing		■	■	■	■	■	■	■									
10,000-count display	■								■	■	■	■	■	■	■	■	■
Backlighting	■				■	■			■	■	■	■	■	■	■	■	■
Bar graph		■	■				■	■									
AC current	100 A	400 A	400 A	600 A	600 A	600 A	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 A	1,000 A	1,000 A	2,000 A	2,000 A	2,000 A
DC current			400 A		900 A	900 A		1,000 V		1,400 A		1,500 A	1,500 A	1,500 A		3,000 A	3,000 A
AC voltage	600 V	600 V	600V	1,000 V	1,000 V	1,000 V	750 V	750 V	1,000 V	1,000 V	1,200 V	1,200 V	1,200 V	1,000 V	1,200 V	1,200 V	1,000 V
DC voltage	600 V	600 V	600V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V	1,400 V	1,400 V	1,700 V	1,700 V	1,700 V	1,000 V	1,700 V	1,700 V	1,000 V
Resistance	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Sound continuity / Diode	■ / -	■ / -	■ / -	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / -	■ / -	■ / ■	■ / ■	■ / ■	- / -	■ / ■	■ / ■	- / -
Frequency	■	■		■	■	■	■	■	■	■	■	■	■	■	■	■	■
Temperature				■	■				■	■	■	■			■		
Adapter input (external sensor)					■							■			■		
W, var, VA / PF / DPF						■ / ■ / -							■ / ■ / -	■ / ■ / ■		■ / ■ / -	■ / ■ / ■
THDf, r% / Harm0..25 / FC													■ / - / -	■ / ■ / ■		■ / - / -	■ / ■ / ■
Phase rotation						■							■			■	
Min / Max / Peak	- / ■ / -	- / - / -	- / - / ■	■ / ■ / -	■ / ■ / -	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / ■	■ / ■ / -	■ / ■ / -	■ / ■ / ■	■ / ■ / ■	■ / ■ / -	■ / ■ / ■	■ / ■ / ■
Relative ΔX / Differential ΔX/X		■ / -	■ / -		■ / ■	■ / ■	■ / -	■ / -		■ / -		■ / ■	■ / ■		■ / ■	■ / ■	
InRush / TrueInrush				■ / ■	■ / ■	■ / ■					■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■	■ / ■
Data logging														■			■
BlueTooth interface														■			■
CAT III 300 V	■																
CAT III 600 V		■	■				■	■									
CAT III 1000 V				■	■	■			■	■							
CAT III 1500 V (Photovoltaic)											■	■	■		■	■	
CAT IV 600 V				■	■	■			■	■							
CAT IV 1000 V											■	■	■	■	■	■	■



Leakage multimeter clamp

F65



10 μ A 10 000 counts TRMS



In the event of an insulation fault or differential circuit breaker tripping, the F65 clamp is the ideal tool for detecting and measuring earth leakage currents

- Quickly check leakage currents
- Search for insulation faults on live installations
- 50/60 Hz filter



F65 supplied with:

- 1 carrying case
- 1 set of straight banana/elbow banana cords
- 1 set of safety touch points
- 2 x 1.5 V LR03 batteries

To order

1 F65 multimeter clamp
Reference: P01120761

Recommended accessories

- 

P01295457Z
Alligator clips red + black blister pack (set of 2)
- 

P01295456Z
Angled fingertip leads, 1.5 m (1 red/1 black)

				F65	
Display				10,000 count - 2 measurements / s	
Acquisition				TRMS _{AC}	
Function	Unit	Calibre	Resolution	Accuracy	
ith 50-60 Hz filter					
Current	mA AC	60 mA	10 µA	1.2 % ± 5 cts	2.5 % ± 5 cts (60-500 Hz)
		600 mA	100 µA		3.5 % ± 10 cts (500-3 kHz)
	A AC	10 A	1 mA	1.2 % ± 5 cts	2.5 % ± 5 cts (60-500 Hz)
		80 A	10 mA		3.5 % ± 10 cts (500-3 kHz)
		100 A		5 % ± 5 cts	5 % ± 5 cts (50-60 Hz)
		Voltage	V AC	600 V	0.1 V
V DC	600 V		0.1 V	1 % ± 2 cts	
Resistance	Ω	1 kΩ	0.1 Ω	1 % + 3 cts	
Audible continuity	Buzzer < 35 Ω			(VTest ≤ 3.3 V _{DC})	
Frequency	A	100 Hz 1 kHz	0.1 Hz 1 Hz	0.5 % ± 2 cts (I > 10 mA)	
	V	100 Hz 1 kHz	0.1 Hz 1 Hz	0.5 % ± 2 cts (V > 5 V _{AC})	
Max. value				100 ms	
Backlight				Yes	
Automatic switch-off				Yes	
Clamping diameter				28 mm	
Dimensions / weight				218 x 64 x 30 mm / 280 g (with batteries)	
Standards				IEC 61010-1 / IEC 61010-2-032 / IEC 61010-2-033	
Installation category				300 V CAT III	
Degree of enclosure protection				IP 30 according to EN 60529	



Multimeter clamps for electricians

MX 350 - MX 355

**600V
CAT III**
**IEC
61010-2-032**
TRMS


Complete, all the electrician's functions in one hand

- Compact, ergonomic clamp-on multimeters
- Measures current up to 400 AAC (MX 350) and 400 AAC / ADC (MX 355)
- AC & DC voltage measurement up to 600 V
- Resistance and continuity measurement
- Frequency measurement (MX 350)
- Automatic DC zero (MX 355)
- TRMS measurements
- Peak function (1 ms) (MX 355)

	MX 350	MX 355
Designation	Mult. clamp 400A _{AC} TRMS	Mult. clamp 400A _{AC/DC} TRMS
Display	6,000 counts	
Bar graph	-	
Clamping diameter	26 mm	30 mm
Type of acquisition	TRMS	
Range selection	Automatic	
AC current	0.05 A to 400.0 A	
Basic accuracy	1,9 %L + 5 D	
Bandwidth	48 to 400 Hz	
DC current	-	0.1 A to 400.0 A
Basic accuracy	-	2.5 %L + 10 D
AC voltage	0.05 V to 600.0 V	
Basic accuracy	1.9 %L + 5 D	
Bandwidth	48 à 400 Hz	
DC voltage	0.03 V to 600.0 V	
Basic accuracy	1 %L + 3 D	
Resistance	0.2 Ω to 600.0 Ω	
Basic accuracy	1 %L + 2 D	
Sound continuity	≤ 40 Ω	
Frequency	In I: 20 Hz to 10.00 kHz In V: 10 Hz to 100.0 kHz	-
Functions	Hold	Hold ΔZero Peak (1 ms)
Automatic switch-off	20 min. disengageable	
Power supply	2 x 1.5 AAA / LR03	
Electrical safety	IEC 61010-1, IEC 61010-2-032 / 600V CAT III	
Dimensions / weight	199 x 75 x 36 mm / 243 g (with batteries)	



1 MX 35x multimeter clamp supplied with:

- 1 set of test leads with touch points
- 1 soft carrying case
- 2 x 1.5 V AAA alkaline batteries
- 1 operating manual in 5 languages

To order

1 MX 350 clamp

Reference: MX0350Z

1 MX 355 clamp

Reference: MX0355Z

Multimeter clamps for general maintenance

F201 - F203 - F205

600 A_{AC}
900 A_{DC}

TRMS

1 000 V
CAT III

600 V
CAT IV

True
InRush

IEC
61010-2-032

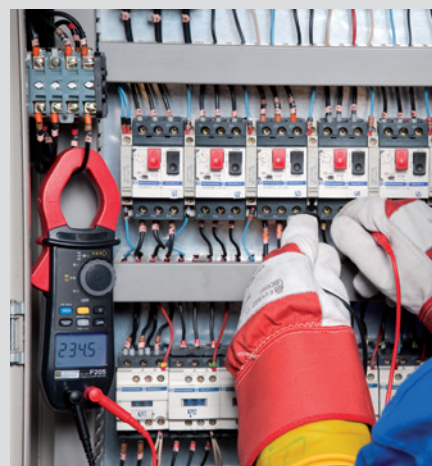


Special maintenance

Equipped with a digital acquisition system
With its fast 12-bit response, the F200 series
provides accurate true-range (TRMS) AC+DC
measurements whatever the nature and shape
of the signal.

- 34 mm clamping diameter
- Compact size
- TRMS AC+DC for F205 clamp

	F201	F203	F205
Bagging		Ø 34 mm	
Display	LCD	Backlit LCD	
Resolution		6,000 counts	
Number of displayed values		1	
Acquisition type	TRMS AC	TRMS AC/DC	TRMS AC, DC, AC+DC
Automatic calibration (Autorange)		Yes	
Automatic AC/DC detection		Yes	
A _{AC}		600 A	
A _{DC}		900 A	
A _{AC+DC}		600 A (900 A peak)	
Better accuracy		1% L + 3 counts	
V _{AC}		1,000 V	
V _{DC}		1,000 V	
V _{AC+DC}		1,000 V (1,400 V peak)	
Better accuracy		1% L + 3 counts	
Frequency in V / in I		Yes / Yes	
Resistance		60 kΩ	
Sound continuity		Adjustable from 1 Ω to 599 Ω	
Diode test (semiconductor junction)		Yes	
Temperature (type K)		°C : -60.0 to +1,000 °C °F : -76 to +1,832 °F	
Adapter		Yes	
Single-phase and total three-phase		AC, DC, AC+DC	
Active (W)		Yes	
Reactive (var)		Yes	
Apparent (VA)		Yes	
FP		Yes	
Phase rotation (2-wire method)		Yes	
Functions			
Measurement of overcurrent		Yes	
Motor start (InRush)		Yes	
Load evolution (TrueInrush)		Yes	
Hold		Yes	
Min / MAX		Yes	
Peak+ / Peak-		Yes	
RELative ΔX		Yes	
Differential ΔX/X(%)		Yes	
Auto Power Off		Yes	
Electrical safety according to IEC 61010-1, IEC 61010-2-032		600 V CAT IV - 1000 V CAT III	
Power supply		1 x 9 V 6LR61	
Dimensions / weight		78 x 222 x 42 mm / 340 g	



F201 supplied with:

- 1 set of PVC leads (black/red) with integral touch points / male banana plug
Ø 4 mm insulated angled
- 1 x 9 V battery 6LR61
- 1 Multifix-compatible case

203 idem F201 avec en plus:

- 1 thermocouple-wire with Ø 4 mm insulated banana plugs integrated at 19 mm centres

F205 supplied with:

- 1 set of PVC cords (black/red) Ø 4 mm insulated male banana plug, angled / Ø 4 mm insulated male banana plug, straight
- 2 touch points / Ø 4 mm insulated female plug (black/red)
- 1 safety alligator clip (black)
- 1 x 9 V battery 6LR61
- 1 Multifix compatible case

To order

1 F201 multimeter clamp

Reference: P01120921

1 F203 multimeter clamp

Reference: P01120923

1 F205 multimeter clamp

Reference: P01120925



Multimeter clamps for general maintenance

MX 650 - MX 655

IEC
61010-2-032



Suitable for the maintenance of electrical machines or electrotechnical machines

- Clamps for measuring high currents and voltages
- Current measurement up to 1,000 AAC (MX 650) and 1,000 AAC and 1,000 AAC&DC (MX 655)
- AC & DC voltage measurement up to 1,000 V
- Resistance, continuity and frequency measurements
- RMS measurements (MX 655)
- Min-Max and Peak 1 ms analysis functions
- Differential current, voltage and resistance measurement



	MX 650	MX 655
Display	4,000 counts	
Bar graph	42 segments	
Clamping diameter	36 mm	40 mm
Type of acquisition	AVG	RMS
Range selection	Automatic or Manual	Automatic
AC current	0.05 A to 1,000 A	
Basic accuracy	1.9 %L + 5 D	
Bandwidth	50 Hz to 1 kHz	
DC current	-	0.10 A to 1,000 A
Basic accuracy	-	2.5 %L + 10 D
AC voltage	0.5 V to 750 V	
Basic accuracy	1.2 %L + 5 D	1.5 %L + 5 D
Bandwidth	50 Hz to 1 kHz	
DC voltage	0.2 V to 1,000 V	
Basic accuracy	0.75 %L + 2 D	1 %L + 2 D
Resistance	-	0.2 to 4,000 Ω
Basic accuracy	1 %L + 2 D	
Sound continuity	≤ 100 Ω	
Diode and semiconductor junction test	I _{test} ≤ 0.6 mA / V _{test} ≤ 3.3 V _{oc}	I _{test} ≤ 1.7 mA / V _{test} ≤ 6 V _{oc}
Frequency	Current: 20 Hz to 10 kHz Voltage: 10 Hz to 10 kHz	
Basic accuracy	0.1 %L + 1 D	
Functions	Hold, Peak (1 ms), Max-Min, ΔREL, Range	Hold, Peak (1 ms), Max-Min, ΔREL
Automatic switch-off	30 min disengageable	
Power supply	1 x 9 V 6LF22	
Electrical safety	IEC 61010-1, IEC 61010-2-032, 600 V CAT III	
Dimensions / Weight	246 x 93 x 43 mm / 400 g	



1 MX 65x multimeter clamp supplied with:

- 1 set of test leads with touch points
- 1 soft carrying case
- 1 9 V alkaline battery and 1 operating manual in 5 languages

To order

1 MX 650 clamp

Reference: MX0650-Z

1 MX 655 clamp

Reference: MX0655-Z

Multimeter clamps for general maintenance

MX 670 - MX 675



600 V
CAT IV

1 000 V
CAT III

IEC
61010-2-032

Dual display
for simultaneous
voltage/current monitoring

- 2 simultaneous TRMS measurement channels
- Dual 10,000-dot backlit display
- 600 V CAT IV
- Voltage up to 1,400 V
- Temperature measurement

	MX 670	MX 675
Clamping Ø	42 mm	40 mm
Display	2 x 10,000 dots / Backlit	
Acquisition type	TRMS AC/DC	
Range selection	Automatic	
AC current	0.05 A to 1,000 A	
Basic accuracy	1.5 %L + 5 D	
Bandwidth	50 Hz to 3 kHz	
DC current	0.10 A to 1,400 A	
Basic accuracy	1.2 %L + 5 D	
AC voltage	0.5 V to 1,000 V	
Basic accuracy	1 %L + 5 D	
Bandwidth	50 Hz to 3 kHz	
DC voltage	0.2 V to 1,400 V	
Basic accuracy	1 %L + 2 D	
Resistance	0.2 to 9,999 Ω	
Basic accuracy	1 %L + 3 D	
Sound continuity	≤ 35 Ω	
Temperature	-40.0 °C to +1,200 °C / -40 °F to +2,192 °F	
Basic accuracy	1 %L + 2 °C / 1 %L + 4 °F	
Frequency	Current: 0.2 Hz to 9999 Hz Voltage: 10 Hz to 9,999 Hz	
Basic accuracy	1 %L + 2 cts	
Functions	Hold Peak (1 ms) Min (500 ms) Max (500 ms)	Hold Peak (1 ms) Min (500 ms) Max (500 ms) ΔZero
Automatic switch-off	10 min disengageable	
Power supply	1 x 9 V 6LF22	
Electrical safety	600 V CAT IV / 1,000 V CAT III	
Dimensions / weight	272 x 80 x 43 mm / 480 g	257 x 80 x 43 mm / 440 g



1 MX 67x multimeter clamp
supplied with:

- 1 9 V alkaline battery
- 1 operating manual in 5 languages
- 1 soft carrying case
- 1 set of leads with touch points and K thermocouple sensor

To order

1 MX 670 clamp
Reference: MX0670-Z

1 MX 675 clamp
Reference: MX0675-Z

Multimeter clamps for industry and energy

F402 - F404 - F406 - F604 - F606



1000 Aac 1500 Aac	2000 Aac 3000 Aac	TRMS	1000 V CAT IV
IP 54	True InRush	IEC 61010-2-032	1500 V CAT III

The F400 and F600 series are suitable for control and maintenance, analysis and expert assessment applications

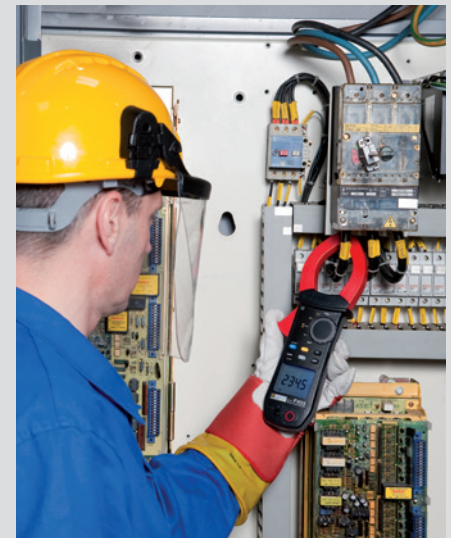
F40X Series

- Small and medium-power LV applications
- 48 mm clamping diameter

F60X Series

- High-power LV applications
- 60 mm clamping diameter

	F402	F404	F406	F604	F606
Clamp	Ø 48 mm			Ø 60 mm	
Display	Backlit LCD				
Resolution	10,000 counts				
Acquisition type	TRMS AC	TRMS AC/DC	TRMS AC, DC, AC+DC	TRMS AC/DC	TRMS AC, DC, AC+DC
Automatic calibration (Autorange)	Yes				
Automatic AC/DC detection	Yes				
Aac	0.25 to 1,000 A			0.25 to 2,000 A	
Aac	0.15 to 1,500 A			0.25 to 3,000 A	
Aac+dc			1,000 A (1,500 A peak)	2,000 A (3,000 A peak)	
Better accuracy	1% L + 3 counts				
Vac	0.15 to 1,200 V				
Vdc	0.15 to 1,700 V				
Vac+dc			0.15 to 1,700 V peak	0.15 to 1,700 V peak	
Better accuracy	1% L + 3 counts				
Frequency in V / in I	Yes / Yes				
Resistance	100 kΩ				
Audio continuity	Adjustable from 1 Ω to 999 Ω				
Diode test (semiconductor junction)	Yes				
Temperature (K type)	°C: -60.0 to +1,000 °C °F: -76 to +1,832 °F			°C: -60.0 to +1,000 °C °F: -76 to +1,832 °F	
Adapter Powers monophasées et totales triphasées		Yes		Yes	
Actives (W)			Yes		Yes
réactives (VAR)			Yes		Yes
apparentes (VA)			Yes		Yes
FP			Yes		Yes
Analyses harmoniques THDf / THDr			Yes / Yes		Yes / Yes
Phase rotation (méthode 2 fils)			Yes		Yes
Functions					
Overcurrent measurement	Yes				
Motor starting (Inrush)	Yes				
Load evolution (TrueInrush)	Yes				
Hold	Yes				
Min / MAX	Yes				
Peak+ / Peak-			Yes		Yes
RELative ΔX		Yes	Yes	Yes	Yes
Differential ΔX/X(%)		Yes	Yes	Yes	Yes
Auto Power Off	Yes				
Electrical safety according to IEC 61010-1, IEC 61010-2-032	1,000 V CAT IV - 1,500 V CAT III				
Power supply	4 x 1.5 V LR06				
Dimensions / weight	92 x 272 x 41 mm / 600 g			111 x 296 x 41 mm / 640 g	



+ The extra

Compatible with the latest photovoltaic installations (1,500 V).



F402 / F404 / F604 supplied with:

- 1 set of PVC cords (black/red) Ø 4 mm insulated male banana plug, angled / Ø 4 mm insulated male banana plug, straight
- 2 test probes / Ø 4 mm insulated female plug (black/red)
- 1 thermocouple-wire with Ø 4 mm insulated banana plug at 19 mm centres
- 4 x 1.5 V AA/LR06 batteries
- 1 Multifix-compatible case

F406 / F606 :

- same as F402 / F404 / F604 without thermocouple-wire and with 1 safety alligator clip (black)

To order

1 F402 multimeter clamp	Reference: P01120942
1 F404 multimeter clamp	Reference: P01120944
1 F406 multimeter clamp	Reference: P01120946
1 F604 multimeter clamp	Reference: P01120964
1 F606 multimeter clamp	Reference: P01120966

Power and harmonic multimeter clamps

F407 - F607

1000 V
CAT IV

IP 54

Ø
60 mm2000
Aac

2 clamps with power and energy measurements

- Measures up to 2,000 Aac or 3,000 Adc or Aac+dc
- Ø clamping 60 mm
- Harmonic analysis up to rank 25
- TruInrush function

	F407	F607
Current (RMS)		
AC	From 250 mA to 1,000 A	From 250 mA to 2,000 A
DC and AC+DC	From 250 mA to 1,500 A	From 100 mA to 3,000 A
Better accuracy	1% L + 3 counts	
Voltage (RMS)		
AC	From 150 mV to 1,000 V	
DC and AC+DC	From 150 mV to 1,000 V	
Better accuracy	1% L + 3 counts	
Auto AC/DC	Yes (V and A)	
Resistance	0,1 Ω to 60 kΩ	
Continuity/buzzer	Yes (< 40 Ω)	
Power W (P), var (Q1) , VA (S)	Yes, single and total three-phase	
Crest factor (CF)	Yes	
PF and cos φ (DPF)	Yes / Yes	
Auto switch-off	Yes	
Hold function	Yes	
Backlight function	Yes	
Min Max button	Yes	
Peak +/- function	Yes - 100 ms	
True-Inrush function	Yes	
THD-f / THD-r harmonic function	Yes / Yes	
Harmonic rank decomposition	25 th	
REC memory function	Yes	
Recordings (with Min, Max)	Up to 3000 measurements	
Bluetooth communication function	Yes	
Frequency	From 5 Hz to 20 kHz	
Clamping diameter	48 mm	60 mm
Protection	IP 54	
Electrical safety	IEC 61010 1,000 V CAT IV	
Warranty	3 years	
Dimensions / weight	272 x 92 x 41 mm - 600 g (with batteries)	296 x 111 x 41 mm - 640 g (with batteries)



F407 and F607 livrées en sacoche compatible avec le système MultiFix :

- 1 set of banana/banana cords (red/black)
- 1 set of fingertips (red/black)
- 1 set of alligator clips (red/black)
- 4 x 1.5 V LR06 batteries
- 1 safety plug
- 1 PC data transfer software Power Analyser Transfer and 1 user manual to download from our website

To order

1 F407 multimeter clamp

Reference: P01120947

1 F604 multimeter clamp

Reference: P01120967

Recommended accessories



P01295451Z
Banana/banana cable set,
red/black



P01295457Z
Set of alligator clips, red/black

Accessories for multimeter clamps

	Item code	Description	F65	MX350 MX 355	F201 F203	F205	MX650 MX655	MX670 MX675	F402 F404	F406	F407	F604	F606	F607
	P01295454Z	Set of 2 moulded touch probes (1 red / 1 black) for CAT III & IV 1,000V installations	■	■	■	■	■	■	■	■	■	■	■	■
	P01295458Z	Set of 2 overmoulded touch-points 4 mm (1 red and 1 black) for CAT 2,300 V installations	■	■	■	■	■	■	■	■	■	■	■	■
	P01295460Z	Set of 2 moulded touch points 2mm (1 red and 1 black) for CAT 2,300 V installations	■	■	■	■	■	■	■	■	■	■	■	■
	P01295491Z	Ø2 mm 1,000 V CAT IV 10 A contact pins - Suitable for IP2X contacts on modular switchboards - Ø4mm insulated female connector - Set of 2 (1 red/1 black) - UL certified	■	■	■	■	■	■	■	■	■	■	■	■
	P01295455Z	Set of 2 PVC touch point leads (1 red, 1 black) / Insulated Ø 4 mm straight male plug / 15 A / 1.5 m / 1,000 V CAT IV	■	■	■	■	■	■	■	■	■	■	■	■
	P01295456Z	Set of 2 PVC touch-tone leads (1 red, 1 black) / Ø4mm insulated angled male plug / 15A / 1.5 m / 1000 V CAT IV	■	■	■	■	■	■	■	■	■	■	■	■
	P01295461Z	Set of 2 IP2X multimeter leads (1 red, 1 black) / IP2X key tip - Ø 4 mm angled male plug / 15 A / 1.5 m / IEC 61010 600 V CAT IV	■	■	■	■	■	■	■	■	■	■	■	■
	P01295451Z	Set of 2 moulded PVC cords (1 red, 1 black) / Ø4 mm insulated straight male plug - Ø4 mm insulated angled male plug / 15 A / 1.5 m / 1,000 V CAT IV	■	■	■	■	■	■	■	■	■	■	■	■
	P01295453Z	Set of 2 moulded silicone leads (1 red, 1 black) / Ø4 mm insulated straight male plug - Ø4 mm insulated angled male plug / 15 A / 1.5 m / 1,000 V CAT IV	■	■	■	■	■	■	■	■	■	■	■	■
	P01295459Z	Kit of measuring accessories for electricians including 2 moulded CAT IV test probes, 2 moulded PVC cords (red/black) with right-angle male-male plugs 1.5 m, 2 alligator clips, 2 Ø 4 mm overmoulded CAT II test probes	■	■	■	■	■	■	■	■	■	■	■	■
	P01295474Z	Accessory kit, 2 PVC RD/BK cords, insulated 4mm straight male plug-insulated 4mm angled male plug, 15 A, 1.5 m, 600 V CAT IV, 2 moulded Ø 2 test probes, 4 mm female plug, CAT II 300 V	■	■	■	■	■	■	■	■	■	■	■	■
	P01295475Z	Accessory kit, 2 PVC RD/BK leads, insulated 4mm straight male plug-insulated 4 mm angled male plug, 15 A, 1.5 m, 600 V CAT IV, 2 Ø 4 moulded touch points, 4mm female plug, CAT II 300 V	■	■	■	■	■	■	■	■	■	■	■	■
	P01102106Z	Set of 2 safety thermocouple adapters for multimeters / Female thermocouple plug - Ø 4mm insulated male plugs (red/black) with 19 mm centres			■				■			■		
	P01102107Z	K thermocouple temperature probe for multimeters and multimeter clamps fitted with a temperature measurement gauge with 19 mm centre distance banana plugs. Measurement range from -50°C to +450°C. Sensor length: approx. 100 cm.			■				■			■		
	P01191748Z	CA 753 Measuring adapter for 2P+T EU socket (E and F type). For safe measurement of P (Phase), N (Neutral) and PE (Earth) with all test probes. Indicates presence of P-N voltage (> 200 V) and phase position.	■	■	■	■	■	■	■	■	■	■	■	■
	P03295509	CMi214S Current cord with 2P+T French mains plug for safe series connection of an ammeter or current measurement with a clamp ammeter, without stripping the outer sheath of the cable power supply cable	■	■	■	■								

Accessories for multimeter clamps

	Item code	Description	F65	MX350 MX 355	F201 F203	F205	MX650 MX655	MX670 MX675	F402 F404	F406	F407	F604	F606	F607
	P01295457Z	Set of 2 alligator clips (1 red and 1 black) 15 A for CAT III & IV 1,000 V installations	■	■	■	■	■	■	■	■	■	■	■	■
	P01102053Z	Set of 2 rigid crocodile clips (1 red / 1 black) / 20 A / 1000 V CAT III	■	■	■	■	■	■	■	■	■	■	■	■
	P01102055Z	Set of 2 wires (1 red and 1 black) for very low voltage use (30 V AC, 60 V DC)	■											
	HX0064	SMD clamp for multimeter / Gold-plated copper-beryllium contacts / Ø 4 mm male plug / 120 m lead / SELV												
	AE0236	Carrying case to replace the one supplied with clamp multimeters models MX350 and MX355	■											
	P01298065Z	Carrying and storage case, one compartment, useful dimensions 200 x 100 x 40 mm with belt attachment	■											
	P01298075	Carrying case with inside pocket, hand strap and MultiFix accessory. Useful internal dimensions 120 x 245 x 60 mm			■	■								
	P01298076	Bag with inside pocket, hand strap and MultiFix accessory. Useful interior dimensions 120 x 320 x 60 mm					■	■	■	■	■	■	■	■
	P01102100Z	MultiFix attachment accessory. Combined with MultiFix-compatible measuring instruments (multimeters, etc.), cases and bags, it can be carried and fixed for greater ease of use.			■	■			■	■	■	■	■	■
	P01102095	DATAVIEW PC software for configuring, saving and processing data, editing reports, etc. for measuring instruments Chauvin Arnoux									■			■

Power, power quality and facility monitoring

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Power analysers

Guide de choix



	CA 8220	CA 8331	CA 8333	CA 8336	CA 8436	CA 8345
Display						
Digital	■	■	■	■	■	■
Graphics		■	■	■	■	■
Number of entries						
	1U/1I	3U/3I	3U/3I	4U/4I	4U/4I	4U/4I
Current						
AC	■	■	■	■	■	■
DC	■	■	■	■	■	■
Range	Depending on sensor	Depending on sensor	Depending on sensor	Depending on sensor	Depending on sensor	Depending on sensor
Voltage						
AC	600 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V
DC	600 V	1,000 V	1,000 V	1,000 V	1,000 V	1,000 V
DPF PF						
	■	■	■	■	■	■
Harmonics						
THD/ranks	■ /50	■ /50	■ /50	■ /50	■ /50	■ /127
Power						
	P Q S	P N Q; D S	P N Q; D S	P N Q; D S	P N Q; D S	P N Q; D S
Memory						
Internal	■	■	■	■	■	
SD card		■	■	■	■	■
Recording						
Trend		■	■	■	■	■
Alarms			■	■	■	∞
Transients			80 µs	80 µs	80 µs	2,5 µs
Images	99	12	12	50	50	∞
Inrush	■			■	■	∞
Shock wave						12 kV & 500 ns
Monitoring				EN50160 Ed.02	EN50160 Ed.02	EN50160 Ed.03
Standards						
IEC61010	600 V CAT III	600 V CAT IV - 1000 V CAT III				1000 V CAT IV
IEC61000-4-30				Class B	Class B	Class A
IEC 60529	IP54	IP53	IP53	IP53	IP67	IP54
Temperature	■					
Resistance	■					
Rotation speed	■					
Unbalance						
		■	■	■	■	■
Flicker						
		PST	PST	PST/PLT	PST/PLT	PST/PLT
Communication						
USB	■	■	■	■	■	■
Wifi						■
Ethernet / IRD server						■ / ■
Power supply						
Batteries	■					
Mains		■	■	■	■	■
Batteries	■	■	■	■	■	■
Phase power supply						
		Opt.	Opt.	Opt.	Integrated	Opt.

Power and motor maintenance analyser

CA 8220



IP 54

600 V
CAT III

CE

For monitoring of rotating machinery

The CA 8220 is a single-phase power analyser with a segmented liquid crystal display.

Suitable for use in electrical engineering, in particular the control of rotating machinery, it is designed for technicians and engineers in control teams. It is the ideal tool for companies' maintenance departments.

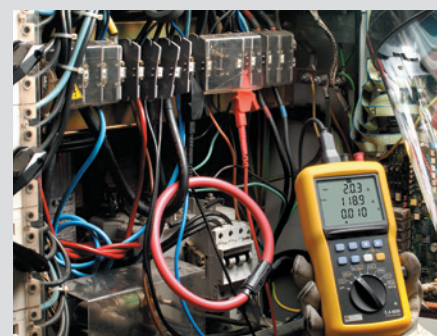
It provides an instant picture of the main characteristics of a single-phase network and enables rotating machines to be monitored (temperature, current consumption and speed of rotation).

Diagnostics
& control

Education

Energy
efficiencyTertiary
& residential

Industries

Production, transport
& distribution

+ The extra

Temperature: Today's motors and rotating machines are equipped with temperature sensors, easily accessible on a terminal block. Simply connecting the CA 8220 to this terminal block measures the motor's internal temperature directly.

Rotational speed: As part of predictive maintenance, regular monitoring of the rotational speed of rotating machines is required.

The CA 8220, an all-in-one instrument, responds simply and effectively to this requirement.

CA 8220 supplied with:

- 6 AA batteries
- 1 x 1.5 m red banana lead (right-right)
- 1 x 1.5 m black banana lead (right-right)
- 1 red touch tip 4 mm
- 1 black touch tip 4 mm
- 1 red alligator clip
- 1 black alligator clip
- 1 USB optical cable
- 1 safety plug
- 1 PC data transfer software Power Analyser Transfer and 1 user manual to download from our website

Recommended accessories



P01120425B
MN93 clamp



P01298049
Bag n°05

To order

CA 8220 Power analyser

Reference: P01160620

CA 8220 Power analyser with MN93A clamp

Reference: P01160621

Download the free PAT software
at www.chauvin-arnoux.com

	CA 8220
As easy to use as a multimeter	■
T-RMS measurements	■
Backlit display	■
Min - Max	■
Automatic current sensor recognition	■
Screen captures to document a report	■
Number of channels and number of inputs	1 voltage input and 1 current input
Voltage (TRMS AC+DC)	Phase-to-phase and phase-to-neutral voltage 2 V to 660 V
Current (TRMS AC+DC)	MN93 500 mA to 200 A _{AC}
	MN93A 0.005 A to 100 A
	CI93 1 A to 1,000 A _{AC}
	AmpFLEX™ or MiniFlex® 10 A to 6,500 A _{AC}
	PAC93 1 A to 1,300 A _{AC/DC}
	E27 (with optional adaptor) 100 mA to 100 A _{AC/DC}
Power ratings	W (P), VA (S), var (Q), PF, DPF, cos φ, tan φ
Energies	Wh, varh, VAh
Harmonics	Yes, from rank 0 to 50, phase
Inrush mode	100 ms
Communication interface	USB
Autonomy	Up to 8 hours
Dimensions / Weight	211 x 108 x 60 mm / 840 g with batteries

Power and energy analysers

CA 8331 - CA 8333 - CA 8336 - CA 8436



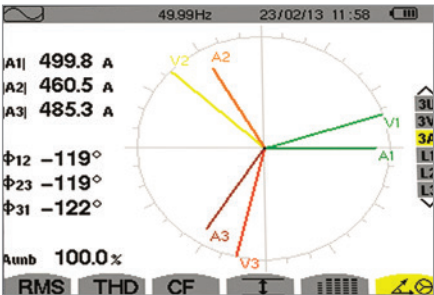
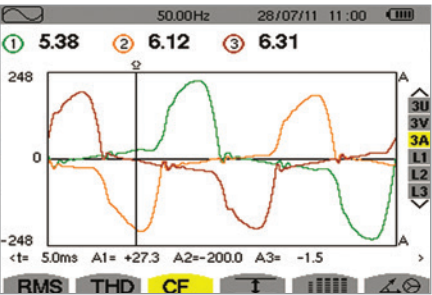
Qualistar experience

Qualistars are designed for use in the inspection and maintenance of industrial and tertiary installations. They provide an instant picture of the main characteristics of the quality of the electrical network. Easy to use and accurate, these devices also offer a wide range of calculated values and several processing functions.

Depending on model:

- Real-time display of waveforms (5 voltage inputs and 4 current inputs)
- RMS voltage and current measurements at ½ period
- Intuitive operation
- Automatic recognition of different types of current sensors
- All DC components taken into account
- Voltage and current ratios
- Mix of current sensors
- Phase diagram display
- Measurement of VA, W, VAD and var power, total and per phase
- Measurement of VAh, Wh, VADh and varh energy, total and per phase
- Calculation of K factor - FHL
- Calculation of power displacement factor cos φ (DPF) and power factor PF
- Power system monitoring with alarm settings
- IEC 61000-4-30 Class B
- Automatic parameter setting for EN 50160 Ed. 02 report
- Save and record screenshots (image and data)
- Recording and export to PC
- Software for data retrieval and real-time real-time communication with a PC

	CA 8331	CA 8333	CA 8336	CA 8436
Proven ease of use	■	■	■	■
Measurement of voltage, current and power parameters useful for the complete diagnosis of an electrical installation	■	■	■	■
Measurements for sizing harmonic filters	■	■	■	■
Recording to monitor all the parameters to define a phase-shift compensation cabinet	■	■	■	■
Detection of micro outages of a few μs	■	■	■	■
All the power balances needed to draw up an energy efficiency diagnosis	■	■	■	■
Data logger	■	■	■	■
Monitoring with alarms	■	■	■	■
Load start mode	■	■	■	■
Waterproof device for outdoor use	■	■	■	■



Monitoring faults on an electrical cabinet

+ The extra

Breakdown of reactive power, with the concept of nonactive power (N), distorting power (D) and reactive power (Q_i).

- Distorting power (D) for sizing harmonic filters.
- The reactive power (Q_i) linked to the phase shift of the fundamental for sizing the rephasing capacitor bank.
- The total reactive power (N) of the installation, also known as non-active power.

Qualistar + CA 8331, CA 8333, CA8336 and CA 8436		
Number of channels and inputs		3U / 4I with 4 voltage terminals / 3 current inputs (CA 8331 & CA 8333) 4U / 4I with 5 voltage terminals / 4 current inputs (CA 8336 & CA 8436)
IEC 61000-4-30		For EN 50160 Edition 2 reports (CA 8336 & CA 8436)
Voltage (TRMS AC+DC)	Voltage ratio	2 V to 1,000 V / up to 500 kV
Current (TRMS AC+DC)	MN	MN93: 500 mA to 200 A _{AC} ; MN93A : 0.005 A _{AC} to 100 A _{AC}
	C193	1 A to 1,000 A _{AC}
	AmpFLEX™ or MiniFlex*	100 mA to 10 000 A _{AC}
	PAC93	1 A to 1,300 A _{AC} /dc
	E27	50 mA to 100 A _{AC} /dc
	J93	50 to 3,500 A _{AC} / 50 to 5,000 A _{DC}
Frequency		40 Hz to 69 Hz
Powers		W (P), VA (S), var (Q, N, D), PF, DPF, cos φ, tan φ
Energy		Wh, varh (Qh, Nh, Dh), VAh
Harmonics	THD	Yes, from rank 0 to 50, phase
	Expert mode	Yes (CA 8333, CA 8336 & CA 8436)
Transient		Less than 80 μs 50 (CA 8333), 210 (CA 8336 and CA 8436)
Flicker		Pst, Plt (via software) (CA 8336 & CA 8436)
Inrush mode		RMS trend (> 10 minutes) and oscillogram (> 1 minute) (CA 8336 and CA 8436)
Unbalance		In voltage In current
Recording of a selection of parameters on a programmable sample		From a few days to several weeks
Alarms		4,000 of 10 different types (CA 8333) 10,000 of 40 different types (CA 8336 & CA 8436)
Peak		Yes
Vector representation		Automatic in voltage, current and voltage/current
Display		TFT colour display 1/4 VGA 320 x 240 diagonal 148 mm
Screen capture, data & associated curves		12 (CA 8331 & CA 8333) 50 (CA 8336 & CA 8436)
Electrical safety		IEC 61010 1 000 V CAT III / 600 V CAT IV
Protection class		IP53 / IK08 (CA 8331, CA 8333 & CA 8336) IP67 / IK08 (CA 8436)
Languages		More than 27
Communication interface		USB
Autonomy		Up to 10 hours
Power supply		Rechargeable 9.6 V NiMH battery or mains supply
Dimensions / Weight		240 x 180 x 55 mm / 1.9 kg - CA 8436 : 270 x 250 x 180 mm / 3.7 kg



CA 8436
the all-rounder
robust and
waterproof
IP67

Power and energy analyser

- For indoor and outdoor use, even in the rain
- 5 voltage inputs, 4 current inputs
- Continuous and simultaneous recording of all parameters
- Monitoring with alarms
- All types of installations



CA 8331 / CA 8333 / CA 8336 supplied with:

- 1 N°22 case
- 1 USB cable
- 1 mains adaptor
- 4 x 3 m 4 mm banana plug leads (5 leads for CA 8336/CA 8436)
- 4 alligator clips (5 clips for CA 8336/CA 8436)
- 1 safety plug
- 1 set of 12-colour markers for cables and inputs
- 1 anti-scratch screen protection film (fitted)
- 1 PC data transfer software Power Analyser Transfer and 1 user manual to download from our website

To order

CA8331 Three-phase power analyser

Reference: P01160511

CA8333 Three-phase power analyser

Reference: P01160541

CA8336 Three-phase power analyser

Reference: P01160591

CA8436 Three-phase power analyser

Reference: P01160595

Recommended accessories



P01120593, P01120592, P01120594
MA194 flexible AC current transducer
Available in 3 lengths 250 mm / 350 mm / 1,000 mm



P01120434B
MN93A AC current transducer
Ranges 5 and 100 A



P01120027
E27 AC and DC current transducer
10 A and 100 A ranges



P01102150
PA31ER mains adaptor
For power supply via measurement channels

Download the free PAT2 software
at www.chauvin-arnoux.com

Voltage quality analyser

CA 8345

1000 V
CAT IV

IP 54

SD

Wi-Fi

USB

IEC
61000-4-30IEC
61000-4-30IEC
61000-4-30

Web server

Class A

For industrial or tertiary installation control and maintenance services, Qualistar provides an instant image of the main characteristics of the quality of the electrical network.

Qualistar is suitable for all types of installation. For added security, they automatically recognise the type of current sensor connected.

It can display harmonics and inter-harmonics as defined by IEC 61000-4-7 up to rank 127. Flicker measurements are carried out in accordance with IEC 61000-4-15.

Communication : In addition to the SD card and USB key, it is of course possible to retrieve measurements and communicate with the device from a greater or lesser distance. USB, remote links, Wifi (direct or via server) or via RJ45.

	CA 8345
Easy to use with multilingual help	■
IEC61000-4-30	Class A Full
Harmonic / Interharmonic	Rank 127 / 126
Power	P, N, Q, S, D
Alarms	Up to 20,000
Transients	2.5 µs
Shock wave	12kV - 500 ns
Inrush	RMS (30 min), Peak (10min)
Number of channels and inputs	4U / 4I with 5 voltage terminals / 4 current inputs
Voltage (TRMS AC+DC)	from 5 to 1,000 V - Phase-to-phase and phase-to-neutral voltage
Current (TRMS AC+DC)	
	MN93 500 mA to 200 A _{AC}
	MN93A 0,005 A to 100 A _{AC}
	MINI 94 50 mA to 200 A _{AC}
	C193 1 A to 1,000 A _{AC}
	AmpFLEX™ or MiniFlex® 100 mA to 10 000 A _{AC}
	PAC93 1 A to 1,000 A _{AC} / 1 A to 1,300 A _{DC}
	E94 de 50 mA to 100 A _{AC/DC}
	J93 50 A to 3,500 A _{AC} and 50 A to 5,000 A _{DC}
Power ratings	W (P), VA (S), var (Q, D, N), PF, DPF, cos φ, tan φ
Energies	Wh, varh, VAh
Harmonics	Yes, from rank 0 to 127, phase
Communication interface	USB, Ethernet, Wifi, SD
Operating time	Up to 8 hours on Li-Ion batteries
Measurement campaign	EN 50160 Ed. 03
Dimensions / Weight	200 x 285 x 55 mm / 2 kg



+ The extra

Remote interface: The CA 8345 has on-board software for remote access. It can be remotely controlled via VNC, and activated from any Internet browser.

- Large colour touch screen
- Isolated measurement inputs
- On-board GPS for perfect time synchronisation

CA 8345 supplied with:

- 1 PA40W-2 mains adapter
- 1 removable handle
- 1 magnetic clip
- 5 black 3 m banana cords (right-right)
- 5 black alligator clips
- 1 USB cable
- 1 safety plug
- 1 PC data transfer software Power Analyser Transfer and 1 user manual to download from our website
- set of counters / coloured rings
- 5 Reelingboxes
- SD card
- carrying bag

To order

CA8345 Power analyser

Reference: P01160657N

CA8345

Phase-fed power analyser

Reference: P01160658N

Recommended accessories



P01120592
Miniflex MA194-350



P01298083
Bag for CA 8345



P01103076
Power supply via PA32ER
measurement inputs - 1,000 V
AC and DC

Download the free PAT3
at www.chauvin-arnoux.com

Voltage, current, power and energy recorders

Selection guide



	L411	L412	L461	PEL 51	PEL 52	PEL 112	PEL 113	PEL 115
Display								
Without						■		
With	■	■	■	■	■		■	■
Number of inputs								
	1I	2I	1U	1U/1I	2U/2I	3U/3I	3U/3I	4U/4I
Current								
AC	■	■		■	■	■	■	■
DC						■	■	■
Voltage								
AC			1,000 V	600 V	600 V	1,000 V	1,000 V	1,000 V
DC			1,500 V			1,000 V	1,000 V	1,000 V
Powers								
				P N Q D S	P N Q D S	P N Q D S	P N Q D S	P N Q D S
Memory								
SD card	Internal	Internal	Internal	■	■	■	■	■
Communication								
USB	■	■	■			■	■	■
Wifi	■	■	■	■	■	■	■	■
RJ45						■	■	■
Webserver	■	■	■	■	■			
IRD server	■	■	■	■	■	■	■	■
Power supply								
	Batteries	Batteries	Batteries	Mains via voltage measurement inputs	Mains via voltage measurement inputs	Mains via voltage measurement inputs (opt)	Mains via voltage measurement inputs (opt)	Mains via voltage measurement inputs
Protection								
	IP54	IP54	IP54	IP54	IP54	IP54	IP54	IP67
Safety								
IEC 61010	CAT III 1,000 V	CAT III 1,000 V	CAT III 1,000 V _{AC} CAT III 1,500 V _{DC}	CAT III 600 V	CAT III 600 V	CAT III 1,000 V CAT IV 600 V	CAT III 1,000 V CAT IV 600 V	CAT IV 1,000 V

Voltage and current recorders

L411 - L412 - L461



For diagnostics and preventive maintenance

- Simplified implementation and use
- Very high memory depth
- Measurements and recordings up to 1,500 V_{DC}

	L411	L412	L461
1 measurement channel	■	■	■
2 measurement channels		■	
Current : MiniFlex captive sensor 3,000 A _{AC}	■		
Current : Multiple technology AC current transducers		■	
Voltage : Measures 1,000 V _{AC} and 1,500 V _{DC}			■
Single-phase electrical distribution system	■	■	■
Single & two-phase electrical distribution system		■	

	L411	L412	L461
Number of channels	1	2	1
Current range	From 0.08 to 3,000 A ac	Depending on the sensors	From 10 V to 1,200 Vac / 1,700 Vdc
Frequency		Yes	
Display		LCD rétro éclairé	
Memory size		8 Go	
Acquisition speed		1 mesure / s	
Aggregation		De 1 à 60 min	
Communication	USB, Wifi, Web server, IRD server DataView Synch		
Power supply	3 Batteries AA, ou USB		
Battery life	3 jours en Recording sans Wi-Fi		
Dimensions	147 x 34 x 72 mm	177 x 34 x 72 mm	178 x 34 x 72 mm
Weight	300 g environ	350 g environ	300 g environ
Sensor	Ø 100mm / 350mm cordon longueur 1,2 m	-	-
Operating temperature	De -20°C à 50°C		
Protection	IP54		
	600 V CAT IV		
Electrical safety	1 000 V CAT III	1 000 V CAT III	1 000 V _{AC} CAT III / 1 500 V _{DC} CAT III



+ The extra

The **Wi-Fi interface** on the Data Logger L411, L412 and L461 allows the device to be connected to a communicating network and become accessible from any PC on the network using the Data Logger Transfer software. The devices then become remote voltage and current sensors.

1 recorder (L411, L412 or L461) supplied with:

- 1 test report
- 1 safety data sheet
- 1 CE certificate
- 1 quick start guide
- 1 USB-micro USB cable
- 1 USB power adapter
- 3 batteries (AA or LR06)
- 1 Data Logger Transfer software package and user manual available for download from our website

Plus for L461:

- 2 power cords (red / black)
- 2 alligator clips (red / black)

To order

L411 1-channel current logger

Reference: P01157180

L412 2-channel current recorder

Reference: P01157181

L461 1-channel voltage recorder

Reference: P01157182

Recommended accessories



For L461 :
P01103058Z
Magnetic key tips



For L412 :
P01106194
Mini94 current sensor

Download free Data Logger Transfer software
from www.chauvin-arnoux.com

Power and energy loggers single and two-phase

PEL 51 / PEL 52

600 V
CAT III

TRMS

IP 54

+ The extra

- To optimise energy efficiency of single-phase installations
- Easy to connect to the WiFi network
- Memory depth: all measurements per second for 100 years, time synchronised

The PEL 51 and PEL 52 are voltage and current recorders with a liquid crystal segment display. They will enable you to obtain detailed energy and electricity consumption profiles during ISO 50 001 energy audits and to identify potential savings specifically around single-phase loads in your installations.

Versatility

The PEL 51 has a voltage measurement input (2 banana terminals) and a current measurement input and is designed for the single-phase electrical market. The PEL 52 is mainly intended for the two-phase electrical market, but can also be used in single-phase with 2 current channels recorded.

	PEL 51 & PEL 52
Power and energy logger	■
Recording for monitoring all parameters to search for energy losses	■
T-RMS voltage and current measurements	■
Backlit display	■
Min and Max values	■
Automatic current sensor recognition	■
Measurement storage on SD card	■
Wifi connection (Access point & hotspot)	■
Remote use in VNC mode (Webserver)	■
Magnetic fixing for simplified use	■
Unlimited autonomy thanks to its power supply from the measurement channels	■

Number of channels and number of inputs		PEL 51: 1 voltage input and 1 current input PEL 52: 2 voltage inputs and 2 current inputs
Voltage (TRMS AC)		Phase-to-phase and phase-to-neutral voltage 10 V to 600 V
Current (TRMS AC)	MN93	500 mA to 200 Aac
	MN93A	0.005 Aac to 100 Aac
	C193	1 A to 1,000 Aac
	Mini 94	50 mA to 200 Aac
	AmpFLEX™ ou MiniFlex®	500 mA to 2,400 Aac
Power	W (P, PF), VA (S), var (Q, N, D), PF, DPF / cos φ, tan φ	
Energy	Wh, varh, VAh	
Communication interface	Wifi	
Dimensions / weight	180 x 88 x 37 mm / 400 g	



PEL 51 supplied with:

- 1 MA194-250 current sensor
- 1 bag
- 2 red/black 1.5 m banana cables (right-right)
- 2 red/black alligator clips
- 1 C8 adapter
- 1 mains lead
- 1 SD card
- 1 safety plug
- 1 PC data transfer software PEL Transfer and 1 user manual to download from our website

PEL 52 supplied with:

- Same as PEL51 without current sensor (wide choice of compatible sensors depending on application).
Plus :
- 1 blue 1.5 m banana cord (right-right) ;
 - 1 blue alligator clip

To order

PEL51

Single-phase power and energy recorder

Reference: P01157166

PEL52

Two-phase power and energy data logger

Reference: P01157167

Recommended accessories

P01120594
MA194 flexible AC current transducer 1 000 mm

P01120434B
MN93A AC current transducer 5 A and 100 A ranges

P01106194
MINI94 clamp

Download the free PEL Transfer software
at www.chauvin-arnoux.com

Power and energy recorders

PEL 112 - PEL 113 - PEL 115

600 V
CAT IV1000 V
CAT III

TRMS



The PEL 110 series includes 3 voltage and current recorders with a liquid crystal segment display. They are used to obtain detailed energy and electricity consumption profiles for energy audits under the European Union's Energy Efficiency Directive. ISO 50 001 and identify potential savings specifically around electrical loads in your installations.

Power and energy measurements

Measurements of active (P, Pfun), apparent (S) and reactive (N, Q, D) power, as well as power factors and power displacement, enable you to define the exact consumption of the various loads. to determine the exact power consumption of the various loads.

1000 V
CAT IV

IP 67

Série PEL 110

Recorder for all power and energy	■
Recording for monitoring all parameters to search for energy losses	■
T-RMS voltage and current measurements	■
Backlit display (PEL113 - PEL115)	■
Min and Max values	■
Automatic current sensor recognition	■
Measurement storage on SD card	■
USB, Ethernet and Wifi connection (Access point & hotspot)	■
Magnetic attachment for easy use (PEL112 & 113)	■
Unlimited autonomy thanks to its power supply from the measurement channels (Optional PEL112 & 113; included in PEL115)	■

	PEL 112 & PEL 113	PEL 115
Number of channels and inputs	3 voltage channels & 3-way current 4 voltage inputs and 3 current inputs	4 voltage channels & 4-way current 5 voltage inputs and 4 current inputs
Voltage (TRMS AC+DC)	Phase-to-phase and phase-to-neutral voltage 10 V to 1,000 V _{AC} / 100 V to 1,000 V _{DC}	
Current (RMS AC)	MN93	500 mA to 200 A _{AC}
	MN93A	0.005 A _{AC} to 100 A _{AC}
	C193	1 A to 1,000 A _{AC}
	Mini 94	50 mA to 200 A _{AC}
	AmpFLEX™ ou MiniFlex™	200 mA to 10,000 A _{AC}
Current (TRMS AC+DC)	E94	100 mA to 100 A _{AC/DC}
	PAC93	1 A to 1,000 A _{AC} / 1 A to 1,300 A _{DC}
	J93	50 A to 3,500 A _{AC} / 50 A to 5,000 A _{DC}
Power ratings	W (P), VA (S), var (Q), PF, DPF, cos φ, tan φ	
Energies	Wh, varh, VAh	
Acquisition step	200 ms	
Communication interface	Wifi, Ethernet, USB	
Protection	IP54	IP67
Dimensions / Weights	256 x 125 x 37 mm / 930 g	270 x 245 x 180 mm / 3,4 kg



PEL 113 supplied with:

- 1 case
- 4 black 3 m banana cables (right-right)
- 4 black alligator clips
- 1 USB/SD adapter
- 1 power cord
- 1 USB cable
- 1 set of marker rings
- 4 cable reels
- 1 SD card
- 1 safety data sheet
- 1 PC data transfer software PEL Transfer and 1 user manual to download from our website

PEL 112 supplied with:

- Same as PEL113

PEL 115 supplied with:

- 1 carrying case
- 5 black 3 m banana leads (right-right)
- 5 black alligator clips
- 1 USB/SD adapter
- 1 power cord
- 1 USB cable
- 1 SD card
- 1 set of marker rings
- 5 cable reels
- 1 safety plug
- 1 PC data transfer software PEL Transfer and 1 user manual to download from our website

To order

PEL113 Power and energy logger

Reference: P01157157

PEL113 version with 3 MiniFlex MA194-350 current sensors and mains adapter

Reference: P01300003

PEL113 version with 3 MiniFlex MA194-350 current sensors, mains adapter, DataView software and magnetic touch points

Reference: P01300004

PEL112 Power and energy logger

Reference: P01157156

PEL115 Power and energy logger

Reference: P01157169

Download the free PEL Transfer software from
www.chauvin-arnoux.com

Photovoltaic analyser

FTV500



The FTV500 photovoltaic tester is a measuring instrument designed to meet all the requirements of technicians and professionals when it comes to installation, testing and maintenance of photovoltaic systems.

Checking electrical safety

The FTV500 can be used to check that the installation is safe. Insulation and continuity tests are possible, in compliance with IEC61557 standards.

I-V curves

The device is designed to carry out tests and measurements on PV modules made up of an appropriate number of PV cells in order to detect their I-V (current-voltage) characteristic curve and the series of resistances R_s , characteristic parameters that constructively identify them, based on the IEC 60891 standard.

Efficiency and shadow curves

Efficiency data recording represents the recording of parameters related to the efficiency test.

In fact, it represents the evaluation of the installation's efficiency over time. The aim of this test is to check whether the same efficiency is maintained over the long term.

Performance of photovoltaic systems

The performance of photovoltaic systems in normal operation is assessed in accordance with IEC 61446 (Voc, Isc, Pmpp, etc.) and IEC 61724 (PR and PRP parameters).

	FTV500
Efficiency of the inverter and the complete installation	■
Simplified HMI with touch screen	■
No PC required, thanks to automatic generation of measurement reports	■
Daily recording for monitoring the site's shadow curve	■
Wi-Fi communication with remote module	■
Remote control of the device in VNC mode	■

Display	5" colour TFT touch screen
DC voltage	1,000 V
Current DC	20 A
AC voltage	1,000 V
Current AC	3,000 A
Continuity	0.01 to 99 Ω , current 200 mA
Insulation	Power off Power on
	0.25 to 199 M Ω 0.25 to 100 M Ω
Solar irradiation	From 50 to 2,000 W/m ²
Temperature	Contact and ambient
Autonomy	Up to 15 hours
Protection	IP54 IEC 61010 CAT III - 1,000 V / CAT IV 600 V



+ The extra

Live insulation test

The R_s series resistance test (only possible when powered up) enables this parameter to be measured accurately in real time on the PV module, in accordance with the procedure laid down in standard IEC 60891.

Recommended accessories



P01102184
FTV500 remote box



P01120600
PAC500 clamp



FTV500 comes with:

- 1 carrying case
- 1 certificate of conformity
- 12 red/black 2 m banana cables
- 1 set of red/black alligator clips
- 3 x MA500 MiniFlex AC current sensors
- 3 x PAC500 DC current sensors
- 1 I-V cable for DC connection
- 1 FTV500 remote unit
- 1 FTV500 mains adapter
- 1 inclinometer
- 1 set of flexible test leads

To order

FTV500 Photovoltaic analyser
Reference: P01129600

Accessories / Spare parts

	CA 8220 CA 8230	CA 8332 CA 8332B CA 8334 CA 8334B	CA 8335 CA 8331 CA 8333 CA 8336	CA 8435 CA 8436	CA 8435	PEL51 PEL52	PEL102 PEL103	PEL104 PEL112 PEL113	PEL105	PEL106 PEL115
MN93				(1)					(1)	(1)
MN93A				(1)					(1)	(1)
Mini94										(1)
C193				(1)					(1)	(1)
MA193				(1)					(1)	(1)
MA194				(1)					(1)	(1)
MA196										
A193									(1)	(1)
A196										
E3N	(2)		(2)	(1) (2)	(2)		(2)	(2)	(1) (2)	(1) (2)
E27	(2)		(2)	(1) (2)	(2)		(2)	(2)	(1) (2)	(1) (2)
E94					(3)			(3)		(1) (3)
PAC93				(1)	(3)				(1)	(1)
J93				(1)					(1)	(1)

COMPATIBILITY CURRENT
SENSORS QUALISTAR
RANGE

	Recommended
	Not Recommended
	Incompatible

(1) without IP67 sealing
(2) with adapter
(3) powered by the device



Accessories and spare parts for analysers and recorders power and energy quality

CA 8220, CA 8331, CA 8333, CA 8336, CA 8436, CA 8345, PEL 112, PEL 113, PEL 115 and PEL51, PEL52

Check compatibility of measurement ranges

CAPTEURS DE Current	Model	Measuring range	Ø Gap / Length	IEC 61010	Reference
	 MN93	500 mA to 200 A _{AC}	Ø 20 mm	600 V CAT III / 300 V CAT IV	P01120425B
	 MN 93A	5 mA to 100 A _{AC}	Ø 20 mm	600 V CAT III / 300 V CAT IV	P01120434B
	 Mini94	50 mA to 200 A _{AC}	Ø 16 mm	IEC 61010 CAT III 600 V / CAT IV - 300 V	P01106194
	 MA194-250 MA194-350 MA194-1000 MA196-350	100 mA to 10 kA _{AC}	Ø 70/250 mm Ø 100/350 mm Ø 300/1.000 mm Ø 100 mm / 350 mm	1000 V CAT III / 600 V CAT IV	P01120593 P01120592 P01120594 P01120568
	 PAC93	1 A to 1,000 A _{AC} / 1 A to 1,300 A _{DC}	1 x Ø 39 mm or 2 x Ø 25 mm	600 V CAT III / 300 V CAT IV	P01120079B
	 J93	50 A to 3,500 A _{AC} / 50 A to 5,000 A _{DC}	Ø 72 mm	600 V CAT III / 300 V CAT IV	P01120110
	 A193-450 A196A-610	100 mA to 10 kA _{AC}	Ø 140 mm / 450 mm Ø 190 mm / 610 mm	1000V CAT III / 600 V CAT IV 1000V CAT IV	P01120526B P01120554
	 A193-800	100 mA to 10 kA _{AC}	Ø 250 mm / 800 mm	1,000 V CAT III / 600 V CAT IV	P01120531B
	 C193	1 A to 1,000 A _{AC}	Ø 52 mm	600 V CAT IV	P01120323B
	 E3N / E27 E94	50 mA to 10 A _{AC/DC} 100 mA to 100 A _{AC/DC}	Ø 11,8 mm	600 V CAT III / 300 V CAT IV	P01120027 P01120044

OTHER ACCESSORIES	Description	Reference
	 Kit of 5 banana cables + 5 alligator clips + 1 set of coloured rings	P01295483
	 Set of 4 banana cords + 4 alligator clips + 1 set of coloured rings	P01295476
	 1 set of coloured counters and rings	P01102080
	 5 A adapter box	P01101959

OTHER ACCESSORIES	Description	Reference
	 Reeling box - MultiFix magnetic reel	P01102149
	 USB-A USB-B cable	P01295293
	 Carrying case no. 22	P01298056
	 DataView Software®	P01102095
	 ESSAILEC box	P01102131
	 Magnetic hook	P01103079

Accessories

	Item code	Description	F407/ F607	CA 8220	CA 8331/ CA 8333	CA 8336	CA 8436	CA 8345	PEL 51/ PEL 52	PEL 112/ PEL 113	PEL 115	FTV500
	HX0055B	RS232/USB adapter		■								
	HX0056Z	Optical/USB cable		■								
	HX0061	Car charger			■	■	■					
	HX0091	Pt100 adapter, 2 wires		■								
	P01101959	5 A box			■	■	■	■		■	■	
	P01101967	PAC93 mains adapter		■	■	■	■	■		■	■	
	P01102057	Power supply PA30W			■	■	■				■	
	P01295457Z	Set of 16 A alligator clips, red/black	■	■					■			
	P01102059	Screen protection film			■	■	■					
	P01102080	Set of ring-pins			■	■	■	■		■	■	
	P01102081	E3N / E27 clamp adapter		■	■	■	■					
	P01102082	CA 1711 tachometer probe		■								
	P01102095	DataView® software	■	■	■	■	■	■	■	■	■	
	P01102099	Set of 5 locking alligator clips					■				■	
	P01102100Z	MultiFix magnet kit	■									
	P01102115	Inclinometer										■
	P01102117	Set of plugs (CA 8436)					■					
	P01102131	ESSAILEC box			■	■	■	■		■	■	
	P01102146	Pole fixing kit					■				■	
	P01102147	Set of rubber stoppers (5 small+ 4 large)					■				■	
	P01102149	Reeling Box			■	■	■	■		■	■	
	P01102150	PA31ER mains adapter			■	■						
	P01102155	Power supply PA40W-2 Li-Ion						■				
	P01102184	FTV500 remote box										■
	P01102189	Flexible tips										■
	P01102204B	Mains adapter (self-powered)								■		
	P01103058Z	Set of 2 magnetic measuring tips (1 red/1 black)		■								
	P01103076	Power supply PA32ER 1,000 V						■				
	P01103077	C8 adapter						■				
	P01103078	SD card						■		■	■	

Accessories

	Item code	Description	F407/ F607	CA 8220	CA 8331/ CA 8333	CA 8336	CA 8436	CA 8345	PEL 51/ PEL 52	PEL 112/ PEL 113	PEL 115	FTV500
	P01103079	Magnetic hook			■	■		■				
	P01120027	E27 clip		■	■	■	■					
	P01120047	Power supply E3N/E27		■	■	■	■					
	P01120480	PAC500 DC clamp										■
	P01120600	MiniFlex MA500 sensor										■
	P01295174	Power supply cable							■	■	■	
	P01295288Z	Banana/banana cords (1 red/1 black)		■					■			
	P01295293	USB-A / USB-B cable			■	■	■	■		■	■	
	P01295451Z	Banana/banana cable set (red/black)	■									
	P01295454Z	Touch points (1 red/1 black)		■								
	P01295476	Set of 4 banana cords, 4 alligator clips and 1 set of coloured rings			■	■	■	■		■	■	
	P01295477	IP 67 power cord (CA 8436)					■					
	P01295479	Set of 3 m IP 67 banana cables (x5) BB196					■				■	
	P01295483	Kit of 5 banana leads, 5 alligator clips and 1 set of coloured rings				■	■	■			■	
	P01295496	Banana power cord (CA 8436)					■					
	P01295504	MC4 cable set										■
	P01295505	FTV500 mains adapter										■
	P01296024	QualistarPlus battery pack			■	■	■					
	P01296037	Pack of 6 NiMH batteries		■								
	P01296047	CA 8345 battery pack						■				
	P01296052	FTV500 battery										■
	P01298049	Carrying case n°5		■								
	P01298055	Belly bag n° 21			■	■						
	P01298066	Saddlebag n° S21			■	■	■	■		■		
	P01298067	Satchel No. 22			■	■	■				■	
	P01298076	Bag n° S03	■						■			
	P01298078	Bag n° 20								■		
	P01298083	Bag Q2						■				
	P01637301	Bluetooth kit	■									
	P01651023	230 V USB-USB B cord adapter for E27		■	■	■	■					
	P03295509	Current Measurement Lead		■								

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Installation testers

Selection guide



	CA 6011	CA 6131	CA 6133	CA 6113	CA 6116N	CA 6117
Insulation						
Test voltage		250 / 500 V	250 / 500 / 1,000 V	50 / 100 / 250 / 500 / 1,000 V		
RCD tests						
No-Trip tests		■	■	■	■	■
Trip time (pulse)		■	■	■	■	■
Trip current (Ramp)		■	■	■	■	■
Management of standard or selective RCDs, type AC or A		■ (standard)	■ (standard)	■	■	■
Management of type-B RCDs						■
Earth measurement						
Terre 2P/3P			■	■	■	■
Terre sous Voltage (RA) 1P				■	■	■
Terre sélective 1 pince (RA Sel)				■	■	■
Loop impedance & resistance						
Z-loop (L-PE)		■	■	■	■	■
Z-Line (L-N or LL)		■	■	■	■	■
Ik calculation (PFC)		■	■	■	■	■
Icc calculation (PSCC)		■	■	■	■	■
Integrated fuse table						■
Voltage drop						■
Resistance / Continuity						
Mesure manuelle & Automatic	■	■	■	■	■	■
Other functions						
Voltage / frequency		■ / -	■ / ■	■ / ■	■ / ■	■ / ■
Current / leakage current on clamp		■	■	■	■	■
Phase sequence		■	■	■	■	■
Power values					■	■
Harmonics					■	■
Wiring polarity test + reversal				■	■	■
Alarms		■	■	■	■	■
Data Storage / Communication						
Data storage			■		■	■
Storage of 3 tree-structure levels					■	■
USB interface					■	■
Bluetooth			■			
Display et Power supply						
Black and white LCD	■ (Two-colour backlighting)	■ (Custom)	■ (Custom)			
Black and white graphical LCD				■		
Colour graphical LCD					■	■
Online help				■	■	■
Battery operation	■	■				
Operation with rechargeable batteries			■ Ni-Mh	■ Ni-Mh	■ Li-ion	■ Li-ion
Software						
ICT / DataView®					■	■
Android application			■			
Safety / Standards						
IEC 61010-1 600V CAT III		■	■	■	■	■
IEC 61557	■	■	■	■	■	■

Installation testers

CA 6113 - CA 6116N - CA 6117

600 V
CAT III

IP 53

IEC
61557

Complete control of electrical installations in accordance with current standards

- Test on DDR AC, A, F, B, B+, EV
- Battery with up to 30 hours of autonomy
- Verification in accordance with IEC 60364-6, NF C 15-100, DIN VDE 100, DIN VDE 0105, NF C 16-600, etc.
- Automatic continuity measurement
- Colour display (except CA 6113)
- Measurements: voltage, current via clamp, power, waveforms and harmonics
- Loop measurement with 1 mΩ resolution

Effective contextual help and guaranteed safety

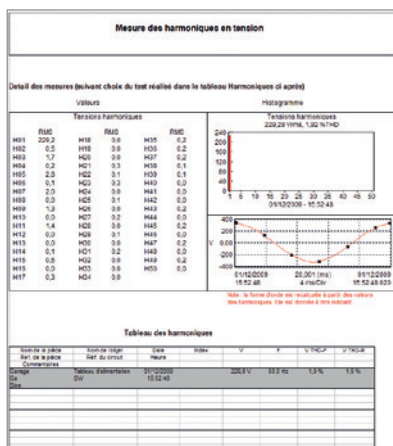
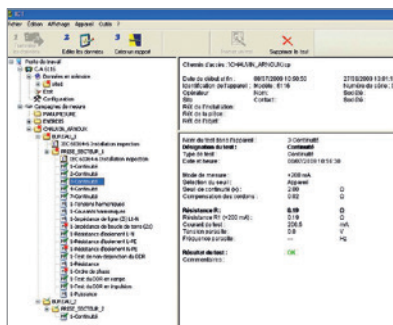
Controllers have access to clear and detailed contextual help. They are therefore suitable for both experienced and less experienced users.

Each measurement has dedicated help, including a guide for the connections to be made and help for interpreting the results. For added safety, in the event of incorrect connection or the presence of dangerous voltage, the device displays an error message to warn the user.

DataView® automatically recognises the device when it is connected to the PC and launches the corresponding menu. This menu, presented in a tree structure, gives the user direct access to the data recorded in the device, its configuration, etc. DataView® has multiple predefined report templates for quick editing in full compliance with current standards. Users can create their own templates according to their needs.

Specific to installation controllers, the DataView ICT module enables quick and easy analysis of measurements recorded by the CA 6116N and CA 6117 controllers. Supplied as standard, it offers the following features:

- Data retrieval
- Device configuration
- Customisation of measurement campaigns with transfer to the device
- First-level report editing

Diagnostics
& control

Education

Tertiary
& residential

Industries



+ The extra

- Integrated fuse table for quick reading of results on the device
- User-friendly interface
- Extra-large graphic display
- On-screen help for each function
- ICT data export software included
- Compatible with DataView® software
- Supplied with a tripod cord and European mains plug

To order

1 CA 6113 controller

Reference: P01145445

1 CA 6116N controller

Reference: P01145455

1 CA 6117 controller

Reference: P01145460



		CA 6113	CA 6116N	CA 6117
Continuity / Resistance				
Measurement current		I > 200 mA up to 39.99 Ω and approx. 12 mA up to 400 Ω		
Accuracy		± (1.5% of measurement + 2 cts), with audible beep		
Range		4 kΩ / 40 kΩ - 400 kΩ		
Insulation				
Test voltage		50 / 100 / 250 / 500 / 1,000 Vdc		
Range / accuracy		0.01 MΩ to 2 GΩ / ±(5 % of measurement + 3 cts)		
Short-circuit current		≤ 3 mA		
Earth				
3P earth	Range	0.50 Ω to 15 kΩ		
	Accuracy	±(2 % of measurement + 2 cts)		
	Others	RH & RS auxiliary-stake resistance measurement (up to 40 kΩ)		
Selective 1P earth	Range / accuracy	0.20 Ω to 399.9 Ω ±(10 % of measurement + 10 cts) (I sel via clamp)		
Loop impedance (Zs (L-PE) and Zi (L-N or L-L)) – 1P live earth				
Live earth				
	Installation voltage / freq.	90 to 500 V / 15.8 to 17.5 Hz - 45 to 65 Hz		
High current mode - Zs (L-PE) (TRIP) & Zi (L-N or L-L)	Range / accuracy	Max. test current: 7.5 A 0.100 Ω to 399.99 Ω / ±(5% of measurement + 2 cts)		
	NO TRIP mode (Zs (L-PE))	Test current: 6 mA – 9 mA – 12 mA (as required) - 0.20 Ω to 3,999 Ω ±(5% of measurement + 2 cts)		
Calculation of short-circuit current Ik (PFC (Zs)) , I Sc (PSCC (Zi))		Fault and short-circuit current: display range 0.1 A to 6 kA		
Integrated fuse table		Yes		
Voltage drop DU% (Zi)			-40% to + 40%	
Others		Measurement of the resistive and inductive components of the impedances Zs and Zi		
RCDs				
Type AC, A and F RCDs	Installation voltage / freq.	90 to 500 V / 15.8 to 17.5 Hz - 45 to 65 Hz		
	IDn	10 / 30 / 100 / 300 / 500 / 650 / 1,000 mA (90 V – 280 V) or variable - 10 / 30 / 100 / 300 / 500 mA (280-550 V) or variable Ramp and pulse test		
	NO TRIP test	at ½ IDn – Duration: 1,000 ms or 2,000 ms		
	Trip current Ramp mode	0.3 x IDn to 1.06 x IDn in increments of 3.3% x IDn		
	Trip time measurement Pulse mode	0.2 to 0.5 x IDn (Uf) / 0.5 x IDn / 2 x IDn (selective) / 5 x IDn. Pulse: 0 to 500 ms, Ramp mode: 0 to 200 ms		
Type B, B+ and EV RCDs	Installation voltage / freq.			90 V to 275 V / 15.8 to 17.5 Hz - 45 to 65 Hz
	IDn: ramp / pulse 2 x IDn pulse 4 x IDn	10 / 30 / 100 / 300 / 500 mA 10 / 30 / 100 mA		
Test in ramp mode		0.2 x IDn to 2.2 x IDn		
Trip test		1.1x2 or 2.2x2 or 2.2x4 x IDn		
Other measurements				
Current		(1 mA*) 5.0 mA to 19.99 A (MN77 clamp) / 5.0 mA to 199.9 A (CI77 A clamp)		
Voltage		0 to 550 Vac / dc / dc and 15.8 to 500 Hz		
Frequency		10 to 500 Hz		
Phase rotation		20 to 500 Vac		
Active power		0 to 110 kW in single-phase - 0 to 330 kW in three-phase Simultaneous display of voltage and current waveform		
Harmonics			Voltage and current / up to 50th order / THD-F / THD-R	
General specifications				
Large backlit LCD screen, 320 x 240 cts		monochrome graphical 5.7"		colour graphical 5.7"
Data storage / Communication			1,000 tests / via USB for data transfer and report generation	
Power supply: rechargeable battery		NiMH 9.6 V rated 4 Ah.		Lithium-ion 10.8 V rated 5.8 Ah
Battery life		up to 24 hours		up to 30 hours
Dimensions / weight		280 x 190 x 128 mm / 2.2 kg		
Ingress protection / EMC		IP 53 / IK04 / IEC 61326-1		
Electrical safety / Standards		IEC 61010 -1 – 600 V CAT III – 300 V CAT IV – IEC 61557		

*if a voltage is connected to the device



CA 6113 delivered in a shoulder bag with:

- 1 x PA 30 W power pack
- 1 Euro 3-point lead - 3 safety leads (red, blue, green)
- 3 test probes Ø 4 mm (red, blue, green)
- 3 crocodile clips (red, blue, green)
- 2 elbowed-straight safety leads (red and black) 3 m long
- 1 three-point Euro mains lead
- 1 remote-control probe
- 1 anti-scratch film mounted on the instrument
- 1 wrist-strap
- 1 x 4-point hands-free strap
- 1 CD-ROM containing the user's manual

CA 6116N and CA 6117 delivered in a shoulder bag with:

- 1 mains power / charger pack (type 2)
- 1 Li-Ion rechargeable battery pack mounted on the instrument
- 1 USB A / B cable 1.80 m long with ferrite
- 1 three-point lead - 3 safety leads (red, green and blue)
- 3 test probes Ø 4 mm (red, green and blue)
- 3 crocodile clips (red, green and blue)
- 2 elbowed-straight safety leads 3 m long (red and black)
- 1 three-point EURO mains lead
- 1 two-point EURO mains lead
- 1 remote-control probe
- 1 anti-scratch film mounted on the instrument
- 1 wrist-strap
- 1 x 4-point hands-free strap
- 1 ICT data export software on CD-ROM
- 1 CD-ROM containing the user manual

Recommended accessories



P01295398
Three-point lead with separated wires 2.5 m



P01295393
Three-point lead for testing European mains sockets



P01102095
Dataview

Download the free ICT software compatible with the CA 6116N and CA 6117.

Installation testers

CA 6131 - CA 6133

600 V
CAT III

IP 54

IEC
61557Auto
Script

Earth measurement by stake and loop method

- Continuity measurement at 0.2 A
- Insulation testing
- RCD testing: current and trip time
- Automatic test sequences
- Storage of tests
- Power supply by mains-rechargeable batteries with USB or vehicle cigarette lighter connection

	CA 6131	CA 6133
Display	231-segment LCD with blue backlighting	
Data storage	-	30 sites x 99 tests
Communication	-	Bluetooth Class 1 ; range > 10m
Software	-	IT-Report Android application
Power supply	6 x LR 6 or AA batteries	6 NiMH batteries rechargeable via the mains < 6 hours, USB or vehicle cigarette lighter
Battery life	> 1,900 continuity measurements at 1 Ω	> 1,700 continuity measurements at 1 Ω
Protection	IP 54 (IEC 60529) ; IK 04 (IEC 50102)	
Standards / electrical safety	EMC: IEC 61326-1 ; IEC 61010-1 ; IEC 61010-2-030 ; IEC 61010-2-034, 600 V CAT III, 300 V CAT II on charger input	
IEC 61557 compliance	Parts 1, 2, 3, 4, 6, 7 and 10	Parts 1, 2, 3, 4, 5, 6, 7 and 10
Continuity		
Range / Resolution / Accuracy	0.00 to 9.99 Ω / Cable compensation up to 5 Ω; I >= 200 mA / 0.01 Ω / ± (2 %R + 2 cts)	
Resistance		
Range / Resolution / Accuracy	1 to 9,999 Ω — 10.00 to 99.99 kΩ / 1 Ω — 10 Ω / ± (1 %R + 5 cts)	
Insulation		
Test voltage	250 V / 500 V	250 V / 500 V / 1,000 V
Range / Resolution / Accuracy	0.01 to 999.9 MΩ / 10 kΩ or 100 kΩ / ± (3 % R + 3 cts)	
Earth resistance - 3P method		
Range	-	0.50 to 99.99 Ω / 100.0 to 999.9 Ω / 1,000 to 2,000 Ω
Measurement frequency	-	128 Hz
Earth loop measurement (Zs) No TRIP (12 mA)		
Range / Resolution / Accuracy	1* to 2,000 / 1 / ± (5 %R +2 cts)	
Ik calculation	1 to 999 A	
Earth loop measurement (Zs) With TRIP (300 mA)		
Type of connection	Zs: via banana leads and Euro plug tripod; Zi: via banana leads	
Range / Resolution / Accuracy	0.1** to 399.9 Ω / 0.1 Ω / ±(5 %R + 2 cts)	
Ik calculation	1 to 9,999 A	
RCD test		
Voltage de l'installation	90 to 450 V ; 45 to 65 Hz	
Types and calibres	AC and A ; 30 mA - 100 mA - 300 mA - 500 mA - 650 mA	
Trip time	0.5 x I ΔN ; 1 x I ΔN ; 5 x I ΔN / 5.0 to 300 ms	
Trip current	30 mA : - 0. - + (7 %R +3.3 % I ΔN + 2 mA)	
Fault voltage: Range / Resolution / Accuracy	1.0 to 25.0 V — 25.0 to 70.0 V / 0.1 V / ± (15 %R + 3 cts) - ± (5 %R + 2 cts)	
Automatic test sequence	No	RCD, Loop-RCD-Insulation
Voltage & frequency		
Voltage: Range / Resolution / Accuracy	2.0 to 550.0 V _{AC} / 0.1 V / ± (1 % R + 2 cts) ; 0.0 to 800.0 V _{DC} / 0.1 V / ± (1 % R + 2 cts)	
Frequency: Range / Resolution / Accuracy	-	30.0 to 999.9 Hz / 0.1 Hz / ±(0.1 %R + 1 ct) - Voltage > 2 V
Phase rotation	45 to 550 V / 45 to 65 Hz	
Current	Via clamp with voltage output using the voltage sensor option (AUX)	Via MN73 A clamp, 2 A calibre: 10.0 mA to 2,400 mA, 200 A calibre: 1.00 to 200 A
AUX sensor function (CA 6131)		
AC+DC range: Range / Resolution / Accuracy	2.0 to 999.9 mV — 1.000 to 12,000 V / 0.1 mV — 1 mV / ±(1 % R + 2 cts)	
DC range / Resolution / Accuracy	±(0.0 to 999.9 mV) — ±(1.000 to 2,000 V) / 0.1 mV — 1 mV / ±(1 % R + 2 cts)	
General characteristics		
Dimensions / weight	223 x 126 x 70 mm / approx. 1.1 kg	
Environment	Use: 0 to 40 °C / Storage: -10 to 70 °C (80% RH)	
Protection	IP 54 (IEC 60529) ; IK 04 (IEC 50102)	
Standards / Electrical safety	EMC: IEC 61326-1; IEC 61010-1; IEC 61010-2-030; IEC 61010-2-034, IEC 61557, 600V CAT III, 300V CAT II on charger input	

* from 10 ohms (IEC 61557) ** from 1 ohm (IEC 61557)



1 contrôleur CA 6131 ou CA 6133 supplied with:

- 1 carrying bag containing:
- 1 neck strap
- 1 three-pole EURO mains cable
- 3 safety cables
- 3 crocodile clips
- 1 test probe
- 1 USB 2 A power supply + 1 USB cable (CA 6133)
- 6 x 1.5 V LR06 batteries (CA 6131)
- 6 Ni MH rechargeable batteries (CA 6133)
- 1 test report with measurement report

To order

1 CA 6131 controller

Reference: P01146011

1 CA 6133 controller

Reference: P01146013

Recommended accessories

**P01102157**
Remote control probe**P01120439**
MN73A current clamp
(for CA 6133)

**Download the IT-Report application
compatible with the CA 6133**

Field electrical safety controller

MX 531

**300 V
CAT III**
IP 40


Practical and simple, the 'MX5 3-in-1'

For your diagnostics and checks in industry, the tertiary sector and residential, a measuring device suitable for TT neutral systems

- 1 - Measures voltage and checks the connection of the 2P+E socket, phase, neutral, earth
- 2 - Automatic earth measurement without tripping the RCD with a resolution of 0.1 Ω
- 3 - 30 mA RCD test via TEST button, display held for 7 seconds


Diagnostics
& control


Education


Tertiary
& residential

Laboratory
& metrology


+ The extra

- Fully autonomous (no batteries) with immediate display no adjustment or position selection required
- Tester adapts to any socket configuration with its rotating head and compact design
- Instant display on the two-colour screen depending on the compliance of the installation



MX0531 EARTH RCD30mA supplied:

equipped with wrist strap, carrying case and paper operating instructions

To order

MX 531 controller

Reference: MX0531

	MX 531
Display	2,000 counts
Acquisition	RMS AC+DC
Automatic calibration	Yes
R _E earth fault error	Red screen display if R _E > 100 Ω or OL > 2,000 Ω
Earth R _E Range	0 to 1999 Ω
Automatic calibres	3 Ω to 199,9 Ω and 180 Ω to 1999 Ω
Resolution	0,1 Ω ; 1 Ω
Accuracy	± (3% R + 5 D)
Protection / Permissible overload	300 V CAT III
RMS voltage (AC+DC)	100 V to 400 V
Phase-neutral voltage	195 V to 253 V 50/60 Hz L/N reversal indication and if < 195 V and > 253 V fault
Resolution	1 V
Accuracy	± (2 %+1 D)
Position indication	Phase neutral and earth
30mA AC type RCD	If R _E correct
Nominal value	230 V between phase and neutral current 30 mA - 0% and +6%
Conditions	Time 200 ms ± 4 ms
General characteristics	
Display	46 x 50 mm blue and red backlit LCD
Plug type	2P +E 10/16A -Type E and F
Safety	EN 61010-2-030, pollution degree 2, CAT III 300V
Operating temperature	-10 to +45 °C
Standards	Tested according to IEC/EN 61557-1 -3 and -6 - EMC according to IEC 61236-1
Dimensions / Weight / IP / IK	Dimensions 185 x 65 x 53 mm / Weight : 230 g ± 50 g / IP 40 / IK 07

Continuity tester

CA 6011

300 V
CAT IV

IP 40

IEC
61557-4

Designed for simple, repetitive daily use

Specially designed for periodic checks of the continuity of protective conductors to earth on electrical equipment, materials and installations, in particular in accordance with standards and legislation IEC/EN 60364, NF C 15-100, VDE 0100-600

- Dedicated to continuity testing on protective earth conductors
- Double configuration: continuity tester attached to the reeler and remote continuity tester on the wrist
- Lightweight and compact

CA 6011		
Display	2,000 counts with two-colour backlighting	
Continuity		
Measurement range	0.00 Ω to 2.00 Ω	2.00 Ω to 20.00 Ω
Resolution	10 m Ω	
Measurement current	200 mA	20 mA
	with automatic polarity reversal	
Open-circuit voltage	$\pm(4 \text{ Vdc} < U < 6 \text{ Vdc})$	
Resistance		
Measurement range	1.0 Ω to 200.0 Ω	
Resolution	100 m Ω	
Measurement current	10 mA	
Open-circuit voltage	$\pm(4 \text{ Vdc} < U < 6 \text{ Vdc})$	
Continuity threshold	Programmable: 1 Ω or 2 Ω	
Compensation of cable resistance	Yes	
Test conformity / non-conformity indication	Configurable: visual, audible and / or vibrating	
Compliance with standards	IEC 61557-1 & IEC 61557-4 IEC 61010-1, IEC 61010-2-030 300 V CAT IV	
Automatic standby mode	10 minutes / deactivatable	
Battery life	30,000 measurements in actual use 4,500 as per IEC 61557-4 protocol	
Power supply	4 x 1.5 V AA / LR6 batteries	
Dimensions (instrument+reeler)	225 x 185 x 135 mm	
Weight	CA 6011 alone: 350 g - Reeler with 30 m cable: 1.2 kg	



CA 6011 KIT supplied with:

- 1 elastic strap for fixing the measuring unit to your wrist
- 1 waist belt + 1 shoulder belt
- 1 "Cable Reeler No. 01" with 1 green PVC cable 30 m long
- 1 black spiral PVC cable 3.5 m long
- 1 green crocodile clip with $\varnothing$ 4 mm banana socket
- 1 moulded black test probe
- 1 green PVC cable 0.50 m long
- 1 set of 4 x 1.5 V LR06 alkaline batteries

CA 6011 supplied with:

- 1 elastic strap for fixing the measuring unit to your wrist
- 1 set of 4 x 1.5 V LR06 alkaline batteries

To order

1 CA 6011 alone

Reference: P01191611

1 kit of CA 6011

Reference: P01299926

Recommended accessories



P01295492

Cable reeler no.1 30 m



P01102084A

Continuity rod

* Supplied with the kit



Lightning arrester tester

MX 604



300 V
CAT III

V

Hz

Lightning arrester tester

- Lightning-arrester support module for measurements on unmounted lightning arresters
- Probe with remote control button for in-situ measurements
- Measures insulation resistance at 50, 100 and 500 Vdc
- Quick and easy readings with the colour-scale dial



MX 604

Lightning arrester test	0 to 600 Vdc
Insulation	100 kΩ to 2,000 MΩ at 50 / 100 and 500 Vdc (3 ranges)
Battery test	Yes
Electrical safety	IEC 61010 – 300 V CAT III
Power supply	3 x 1.5 V batteries for a battery life of 1,500 x 5 s measurements
Dimensions / weight	155 x 98 x 40 mm / 350 g

1 MX 604 delivered in a hard case with :

- 1 detachable lightning-arrester support module,
- 1 remote-control probe
- 1 red test probe,
- 1 black straight-straight lead 1.5 m long with built-in test probe,
- 1 black crocodile clip,
- 1 lightning-arrester support clamp,
- 1 strap mounted on the instrument,
- 3 batteries LR03 or AAA
- 1 user's manual in 5 languages

To order

1 MX 604 tester

Reference: MX0604

Test adapter for type-2 AC electric vehicle charging stations

CA 6652



- 300 V
CAT II
- IEC
61851-1
- IEC
60364-7-722
- IP 54

TYPE 2 test adapter
for charging stations
BEV/BHEV

- Immediate diagnosis of your installations
AC EV charging stations for EVs/BEVs/BHEVs
- Simplified connection of measuring
and testing devices
- Safe use, indoors and outdoors

CA 6652	
Charging point socket connector	
Charging point	Type 2 IEC 62196-2
Operator safety	
Voltage detection on PE	With conductive key
Vehicle presence simulation	
PP simulation	Not connected NC, 13A, 20A, 32A, 63A
CP simulation	States A, B, C, D
Simulation of fault conditions	
	CP-PE short circuit, CP-PE diode short circuit, PE opening
Outputs	
4 mm banana measurement terminals	L1, L2, L3, N, PE, CP signal
Voltage presence indication	via LEDs
General characteristics	
Environment	USE -20 °C TO +55 °C; STORAGE -20 °C TO +70 °C
Housing dimensions (L x W x H)	221 x 100 x 44 mm
Type 2 socket dimensions	Approximately 240 x Ø 58 mm
Cable length	Approximately 60 cm
Weight	Approximately 850 g
Protection rating	IP 40 - IEC 60529, in operation, when all terminals are connected IP 54 - IEC 60529, out of operation, with the type 2 plug cap in place.
Standards / Electrical safety	Adapter: IEC/EN 61010-2-030. Cords: IEC/EN 61010-2-031, 300 V CAT II pollution degree 2.
EMC	IEC/EN 61326-1.



+ The extra

- The AC adapter 6652 is the ideal tool for performing operations on AC EV charging stations.
- Qualification
 - Installation and commissioning
 - Maintenance and troubleshooting of charging stations
 - Periodic tests



CA 6652 adapter for BEV/BHEV charging stations, supplied in a cardboard box including:

- 1 carrying case
- 1 cable terminated with a type 2 plug
- 1 multilingual quick start guide
- 1 multilingual safety sheet
- 1 verification certificate

To order

- CA 6652
Reference: P01191309
- PACK EVSE CA6652 + MX535 + CA762 IP2X
Reference: P01300005
- PACK EVSE CA6652 + CA6133 + CA762 IP2X
Reference: P01300006
- PACK EVSE CA6652+CA6117+DW+CA762 IP2X
Reference: P01300002

EVSE PACK CA 6652
+ MX 535 + CA 762 IP2X

CA 6652
EV charging stations

+

CA 762IP2X
DDT/VAT

+

MX 535
Electrical installation tester

EVSE PACK CA 6652
+ CA 6133 + CA 762 IP2X

CA 6652
EV charging stations

+

CA 762IP2X
DDT/VAT

+

CA 6117
Electrical installation tester

EVSE PACK CA 6652
+ CA6117 + DW + CA762 IP2X

CA 6652
EV charging stations

+

CA 762IP2X
DDT/VAT

+

CA 6133
Electrical installation tester

Portable insulation testers

Guide de choix



	CA 6503	CA 6511	CA 6513	CA 6528	CA 6522	CA 6524	CA 6526	CA 6532	CA 6534	CA 6536
Type										
	Hand-cranked	Analogue		Portable digital						
Test voltage (in V _{OC})										
10									■	■ 1 V increments
25									■	■ 1 V increments
50						■	■	■		■ 1 V increments
100						■	■	■	■	■ 1 V increments
250	■			■	■	■	■		■	
500	■	■	■	■	■	■	■		■	
1000	■		■	■	■	■	■			
Max. measured value										
1 GΩ		■	■							
5 GΩ	■									
11 GΩ				■						
20 GΩ								■		■
40 GΩ					■					
50 GΩ									■	
200 GΩ						■	■			
Continuity		■	■	■	■	■	■	■	■	■
Resistance			■	■		■	■	■	■	■
Capacitance							■	■		
Leakage current						■	■	■	■	■
Chronometer				■	■	■	■	■	■	■
Programming of test duration				■	■	■	■	■	■	■
Quality ratios										
PI						■	■	■		
DAR						■	■	■		
Data storage						■	■	■	■	
Bluetooth							■	■	■	
Display										
Analogue	■	■	■							
LCD				■						
LCD + bargraph					■	■	■	■	■	■
Power supply										
Hand-cranked magneto	■									
Batteries		■	■	■	■	■	■	■	■	■

Hand-cranked insulation testers

CA 6503



300 V
CAT III

IP 54

CA 6503		
Insulation	Test voltage (DC)	250 V / 500 V / 1,000 V
	Range	1 to 5,000 MΩ
	Accuracy	2.5 % of full scale
Voltage	Range	0... 600 V _{AC}
	Frequency	45 to 450 Hz
	Accuracy	3 % of full scale
Display	Analogue	
Dimensions / weight	120 x 120 x 130 mm / 1.06 kg	
Power supply	Hand-cranked magneto providing a stable voltage	
Ingress protection	IP 54 with cover / IP 52 without cover	
Electrical safety	IEC 61010 - 600 V CAT II / 300 V CAT III	

Analogue insulation testers

CA 6511 - CA 6513



600 V
CAT III

IP 40

		CA 6511	CA 6513
Insulation	Test voltage (DC)	500 V	500 V / 1,000 V
	Range	0.1 to 1,000 MΩ	
	Accuracy	± 5 % of measurement	
Resistance	Range	-	0 to 1,000 Ω
	Accuracy	-	± 3 % of full scale
Continuity	Range	-10 Ω to +10 Ω	
	Accuracy	± 3 % of full scale	
	Measurement current	≥ 200 mA	
	Current reversal	Yes	
Voltage	Range	0... 600 V _{AC}	
	Frequency	45 à 400 Hz	
	Accuracy	3 % de la pleine échelle	
Display		Analogue	
Dimensions / weight		167 x 106 x 55 mm / 500 g (excluding sheath)	
Power supply		4 x 1.5 V LR06 batteries	
Electrical safety		IEC 61010 - 600 V CAT III	



Diagnostics
& control



Education



Transport



Industries



Production, transport
& distribution

+ The extra

- Rugged plastic casing ideal for all-terrain use
- Special for on-site use
- Does not require a power supply

CA 6503 delivered in a shoulder bag

- 3 elbowed / straight PV leads 1.5 m long (black / red / blue)
- 3 crocodile clips (black / red / blue)
- 1 black test probe



To order

CA 6503
Reference: P01132504



Diagnostics
& control



Education



Transport



Tertiary
& residential



Industries



CA 6511 and CA 6513 delivered mounted in their shockproof sleeves:

- 2 elbowed / straight PVC leads 1.5 m long (black / red)
- 1 black test probe
- 1 red crocodile clip
- 4 x 1.5 V LR06 batteries
- 1 replacement fuse
- 1 operating manual

To order

CA 6511 Reference: P01140201

CA 6513 Reference: P01140301

Insulation and continuity controllers

CA 6522 - CA 6524 - CA 6526

600 V
CAT IV

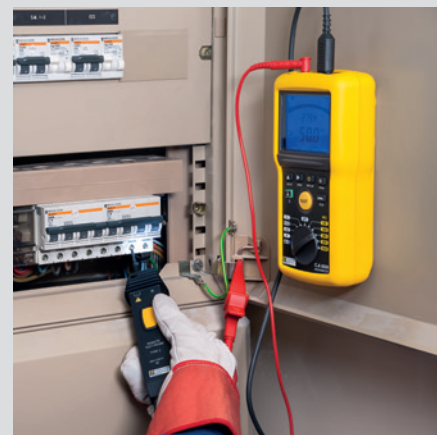
IP 54

IEC
61557

TRMS

For testing and diagnostics in industry and the service sector

- Test voltage from 50 to 1000 V
- Measurement range from 10 kΩ to 200 GΩ
- PI, DAR ratios to determine insulation quality
- Illuminated alarms and Pass/Fail indicators (CA 6526)
- Memory for up to 1300 measurements



	CA 6522	CA 6524	CA 6526
Display	2 x 4,000 cts + logarithmic bar graph		
Memory	-	300 measurements	1,300 measurements
Communication	-	-	Bluetooth® Class II
Power supply / Automatic switch-off	6 LR06 batteries / 5 mn, deactivatable		
Operating time	1,500 measurements: UN x 1 kΩ @ UN (5 s ON / 55 s OFF) 3,000 continuity measurements (5 s ON / 55 s OFF)		
Dimensions / Weight / IP rating	211 x 108 x 60 mm / 850 g / IP 54 / IK 04		
EMC / Electrical safety	IEC 61326 - 1 / IEC 61010 - 1 and IEC 61010 - 2 - 030, 600 V CAT IV		
Compliance with standards	IEC 61557 parts 1, 2, 4 and 10		

Voltage			
Measuring range / Resolution		0.3 V - 399.9 V / 0.1 V ; 400 V - 700 V / 1 V	
Accuracy / Input impedance		± (3 %+ 2 cts) / 400 KΩ	
Operating frequency		-	DC ; 15.3 - 800 Hz
Frequency			
Measuring range / Resolution / Accuracy		-	15.3 Hz - 399.9 Hz / 0.1 Hz / ± (1%+ 2 cts) 400 - 800 Hz / 1 Hz / ± (1%+ 1 pt)
Isolation			
Test voltage		250 - 500 - 1,000 V	50 - 100 - 250 - 500 - 1,000 V
Range at maximum test voltage		40 GΩ	200 GΩ
Compliance with IEC 61557 - 2		2 GΩ	
Measuring range			

	50 V	-	10 kΩ - 10 GΩ
	100 V	-	20 kΩ - 20 GΩ
	250 V	50 kΩ - 10 GΩ	50 kΩ - 50 GΩ
	500 V	100 kΩ - 20 GΩ	100 kΩ - 100 GΩ
	1 000 V	200 kΩ - 40 GΩ	200 kΩ - 200 GΩ

Measurement range / Resolution	10 ⁽¹⁾ - 999 kΩ and 1,000 - 3,999 MΩ / 1 kΩ ; 4.00 - 39.99 MΩ / 10 kΩ ; 40.0 - 399.9 MΩ / 100 kΩ ; 400 - 3,999 MΩ / 1 MΩ / 4.00 - 39.99 GΩ / 10 MΩ ; 40.0 - 200 GΩ / 100 MΩ
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Accuracy	± (3 % + 2 cts) ⁽²⁾
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Test voltage (I < 1 mA)	- 0 % + 20 %
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Voltage display Test	± (3 % + 3 cts)
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Test current / resolution	-	0.01 μA - 39.99 μA / 10 nA ; 40.0 - 399.9 μA / 100 nA ; 0.400 - 2.000 mA / 1 μA
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Test current accuracy	-	± (10 % + 3 cts)
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PI / DAR ratio	-	10 mn / 1 mn - 1 mn / 30 s
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Timer (mn:s)	0:00 - 39:59 - configurable minutes	
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Discharge time (at 25 V)	< 2 s / μF	
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Alarms	-	2 fixed thresholds + 1 programmable threshold
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Continuity		
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Continuity measurement range	0.00 Ω - 10.00 Ω (200 mA)	0.00 Ω - 10.00 Ω (200 mA) 0.0 - 100.0 Ω (20 mA)
------------------------------	------------------------------	--

Accuracy / Open circuit voltage	± (2 % + 2 cts) / ≥ 6 V	
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Measurement current	200 mA : 200 mA (- 0 mA + 20 mA) - 20 mA : 20 mA ± 5 mA	
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Continuity thresholds (rapid beep)	2 Ω fixed	2 Ω, 1 Ω, programmable threshold
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Lead compensation	up to 9.99 Ω	
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Resistance: Measurement range / Resolution	-	0 - 3,999 Ω / 1 Ω 4.00 kΩ - 39.99 kΩ / 10 Ω 40.0 kΩ - 399.9 kΩ / 100 Ω 400 kΩ - 1,000 kΩ / 1 kΩ
--	---	--

Accuracy	-	± (3 % + 2 cts)
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Capacitance: Measuring range / Resolution	-	0.1 nF - 399.9 nF / 0.1 nF 400 nF - 3,999 nF / 1 nF 4.00 μF - 10.0 μF / 10 nF
---	---	---

Accuracy	-	± (3 % + 2 cts)
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(1) 2 kΩ for models CA 6532 - CA 6534 - CA 6536.

(2) In addition: 10 V: 1% per 0.1 GΩ; 25 V: 0.4% per 0.1 GΩ; 50 V: 2% per GΩ; 100 V: 1% per GΩ; 250 V: 0.4% per GΩ; 500 V: 0.2% per GΩ; 1000 V: 0.1% per GΩ.4

CA 6522, CA 6524 or CA 6526 insulation tester supplied with:

- 1 hands-free carry and use bag
- 2 right-angled safety leads (red and black), 1.50 m long
- 1 red alligator clip
- 1 black key tip
- 6 LR06 batteries
- 1 multilingual safety card
- 1 multilingual quick start guide
- Downloadable operating manuals
- 1 Megohmmeter Transfer software download for CA 6526

To order

1 CA 6522 insulation tester

Reference: P01140822

1 CA 6524 insulation tester

Reference: P01140824

1 CA 6526 insulation tester

Reference: P01140826

Recommended accessories



P01102092A
Remote control probe type 3



P01295453Z
2 x 1.50 m straight bent safety leads (red and black)

Download the free Megohmmeter Transfer (MEG) software from www.chauvin-arnoux.com

Digital insulation testers

CA 6528

1000 V
CAT III600 V
CAT IV

IP 40

IEC
61557

For servicing and maintenance

Designed for field use, with shockproof casing, the CA 6528 controller enables servicing and repair of electrical equipment such as cabinets, motors, cables, etc.

- Insulation measurement at 250 / 500 / 1,000 V
- Insulation resistance up to 11 GΩ
- Manual, locked and timer modes
- AC and AC+DC voltage measurement up to 700 V
- Continuity at 200 mA
- Visual alarm, blue / red backlighting

CA 6528

Industrial maintenance

Display	2 x 4,000 cts
Power supply / Automatic power-off	6 x LR06 or AA batteries / 10 min deactivatable
Battery life	1,000 measurements: at 1 MΩ @ 1 kV (5 s ON / 25 s OFF); > 3,000 continuity measurements (5 s ON / 25 s OFF) at 1 Ω
Dimensions / weight / IP rating	218 x 95 x 63 mm / 760 g / IP 40
EMC / electrical safety	IEC 61326-1 / IEC 61010-1, IEC 61010-2-030 and IEC 61010-2-034 / 600 V CAT IV
Compliance with standards	IEC 61557 parties 1, 2, 4 and 10

Voltage	
Measurement range / resolution	± (1 - 700 V) / 1 V
Accuracy / input impedance	±12% R ± 1ct for AC+DC; ±1 R ± 1ct for DC / 25 MΩ
Operating frequency	DC ; 45-65 Hz
Insulation	
Test voltage	250 - 500 - 1,000 V
Range at maximum test voltage	11 GΩ
Measurement range 250 V	50 kΩ - 4.2 GΩ
500 V	100 kΩ - 4.2 GΩ
1,000 V	200 kΩ - 11 GΩ
Measuring range / resolution	50 kΩ - 3.999 MΩ / 1 kΩ; (0.2) 3.6 - 39.99 MΩ / 10 kΩ; 36-399.9 MΩ / 100 kΩ; 360-4.200 MΩ / 1 MΩ; (1 kV) 3.6 - 11 GΩ / 10 MΩ
Accuracy	0.05 - 399.9 MΩ : ± 1.5 % R ± 10 cts 360 - 4,000 MΩ : ± 4 % R ± 10 cts ; ± 4 % R ± 5 ct (under 1,000 V) 3.6 - 11 GΩ : ± 10 % R ± 10 cts
Timer (mn:s)	10 s to 39 mn 59 s
Alarms	1 threshold / test voltage
Continuity	
Measurement range	0.02 Ω - 40 Ω
Accuracy / open-circuit voltage	±12% R ± 3 pt / 6 Vdc < U < 9 Vdc
Measurement current	≥ 200 mA (up to 2 Ω)
Continuity threshold (fast beep)	2 Ω / 1 Ω
Cable compensation	up to 5 Ω
Resistance	
Measurement range / resolution	1 - 399.9 Ω / 0.1 Ω 360-3.999 Ω / 1 Ω 3.60-39.99 kΩ / 10 Ω 36.0-420.0 kΩ / 100 Ω
Accuracy	±12% R ± 3 cts

¹ under 1,000 V

CA 6528 delivered in hands-free bag containing:

- 2 safety leads (1 red, 1 black)
- 1 red crocodile clip
- 1 black test probe
- 1 protective sheath mounted on the instrument
- 6 x LR06 or AA batteries
- 1 safety datasheet
- 1 Quick Start Guide
- 1 verification certificate

To order

CA 6528

Reference: P01140838

Recommended accessory



P01102084A
Continuity pole

Digital insulation monitors

**CA 6532 Telecom, CA 6534 Electronics,
CA 6536 Avionics, ESD, space, defence**



600 V
CAT IV

IP 54

IEC
61557



TRMS

- Test voltage from 50 to 500 V
- Measurement range from 2 kΩ to 50 GΩ
- Configurable ΔRel mode and alarms
- Linear capacitance measurement in nF/km (CA 6532)
- Continuity 200 mA / 20 mA with active protection without fuse

	CA 6532	CA 6534	CA 6536
Display	2 x 4,000 cts+ logarithmic bar graph		
Memory	1 300 measurements		
Communication	Bluetooth® Class II		-
Power supply / Automatic switch-off	6 LR06 batteries / 5 min, can be switched off		
Autonomy	1,500 measurements: UN x1 kΩ @ UN (5 s ON / 55 s OFF) 3,000 continuity measurements (5 s ON / 55 s OFF)		
Dimensions / Weight / IP rating	211 x 108 x 60 mm / 850 g / IP 54 / IK 04		
EMC / Electrical safety	IEC 61326-1 / IEC 61010-1 and IEC 61010-2-030, 600 V CAT IV		
Compliance with standards	IEC 61557 parts 1, 2, 4 and 10		
Voltage			
Measurement range / Resolution	0.3 V - 399.9 V / 0.1 V ; 400 V - 700 V / 1 V		
Accuracy / Input impedance	± (3 % + 2 cts) / 400 kΩ		
Operating frequency	DC ; 15.3 - 800 Hz		
Frequency			
Measurement range / Resolution / Accuracy	15.3 Hz - 399.9 Hz / 0.1 Hz / ± (1 % + 2 cts)		
Range at maximum test voltage	400 - 800 Hz / 1 Hz / ± (1 % + 1 pt)		-
Insulation			
Test voltage	50 - 100 V	10 - 25 - 100 - 250 - 500 V	10 to 100 V pas de 1 V
Range at maximum test voltage	20 GΩ	50 GΩ	20 GΩ
Compliance with IEC 61557 - 2	2 GΩ		
Measuring range			
	10 V	-	2 kΩ - 1 GΩ
	25 V	-	5 kΩ - 2 GΩ
	50 V	10 kΩ - 10 GΩ	-
	100 V	20 kΩ - 20 GΩ	20 kΩ - 10 GΩ
	250 V	-	50 kΩ - 25 GΩ
	500 V	-	100 kΩ - 50 GΩ
Variable test voltage	-	-	10 to 100 V
Measurement range / Resolution	10 ⁽¹⁾ - 999 kΩ et 1 000 - 3 999 MΩ / 1 kΩ ; 4 00 - 39 99 MΩ / 10 kΩ ; 40 0 - 399 9 MΩ / 100 kΩ ; 400 - 3 999 MΩ / 1 MΩ ; 4 00 - 39 99 GΩ / 10 MΩ ; 40 0 - 200 GΩ / 100 MΩ		
Accuracy	± (3 % + 2 cts) ⁽²⁾		
Test voltage (I < 1 mA)	- 0 % + 20 %		± (3 % + 2 cts) ⁽³⁾
Test voltage display	-	± (3 % + 3 cts)	-
Test current / resolution	0.01 µA - 39 99 µA / 10 nA ; 40 0 - 399 9 µA / 100 nA		
Test current accuracy	-	0.400 - 2 000 mA / 1 µA	-
PI/DAR ratio	10 mn / 1 mn - 1 mn / 30 s	-	-
Timer (mn:s)	0:00 - 39:59 - configurable minutes		
Discharge time (at 25 V)	< 2 s/µF		
Alarms	2 fixed thresholds+ 1 programmable threshold		
Continuity			
Continuity measurement range	0.00 Ω - 10 00 Ω (200 mA) ; 0 0 - 100 0 Ω (20 mA)		
Accuracy / Open circuit voltage	± (2 % + 2 cts) / ≥ 6 V		
Measurement current	200 mA: 200 mA (- 0 mA + 20 mA) - 20 mA: 20 mA ± 5 mA		
Continuity thresholds (rapid beep)	2 Ω, 1 Ω , programmable threshold		
Cord compensation	up to 9 99 Ω		
Resistance			
Measurement range / Resolution	0 - 3 999 Ω / 1 Ω ; 4 00 kΩ - 39 99 kΩ / 10 Ω / ± (3 % + 2 cts)		
	40 0 kΩ - 399 9 kΩ / 100 Ω		
Capacity	400 kΩ - 1 000 kΩ / 1 kΩ / ± (3 % + 2 cts)		
Measuring range / Resolution	0.1 nF - 399 9 nF / 0 1 nF		
	400 nF - 3 999 nF / 1 nF		
	4 00 µF - 10 0 µF / 10 nF		
Accuracy	± (3 % + 2 cts)		
Line length	0 - 100 km		

(1) 2 kΩ for models CA 6532 - CA 6534 - CA 6536.

(2) In addition: 10 V: 1% per 0.1 GΩ; 25 V: 0.4% per 0.1 GΩ; 50 V: 2% per GΩ; 100 V: 1% per GΩ; 250 V: 0.4% per GΩ; 500 V: 0.2% per GΩ; 1,000 V: 0.1% per GΩ.

(3) 10% / UN is added per 100 MΩ



CA 6532, CA 6534 and CA 6536 supplied with:

- 2 right-angled safety cords (red and black)
- 1 red alligator clip
- 1 black key tip
- 2 grip wires (red and black)
- 6 LR06 or AA batteries
- 1 hands-free carry and use case
- 1 multilingual safety data sheet
- 1 multilingual quick-start guide
- MEG software download

To order

1 CA 6532 insulation monitor

Reference: P01140832

1 CA 6534 insulation tester

Reference: P01140834

1 insulation tester CA 6536

Reference: P01140836

1 ESD kit CA 6536 + electrode

Reference: P01299974

Recommended accessories



P01102092A
Remote control probe type 3



P01295453Z
2 x 1.50 m straight-angled
safety cords (red and black)

Download the free Megohmmeter Transfer (MEG)
software from www.chauvin-arnoux.com

On-site insulation tester

Selection guide



	CA 6541	CA 6543	CA 6505	CA 6545	CA 6547	CA 6549	CA 6550	CA 6555
Type	On-site digital							
Test voltage (en Vdc)								
50	■	■	■	■	■	■	■	■
100	■	■	■	■	■	■	■	■
250	■	■	■	■	■	■	■	■
500	■	■	■	■	■	■	■	■
1,000	■	■	■	■	■	■	■	■
2,500			■	■	■	■	■	■
5,000			■	■	■	■	■	■
variable from 50 to 5,100			■	■	■	■	■	■
10,000							■	■
variable from 40 to 10,000							■	■
15,000								■
variable from 40 to 15,000								■
Max. measured value								
4 TΩ	■	■						
10 TΩ			■	■	■	■		
25 TΩ							■	
30 TΩ								■
Continuity	■	■						
Resistance	■	■		■	■	■	■	■
Capacitance	■	■	■	■	■	■	■	■
Leakage current			■	■	■	■	■	■
Chronometer	■	■		■	■	■	■	■
Programming of test duration	■	■	■	■	■	■	■	■
Quality ratios								
PI	■	■	■	■	■	■	■	■
DAR	■	■	■	■	■	■	■	■
DD				■	■	■	■	■
Graphics								
R (t)	■	■		■	■	■	■	■
u (t) + i (t)							■	■
i (u)							■	■
Ramp							■	■
Ramp by voltage steps						■	■	■
Calculation of R. (Tref)						■	■	■
I limit							■	■
Early break / burn-in							■	■
Data storage	■	■		■	■	■	■	■
RS 232		■						
USB					■	■	■	■
Display								
LCD + bargraph	■	■	■	■	■			
Graphics						■	■	■
Power supply								
Batteries	■							
Rechargeable battery		■	■	■	■	■	■	■

1 kv on-site installation testers

CA 6541 - CA 6543

600 V
CAT III

IP 53

IEC
61557Devices designed
for the field!

- Test voltages from 50 V to 1,000 V
- Wide measurement range from 2 kΩ to 4 TΩ
- Automatic calculation of DAR / PI quality ratios
- Communication for CA 6543

	CA 6541	CA 6543
Insulation		
Test voltage		
50 V	2 kΩ to 200 GΩ	
100 V	4 kΩ to 400 GΩ	
250 V	10 kΩ to 1 TΩ	
500 V	20 kΩ to 2 TΩ	
1,000 V	40 kΩ to 4 TΩ	
Accuracy		
2 kΩ to 40 GΩ	±(5 % L + 3 cts)	
40 GΩ to 4 TΩ	±(15 % L + 10 cts)	
Programming of test duration	1 to 59 min.	
DAR (1 min. / 30 sec.)	0.000 to 9.999	
PI (10 min. / 1 min.)	0.000 to 9.999	
Customizable PI	Time customizable from 30 s to 59 min.	
Voltage test / Safety	0 to 1000 Vac/dc	
Voltage alert indicator	Yes > 25 V	
Test inhibition	Yes > 25 V	
Smoother function	Yes	
Continuity		
Range	0.01 to 39.99 Ω	
Measurement current	≥ 200 mA up to 20 Ω	
Resistance		
Range	0.01 to 400 kΩ	
Capacity		
Range	0.005 to 4.999 μF	
Data storage - Communication		
Storage of R(t)	Memory 20 kB	Memory 128 kB
Storage of measurements	20 measurement results	Up to 1,500 measurement results
Communication port	No	RS232
PC software	No	DataView* (option)
Display	Giant LCD + bargraph	Giant LCD + bargraph
Power supply	8 x LR14 batteries	NiMH rechargeable battery
Dimensions / weight	240 x 185 x 110 mm / 3.4 kg	
Electrical safety	IEC 61010 600 V CAT III - IEC 61557	

CA 6541 delivered with
an accessories bag containing:

- 1 set of 2 leads 1.5 m long (red / blue)
- 1 black guarded lead 1.5 m long
- 3 crocodile clips (red / blue / black)
- 1 test probe (black)
- 8 x LR14 batteries

CA 6543 delivered with
an accessories bag containing:

- 1 set of 2 leads 1.5 m long (red / blue)
- 1 black guarded lead 1.5 m long
- 3 crocodile clips (red / blue / black)
- 1 test probe (black)
- 1 power-supply lead 2 m long
- 1 communication cable

+ The extra

- A highly impact-resistant construction site case
- Supplied with an accessory bag that can be clipped onto the construction site case

To order

1 tester CA 6541

Reference: P01138901

1 tester CA 6543

Reference: P01138902

Recommended accessory

P01654821
CA 1821 Thermometer

Download the free Megohmmeter Transfer (MEG) software from the website www.chauvin-arnoux.com

5 kv on-site installation testers

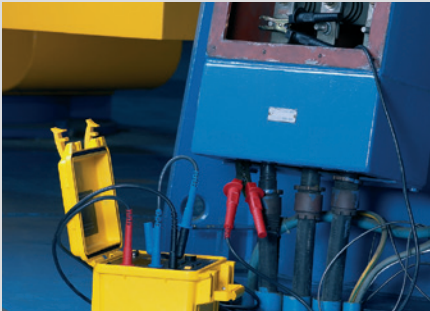
CA 6505 - CA 6545



1000 V CAT III	600 V CAT IV	IP 53	IEC 61557
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- Fixed and programmable test voltages from 40 V to 5,100 V
- Wide measurement range from 30 kΩ to 10 TΩ
- Measurement filtering functions
- Automatic calculation of DAR / PI / DD quality ratios
- Measurement of voltage, capacitance and leakage current

	CA 6505	CA 6545
Insulation		
Test voltage		
500 V		10 kΩ to 2 TΩ
1,000 V		100 kΩ to 4 TΩ
2,500 V		100 kΩ to 10 TΩ
5,000 V		300 kΩ to 10 TΩ
Programmation Voltage	40 V to 1,000 V: 10 V increments 1,000 V to 5,100 V: 100 V increments	
Accuracy		
1 kΩ to 400 GΩ		± 5 % of value ± 3 cts
400 GΩ to 10 TΩ		± 15 % of value ± 10 cts
Programmation durée de test		1 to 59 min.
DAR (1 min. / 30 sec.)		0.02 to 50.00
PI (10 min. / 1 min.)		0.02 to 50.00
PI personnalisable		Time adjustable from 30 s to 59 min.
DD	-	0.02 to 50.00
Test de Voltage/ Safety		0 to 1000 V _{AC} /dc
Indicateur alerte de Voltage		Yes > 25 V
Inhibition du test	Yes > 25 V	Yes - Adjustable according to test voltage
Function de lissage	-	Configurable - Digital filtering to stabilize the measurements
Capacity		0.005 to 49.99 µF
Mesure de Leakage current		0.001 nA to 3 mA
Memory		
Memory de R(t)	-	4 kB memory
Memory des mesures	-	20 measurement results
Display		Giant LCD + bargraph
Power supply		NiMH rechargeable battery
Dimensions / weight		270 x 250 x 180 mm / 4.3 kg
Electrical safety	IEC 61010 1000 V CAT III - 600 V CAT IV IEC 61557	



+ The extra

- A highly impact-resistant construction site case
- Supplied with a carrying bag



CA 6505 - CA 6545 delivered with a shoulder bag containing:

- 2 safety leads 3 m long with HV plug and HV crocodile clip (red / blue)
- 1 guarded safety lead 3 m long with rear-connection HV plug and HV crocodile clip (black)
- 1 cable with rear connection (blue) 0.35 m long
- 1 mains power cable 2 m long

To order

1 insulation tester CA 6505

Reference: P01139714

1 insulation tester CA 6545

Reference: P01139711

Recommended accessories



P01654246
CA 1246 Thermo-hygrometer



P01654821
CA 1821 Thermometer

5 kv on-site installation testers

CA 6547 - CA 6549

1000 V
CAT III600 V
CAT IV

IP 53

IEC
61557

- Fixed and programmable test voltages from 40 V to 5,100 V
- Wide measurement range from 30 kΩ to 10 TΩ
- Measurement filtering functions
- Automatic calculation of DAR / PI / DD quality ratios
- Graphical display of R(t) curves (CA 6549)
- Resistance calculation at a reference temperature (CA 6549)

	CA 6547	CA 6549
Insulation		
Test voltage		
500 V		30 kΩ to 2 TΩ
1,000 V		100 kΩ to 4 TΩ
2,500 V		300 kΩ to 10 TΩ
5,000 V		300 kΩ to 10 TΩ
Voltage programming	40 V to 1,000 V: 10 V increments 1,000 V to 5,100 V: 100 V increments	
Test by voltage steps	-	Programmable value and duration up to 5 increments, three profiles memorized
Accuracy		
30 kΩ to 40 GΩ		±5 % of value ± 3 cts
40 GΩ to 10 TΩ		±15 % of value ± 10 cts
Programming of test duration		1 to 59 min.
DAR (1 min. / 30 sec.)		0.02 to 50.00
PI (10 min. / 1 min.)		0.02 to 50.00
Customizable PI		Time customizable from 30 s to 59 min.
DD		0.02 to 50.00
Voltage test / safety		0 to 1,000 V _{AC} /dc
Voltage alert indicator		Yes > 25 V
Test inhibition		Yes - Adjustable according to test voltage
Smoothering function		Configurable - Digital filtering stabilizing the measurements
Capacity		0.005 to 49.99 μF
Leakage current measurement		0.001 nA to 3 mA
Data storage - Communication		
Storage of R(t)	Storage 128 kB	Display on screen + Storage of samples
Storage of measurements		Up to 1,500 measurement results
Communication port		USB
PC software		DataView* (option)
Display	Giant LCD + bargraph	Wide graphical screen
Power supply		NIMH rechargeable battery
Dimensions / weight		270 x 250 x 180 mm / 4.3 kg
Electrical safety		IEC 61010 1000 V CAT III - 600 V CAT IV - IEC 61557

Diagnostics
& control

Education



Transport



Industries

Production, transport
& distribution

+ The extra

- Voltage step test (CA 6549)
- Compatible with DataView* software



CA 6547 - CA 6549 delivered with a shoulder bag containing:

- 2 safety leads 3 m long with HV plug and HV crocodile clip (red / blue)
- 1 guarded safety lead 3 m long with rear-connection HV plug and HV crocodile clip (black)
- 1 cable with rear connection (blue) 0.35 m long
- 1 mains power cable 2 m long
- 1 communication cable

To order

1 insulation tester CA 6547

Reference: P01139712

1 insulation tester CA 6549

Reference: P01139713

Recommended accessories



P01654246
CA 1246 Thermo-hygrometer



P01654821
CA 1821 Thermometer

Download the free Megohmmeter Transfer (MEG) software from the website www.chauvin-arnoux.com

10 kV / 15 kV site insulation testers

CA 6550 - CA 6555

1000 V
CAT III

IP 54

IEC
61557

Perfectly suited for testing rotating equipment and machinery operating at 12 kV and above. Compliant with the latest recommended practices and future developments.

- Fixed and programmable test voltages from 40 V to 10/15 kV
- Wide measurement range from 10 kΩ to 30 TΩ
- Load current of 5 mA
- Digital, graphical and bar graph display of $R(t) + U(t)$, $i(t)$ and $i(u)$ curves in real time

	CA 6550	CA 6555
Graphics on display	$R(t)+u(t)$; $i(t)$; $i(u)$	
Data storage	256 recordings, 80,000 cts R, U, I and date-stamp	
Communication	Optically-isolated port for USB and RS232 connection	
PC software	DataView®	
Power supply	NiMH rechargeable batteries, 8 x 1.2 V / 4,000 mAh Charging by 90-260 V 50/60 Hz external voltage	
Electrical safety	1000 V CAT IV - IEC 61010-1 and IEC 61557	
Dimensions / weight	406 x 330 x 174 mm, 6 kg approx.	
Test voltages	10 kV	15 kV
Insulation measurement	500 V: 10 kΩ to 2 TΩ	
	1,000 V: 10 kΩ to 4 TΩ	
	2,500 V: 10 kΩ to 10 TΩ	
	5,000 V: 10 kΩ to 15 TΩ	
	10,000 V: 10 kΩ to 25 TΩ	
	-	15,000 V: 10 kΩ to 30 TΩ
Fixed test voltages	500 / 1,000 / 2,500 / 5,000 / 10,000 V	500 / 1,000 / 2,500 / 5,000 / 10,000 / 15,000 V
Variable test voltages	40 V - 10,000 V 3 preconfigurable voltage values	40 V - 15,000 V 3 preconfigurable voltage values
Adjustment increment for variable voltages	Variable: 40-10 kV Increment: 40 V - 1 kV: 10 V 1 kV - 10 kV: 100 V	Variable: 40-15 kV Increment: 40 V - 1 kV: 10 V 1 kV - 15 kV: 100 V
Ramp mode	3 preconfigurable ramps: start voltage / end voltage / duration	
Ramp configuration range	40-1,100 V / 500-10,000 V	40-1,100 V / 500-15,000 V
Step mode	Up to 10 plateaux (values and duration configurable for each plateau)	
Voltage measurement before and after test	AC: 0 - 2,500 V DC: 0 - 4,000 V	
Capacitance measurement (> 500 V)	0.001-9.999 μF / 10.00-19.99 μF	
Leakage current measurement	0 - 8 mA	
Discharge after test	Yes / Automatic	
Additional test stop modes		
I-limite	Programmable 0.2 - 5 mA	
Early-break	di / dt	
Timer	Up to 99:59 minutes	
Debug mode	Permanent test	
Calculation of ratios	PI, DAR, DD, SV, ΔR (ppm / V)	
Calculation of R at ref. temp.	Yes	
Measurement display filter	3 filters with variable time constant	



1 CA 6550 or CA 6555 controller supplied with a bag containing:

- 2 x 3 m safety cords with HT plug and 1 HT crocodile clip (red/blue)
- 1 x 3 m safety cord with HT plug and rear connection and HT crocodile clip (black)
- 1 x 0.5 m blue rear connection cable
- 1 x 2 m mains power cable
- 1 x DataView® software on USB stick
- 1 x optical/USB communication cable
- 1 x CD-ROM containing the operating instructions

To order

1 CA 6550 insulation tester

Reference: P01139715

1 CA 6555 insulation tester

Reference: P01139716

Recommended accessory



P01103062
3 crocodile clips
red/blue/black

Download the free Megohmmeter Transfer (MEG) software from the website www.chauvin-arnoux.com

Earth tester

Selection guide



	CA 6422	CA 6424	CA 6460	CA 6462	CA 6470N TERCA 3	CA 6471	CA 6472	CA 6416	CA 6417	CA 6418
Type										
	Earth testers		Earth and resistivity testers					Earth testers		
Earth										
3P method	■	■	■	■	■	■	■			
4P method			■	■	■	■	■			
Automatic coupling					■	■	■			
Selective earth										
Earth clamp								■	■	■
4P method + clamp						■	■			
2-clamp method						■	■			
Pylon earth measurement*							■			
Resistivity										
Manual			■	■						
Automatic					■	■	■			
Contact voltage measurement								■	■	
Potential measurement			■	■	■	■	■			
Continuity					■	■	■			
Earth potential							■			
Measurement frequency										
Single frequency: 128 Hz	■ (& 256 Hz)	■ (& 256 Hz)	■	■						
Single frequency: 2,083 Hz								■	■	■
41 to 512 Hz					■	■				
41 to 5,078 Hz							■			
Measurement of R _S , R _H		■ (R _H)			■	■	■			
Measurement of U _{stray}					■	■	■			
Current measurement		■ (with G72 clamp option)						■	■	■
Display										
LCD	■		■	■						
LCD, 3 displays		■			■	■	■			
OLED								■	■	■
Data storage / Communication										
Data storage		■ (52% / 62% / 72%)			■	■	■	■	■	■
Communication					■	■	■		■	
Optical USB interface					■	■	■			
Bluetooth®									■	
Power supply										
Batteries	■		■					■	■	■
Rechargeable batteries		■		■	■	■	■			
PC / Tablet software										
GTT / DataView®					■	■	■			
GTC									■	
Tablet application									■	

*Associated with CA 6474

Earth testers

CA 6422 - CA 6424

600 V
CAT IV

IP 65

IEC
61557

- 2P resistance / 3P earth resistance measurement up to 50 kΩ
- Automatic stabilization of the measurement
- Calculation of 52% / 62% / 72% average and % deviation
- Leakage current measurement from 0.5 mA
- Power supply by batteries rechargeable via the mains, USB socket or vehicle cigarette lighter

	CA 6422	CA 6424
Voltage (U_{HE})		
Range	-	0.1-600 V
Resolution	-	0.1 V
Accuracy	-	± (1% R + 1 ct)
2P resistance		
Range	0.05 - 99.99 Ω / 80.0 - 999.9 Ω / 0.800 - 9.999 kΩ / 8.00 - 50.00 kΩ	
Resolution	0.01 Ω / 1 Ω / 10 Ω / 100 Ω	
Accuracy	± (2 %R + 10 cts) / ± (2 %R + 2 cts) / ± (2 %R + 1 ct) / ± (2 %R + 1 ct)	
Cable compensation	-	up to 5 Ω
3P earth resistance		
Range	0.5 Ω - 2,000 kΩ	0.5 Ω - 50.00 kΩ
Resolution	0.01 Ω / 0.1 Ω / 1 Ω	0.01 Ω / 0.1 Ω / 1 Ω / 10 Ω
Accuracy	±(1 %R + 10 cts) / ±(1 %R + 2 cts) / ±(1 %R + 1 ct)	
Measurement frequency	128 Hz or 256 Hz	
No-load voltage	± 10 V peak	
Measurement mode	One-shot or permanent	
Data storage	Registers: RE @ 62%; RE @ 52%; RE @ 72%	
Calculation of average	-	Calculation of the average and the % deviation in relation to the average
R_H stake resistance measurement		
Range	-	0.05 - 9.999 kΩ / 8.00 - 49.99 kΩ
Resolution	-	1 Ω / 10 Ω
Accuracy	-	±(10 %R + 1 ct)
U_{SE} voltage measurement		
Range	-	0.10 - 99.99 V _{AC} / 80.0 - 600 V _{AC}
Resolution	-	0.01 V / 0.1 V
Accuracy	-	±(2% L + 2 pt)
Current measurement (via optional G72 clamp)		
Range	0.5 - 999.9 mA / 0.800-9.999 A / 8.00-60.00 A	
Resolution	0.1 / 1 / 10 mA	
Accuracy	±(1% R + 4 cts) / ±(1% R + 2 cts)	
Display	Backlit custom 206-segment LCD	
Measurement mode	R 2P (Ω), R 3P (Ω)	V, I, R 2P (Ω), R 3P (Ω)
Power supply	6 x LR 6 or AA batteries	6 x NiMH rechargeable batteries, charging time approx. 6 hrs
Charger	-	Internal via mains / USB adapter supplied
Automatic power-off	-	Deactivatable
Battery life	> 2,000 x 3P earth measurements at 100 Ω	>1,500 x 3P earth measurements at 100 Ω
Dimensions / weight	223 x 126 x 70 mm / 1 kg	
Environment	Operation: -10 to +50°C / Storage: -40 to +70°C (without batteries / accumulators)	
Protection	Up to 600 V on any of the input terminals	
IP / IK index	IP 65 as per IEC 60529 / IK 04 as per IEC 50102	
Drop test	1 metre as per IEC 61010-1	
Standards / electrical safety	EMC: IEC 61326-1; IEC 61010-2-030 / 600 V CAT IV	
Compliance with IEC 61557	IEC 61557-1 and IEC 61557-5	



CA 6422 delivered with

- 6 x LR06 type AAA batteries
- 1 quick start guide
- 1 safety datasheet
- 1 test report with measurement results
downloadable operating instructions

CA 6424 delivered with 1 carrying bag:

- 6 NiMH batteries
- 1 USB 2 A power supply, 1 USB micro-razor
power cable
- 1 multilingual quick start guide
- 1 safety datasheet
- 1 battery datasheet
- 1 test report with measurement results
downloadable operating instructions

To order

1 earth tester CA 6422

Reference: P01127012

1 earth tester CA 6424

Reference: P01127014

Recommended accessories



P01298006
Carrying bag



P01102021
50 m expert earth kit

Earth testers

CA 6460 - CA 6462

IP 53

IEC
61557

Earth / resistivity / coupling testers

- 3-in-1 testers: resistivity, earth and coupling
- Validation of the measurement by self-diagnosis: 3 LEDs indicating the presence of faults liable to make the measurement result invalid
- Highly-resistant site-proof casing with lid for use in harsh field conditions
- Large LCD display with backlighting

	CA 6460	CA 6462
Measurement	Earth / resistivity / coupling	
Type	3P & 4P	
Measurement range	0.01 to 2,000 Ω (in 3 automatic calibres)	
Resolution	10 mΩ / 100 mΩ / 1 Ω (depending on calibre)	
Accuracy	± (2 % + 1 ct)	
No-load voltage	≤ 42 V peak	
Frequency	128 Hz	
Alarms	3 fault presence LEDs	
Power supply	8 x 1.5 V LR06 batteries	NiMH rechargeable battery
Display	2,000-count digital LCD	
Electrical safety	IEC 61010 & IEC 61557	
Dimensions	273 x 247 x 127 mm (handle folded away)	
Weight	2.8 kg	3.3 kg



CA 6460 supplied with:

- 8 x 1.5 V LR06 batteries

CA 6462 supplied with:

- 1 mains lead for recharging
- 1 NiMH battery mounted inside the device

To order

1 earth and resistivity tester CA 6460

Reference: P01126501

1 earth and resistivity tester CA 6462

Reference: P01126502

Recommended accessory



P01102024
Earth/Resistivity 4P kit (100 m)

Earth testers

CA 6470N TERCA 3 - CA 6471



IP 53

50 V
CAT IVIEC
61557

CA 6470N TERCA 3 :

- 4-in-1 tester: Earth / Resistivity / Coupling / Continuity

CA 6471

- 5-in-1 tester, Earth / Selective Earth / Resistivity / Coupling / Continuity
- Suitable for industry, housing and electricity companies

	CA 6470N	CA 6471
3P method		
Range (automatic selection)	0.01 Ω to 99.9 kΩ	
Resolution	0.01 to 100 Ω	
Test voltage	16 V or 32 V, selectable	
Measurement frequency	41 to 513 Hz, automatic or manual	
Test current	Up to 250 mA	
Accuracy	± 2 % of value ± 1 ct	
4P method		
Range	0.001 Ω to 99.99 kΩ	
Resolution	0.001 to 10 Ω	
Test voltage	16 V or 32 V	
Measurement frequency	41 to 513 Hz, automatic or manual	
Test current	Up to 250 mA	
Measurement accuracy	± 2 % of value ± 1 ct	
4P method + 1 clamp		Same as 4P method
Soil resistivity measurement		
Measurement method	Wenner or Schlumberger method with automatic calculation of the results and display in Ω-metre	
Range (automatic selection)	0.01 Ω to 99.99 kΩ (ρ max. 999 kΩm)	
Resolution	0.01 Ω to 100 Ω	
Test voltage	16 or 32 V, selectable	
Measurement frequency	41 to 128 Hz selectable	
Measurements with 2 clamps		
Range	0.1 to 500 Ω	
Resolution	0.01 to 1 Ω	
Measurement frequency	Auto: 1611 Hz Manual: 128 Hz – 1.367 Hz – 1,611 Hz – 1,758 Hz	
External voltage measurement		
Range (automatic selection)	0.1 to 65.0 V _{AC/DC} – DC and 15 - 440 Hz	
Accuracy	± 2 % of value ± 1 ct	
Resistance / Continuity - (earth bond test)		
Type of measurement	2P or 4P method, selectable	
Range (automatic selection)	2P: 0.01 Ω to 99.9 kΩ 4P: 0.001 Ω to 99.99 kΩ	
Accuracy	± 2 % of value ± 2 cts	
Test voltage	16 V _{DC} (polarity +, – or auto)	
Test current	> 200 mA for R < 20 Ω	
Data storage		
Storage capacity	512 test results	
Communication	Optically-isolated USB	
Power supply	Rechargeable battery	
Charger power supply	External power supply with 18 V _{DC} / 1.5 A output or 12 V _{DC} vehicle power supply	
Dimensions / weight	272 x 250 x 128 mm / 3.2 kg	
Electrical safety	50 V CAT IV / IEC 61557 -1, -4, -5	



CA 6470N supplied with:

- 1 mains adapter
- 1 x 2-pole mains power cable for battery recharging on the mains
- Data export software
- 1 optical / USB communication cable
- 1 CD-Rom containing the user manual
- 5 specifications labels

CA 6471 supplied with:

- 1 mains adapter
- 1 x 2-pole main power cable for battery recharging on the mains
- Data export software
- 1 optical / USB communication cable
- 2 x C182 clamps with 2 safety leads
- 1 carrying bag
- 1 CD-Rom containing the user manual
- 5 specifications labels

To order

1 earth tester CA 6470N TERCA 3

Reference: P01126506

1 earth tester CA 6471

Reference: P01126505

Recommended accessories



P01102024

Earth and resistivity 4P kit (100 m)



P01102095

Dataview

Download the free Ground Tester Transfer (GTT) software from the website www.chauvin-arnoux.com

Earth tester

CA 6472



IP 53

50 V
CAT IVIEC
61557

6-in-1 controller, earth / selective earth / resistivity / coupling / continuity / pylon earth tester

- All types of earth resistance measurement & pylon earth measurement (with the CA 6474)
- Resistivity (Wenner + Schlumberger methods)
- Earth coupling
- Soil potential measurement
- Continuity / resistance
- Sweep mode

CA 6472

3P measurements	
Range (automatic selection)	0,01 Ω to 99,9 k Ω
Resolution	0,01 Ω to 100 Ω
Test voltage	10 V, 16 V, 32 V _{RMS} ou 60 V, selectable
Measurement frequency	41 to 5,078 Hz, automatic or manual
Test current	Up to 250 mA
Accuracy	$\pm 2\%$ L +1 pt to 128 Hz
Mesures avec 2 pinces	
Range	0.01 to 500 Ω
Resolution	0.01 to 1 Ω
Measurement frequency	Auto: 1,611 Hz - Manual: 128 Hz - 1,367 Hz - 1,611 Hz - 1,758 Hz
Method 4P / Mesure 4P+pinces	
Range	0.001 Ω to 99,99 k Ω
Resolution	0.001 to 10 Ω
Test voltage	10 V, 16 V, 32 V or 60 V, selectable
Measurement frequency	41 to 5078 Hz, automatic or manual
Test current	Up to 250 mA
Measurement accuracy	$\pm 2\%$ of value ± 1 ct
Mesure de résistivité du sol - Method 4P	
Measurement method	Wenner or Schlumberger method with automatic calculation of the results and display
Range (automatic selection)	0.01 to 99.99 k Ω ; ρ max. 999 k Ω m
Resolution	0.01 Ω to 100 Ω
Test voltage	10 V. 16 V. 32 V or 60 V, selectable
Measurement frequency	41 to 512 Hz, selectable
Mesure du potentiel de Terre	
Measuring range	0.00 to 65.00 V
Resolution	0.01 mV to 10 mV
Measurement frequency	41 to 5,078 Hz
Accuracy	$\pm 5\%$ ± 1 ct to 128 Hz
Mesure de Voltage externe	
Range (automatic selection)	0.1 to 65.0 V _{AC/DC} - DC and 15-450 Hz
Accuracy	$\pm 2\%$ of value ± 1 ct
Mesure de Resistance / Continuity	
Type de mesure	2P or 4P method. selectable
Range (automatic selection)	2P: 0.01 Ω to 99.9 k Ω 4P: 0.001 Ω to 99.99 k Ω
Accuracy	$\pm 2\%$ of value ± 2 cts
Test voltage	16 V _{dc} (polarity +, - or auto)
Test current	> 200 mA for R < 20 Ω
Memory	
Capacity Memory	512 test results
Communication	Optically-isolated USB
Power supply	Rechargeable battery
Charger power supply	External power supply with 18 V _{dc} / 1.9 A output or 12 V _{dc} vehicle power supply
Dimensions / weight	272 x 250 x 128 mm / 3.2 kg
Electrical safety	50 V CAT IV / IEC 61557 -1, -4, -5

Diagnostics
& control

Education



Transport

Tertiary
& residential

Industries

Production, transport
& distribution

CA 6472 delivered with:

- 1 mains adapter
- 1 x 2-pole mains power cable for battery recharging on the mains
- Data export software
- 1 optical / USB communication cable
- 2 x C182 clamps with 2 safety leads
- 1 carrying bag
- 1 CD-Rom containing the user manual
- 5 specifications labels

To order

1 earth tester CA 6472

Reference: P01126504

Recommended accessories



P01102024
Earth and resistivity 4P kit (100 m)



P01102095
Dataview

Download the free Ground Tester Transfer (GTT)
software from the website www.chauvin-arnoux.com

Pylon earth controller

CA 6474



IP 53

Specially for measurements on pylons

- Used with the CA 6472 for measurements on pylons
- Pylon earth resistance
- Resistance of each pylon footing
- Quality of overhead earth wire connection

CA 6474 / PYLON BOX	
Measurements	
Type of measurement	Overall pylon earth resistance Earth resistance of each pylon footing Overall line impedance Quality of overhead earth wire connection. Active measurement (injection by the CA 6472) Passive measurement (use of eddy currents)
Range	0.067 Ω to 99.99 kΩ
Accuracy	± (5 % + 1 ct)
Frequency	41 to 5,078 Hz
Frequency sweep	Yes
Dimensions	272 x 250 x 128 mm
Weight	2.3 kg
Power supply / Data storage / Display	Provided by the CA 6472



+ The extra

Possibility of connecting several AmpFlex® units in series for lengths > 8 metres

The complete pylon earthing kit, in AmpFlex® 5 m version, is available to order under reference P01299930. It includes:

- CA 6472
- CA 6474
- AmpFlex® 5 m
- 100 m earthing kit

For the complete pylon earthing kit in AmpFlex® 8 m version, order:

- CA 6472 reference P01126504
- CA 6474 reference P01126511
- 100 m earthing kit reference P01102024

CA 6474 delivered with an accessories bag containing:

- 1 connection cable
- 4 BNC / BNC cables 15 m long
- 4 AmpFlex® flexible current sensors 5 m long
- 1 set of 12 identification rings for AmpFlex® with 15 m BNC cable
- 2 cables (5 m green, 5 m black) with safety plugs on winder
- 5 spade lug / Ø 4 mm banana plug adapters
- 3 adjustable clamps
- 1 calibration loop
- 5 specifications labels

Also available with 8 m AmpFlex® sensor: order reference P01126511

To order

1 earth tester CA 6474

Reference: P01126510

Download the free Ground Tester Transfer (GTT) software from the website www.chauvin-arnoux.com

Earth clamps

CA 6416 - CA 6417 - CA 6418

600 V
CAT IV

IP 40



For earth measurements on HV/MV installations, telecommunications, railway or building installations

- Quick earth loop check
- OLED display and force compensation system
- Loop resistance measurement from 0.01 to 1,500 Ω (1,200 Ω for CA 6418)
- Current measurement from 0.5 mA to 20 A
- Alarms available in Ω and A, and in voltage for CA 6416 / CA 6417
- Time-stamped storage of 300 measurements, 2,000 for CA 6417

	CA 6416	CA 6417	CA 6418
Display	152-segment OLED. Active area 48 x 39 mm		
Max. clamping diam.	Ø 35 mm		Ø 32 mm L x H : 30 x 40 mm / 20 x 55 mm
Data storage	300 time-date-stamped measurements	2,000 time-date-stamped measurements	300 time-date-stamped measurements
Communication	Bluetooth Class 2		
Power supply	4 x 1.5 V LR06 batteries or 4 x NiMH batteries		
Battery life	1,440 measurements of 30 seconds each		2,440 measurements of 30 seconds each
Calibration	Automatic at startup		
Electrical safety	IEC 61010 600 V CAT IV		IEC 61010 100 V CAT IV, 150 V CAT III
Ingress protection	IP40		
Dimensions / weight	55 x 95 x 262 mm / Approx. 935 g with batteries		56 x 106 x 300 mm / Approx. 1.2 kg with batteries
Measurement ranges (Ω) / Resolution (Ω) / Accuracy			
	0.010 to 0.099 / 0.001 / ±1.5 % ±0.01 Ω		0.010 to 0.099 / 0.001 / ±1.5 %R ±0.01 Ω
Loop ohmmeter	0.10 to 0.99 / 0.01 / ±1.5 % ±2 r		0.10 to 0.99 / 0.01 / ±1.5 %R ±2 r
1,500-count display on CA 6416 / CA 6417	1.0 to 49.9 / 0.1 / ±1.5 % ±r		1.0 to 49.9 / 0.1 / ±1.5 %R ±2r
1,200-count display on CA 6418	50.0 to 99.5 / 0.5 / ±2 % ±r		50.0 to 149 / 1 / ±2.5 %R ±2r
	100 to 199 / 1 / ±3 % ±r		150 to 245 / 5 / ±5 %R ±2r
	200 to 395 / 5 / ±5 % ±r		250 to 440 / 10 / ±10 %R ±2r
	400 to 590 / 10 / ±10 % ±r		450 to 640 / 10 / ±15 %R ±2r
	600 to 1,150 / 50 / Approx. 20 %		650 to 1200 / 50 / ±20 %R ±2r
	1,200 to 1,500 / 50 / Approx. 25 %		-
Frequencies	Measurement frequency 2083 Hz Transposition frequency 50, 60, 128 or 2,083 Hz		Measurement frequency ≤ 4.5 mV at 2,083 Hz
Measurement ranges (μH) / Resolution (μH) / Accuracy			
Loop inductance measurement	10 to 100 / 1 / ±5 %±r		-
	100 to 500 / 1 / ±3 %±r		-
Plages de mesures (V) / Resolution (V) / Accuracy			
	0.1 to 4.9 / 0.1 / ±5 %±r		-
Contact voltage (calculated)	5.0 to 49.5 / 0.5 / ±5 %±r		-
	50.0 to 75.0 / 1 / ±10 %±r		-
Measurement ranges (A) / Resolution (A) / Accuracy			
	0.200 to 0.999 mA / 1 μA / ±2 % ±50 μA		0.5 to 9.995 mA / 50 μA / ±2 %R ±200 μA
	1,000 to 2,990 mA - 3.00 to 9.99 mA / 10 μA / ±2 % ±50 μA		10.00 to 99.90 mA / 100 μA / ±2 %R ±r
Ammeter	10.00 to 29.90 mA - 30.0 to 99.9 mA / 100 μA / ±2 %±r		100.00 to 299.0 mA / 1 mA / ±2 %R ±r
4,000-count display	100.0 to 299.0 mA - 0.300 to 0.990 A / 1 mA / ±2 %±r		0.300 to 2.990 A / 10 mA / ±2 %R ±r
	1,000 to 2,990 A - 3.00 to 39.99 A / 10 mA / ±2 %±r		3.00 to 20.00 A / 100 mA / ±2 %±r
Setup			
Modes	Standard or advanced		Standard
Alarms	Configurable on Z, V and A		Configurable on Z, I
Buzzer	Active / Inactive		Active
HOLD	Manual or automatic PRE-HOLD		
Automatic power- off	Active / Inactive		

r = Resolution

Diagnostics
& control

Education



Transport

Tertiary
& residential

Industries

Production, transport
& distribution

1 CA 6416 or CA 6417 earth clamp or CA 6418 supplied with:

- A carrying case
- 4 x 1.5 V LR06 batteries
- 1 verification certificate
- 1 CD-ROM containing the operating instructions

CA 6417 is supplied with:

- Simplified GTC software in addition

To order

1 CA 6416 earth clamp

Reference: P01122015

1 CA 6417 earth clamp

Reference: P01122016

1 CA 6418 earth clamp

Reference: P01122018

Recommended accessory

P01122301
CL1 calibration loop

Download the free software
Ground Tester Transfer Clamp (GTC)
compatible with CA 6417

Download the ANDROID 6417 app
from the Chauvin Arnoux Playstore to:

- use measurements on a smartphone or tablet by linking them to a GPS position, thus ensuring instant geolocation of measurements
- configure the CA 6417 clamp
- remotely view measurements in real time, or those recorded on the clamp
- email the measurement report

Electrical equipment controllers for machines and switchboards

Selection guide



	CA 6161	CA 6163	CA 6165
Insulation			
50 V _{DC}			■
100 V _{DC} / 250 V _{DC} / 500 V _{DC} / 1,000 V _{DC}	■ (1 GΩ)	■ (50 GΩ)	■ (200 MΩ)
Dielectric tests			
40 to 3,000 V _{AC}	■	■	
40 to 5,350 V _{AC}		■	
100 to 5,000 V _{AC}			■ AC/DC
Continuity			
I test 0.1 A	■	■	
I test 0.2 A; 10 A	■	■	■
I test 25 A		■	■
I test 4 A			■
Voltage drop			
I test 10 A	■	■	■
Discharge time at 34 V / 60 V / 120 V			
Discharge time	■	■	■
Leakage current			
PE direct leakage method	■	■	■
Differential leakage method	■	■	■
Direct & differential method via clamp	■	■	
Substitution method		■	■
Contact leakage method		■	■
Functional test			
Active, reactive & apparent power values, voltage, current	■ (except reactive)	■ (except reactive)	■
THD U, THD I	■	■	■
Loop impedance and resistance			
Zs-loop (L-PE) (Trip), Calculation of I _k (PFC)	■	■	
Zs-loop (L-PE) (No Trip), Calculation of I _k (PFC)	■	■	
Zi-loop (L-N or L-L), Calculation of I _{dc} (PSCC)	■	■	
RCD TEST			
PRCD x 0.5 / x1 / x5 x IΔn	■	■	
RCD x 0.5 / x1 / x2 / x4 / x5 / x10 x IΔn (AC, A, F, B, B+)	■	■	
Other functions			
Alarms	■	■	■
Phase sequence	■	■	
Data storage / Communication			
Data storage	■ 100,000 tests	■ 100,000 tests	■ μSD
Communication	USB / WiFi	USB / WiFi	RS232 / USB
Result sent to printer	■	■	■
Interfaces for START / STOP pedal and lamps	■	■	■
Interface for barcode	■ USB	■ USB	■ RS232 / USB
DOOR OPEN interface	■	■	■
PC software			
Automatic test sequences	■	■	■

Electrical equipment controllers for machines and switchboards

CA 6161 - CA 6163

600 V
CAT III

IP 64

IEC
61557Auto
Script

Versatile, multi-standard controllers

The CA 6161 and CA 6163 electrical equipment controllers enable all electrical safety tests required by standards and regulations such as low-voltage switchboards in accordance with IEC/EN 61439-1 and machines in accordance with IEC/EN 60204-1 to be carried out. The EN 50699 and EN 50678 standards are also covered.

	CA 6161	CA 6163	Test socket
High voltage			
AC / AC Rampe	40 - 3,000 V	40 - 5,350 V	
Resolution / Accuracy	10 V / ± 1 % R		
Max. current	200 mA		
Insulation			
Voltage de test	100 V / 250 V / 500 V / 1,000 V		■
Maximum measurement / Accuracy	1,000 M Ω / ± 10 % R	50 G Ω * / ± 10 % R	
Continuity			
Measurement current	0.1 A; 0.2 A; 10 A (voltage drop)		■
	-	25 A*	
Measurement range	120 Ω ; 60 Ω ; 0.5 Ω	120 Ω ; 60 Ω ; 0.5 Ω ; 0.4 Ω	
Accuracy	± 2 % R	± 2 % R	
Leakage current			
Direct I-PE- & I-differential Range / accuracy	Socket: 30 mA / ± 2 % R Clamp: 40 A / ± 2 % R		
I-substitution	-	Socket: 50 mA	
Contact leakage	-	Socket and three-point: 30mA / measurement network: unweighted, weighted	
Loop / fuse table			
Z _S No Trip (Z _S & R _S) Range / Accuracy	2 000 Ω / ± 5 % L / Ik (Range d'Display) 20 kA		
Z _S high current and Z _i Range / Accuracy	400 Ω / ± 5 % L / Ik (Range d'Display) 20 kA		
Inductance Range / Accuracy	15 mH / ± 10 % R		
RCD & PRCD Types AC, A, F, B, B+; G, S			
Voltage du réseau & calibres	440 V _{AC} max; 10 / 30 / 100 / 300 / 500 / 1,000 mA / Var (6 - 1,000 mA)		
Test en impulsion / Range / Accuracy	x 0.5 ; x 1; x 2, x 4; x 5; x 10 (DC) I Δ n / 300 ms / ± 2 ms		
Test en rampe / Resolution / Accuracy	10 / 30 / 100 / 300 / 500 / 1,000 mA; 0.3 x I Δ n to 1.06 x I Δ n / 0.1 mA / -0% + (7 % R + 2 mA)		
Mesure de UF	24.9 V / $\pm (15\%$ R + 3 ct); 70.0 V / $\pm (5\%$ R + 2 ct)		
Discharge time at 34 V, 60 V, 120 V			
Time / Voltage Up	0.1 s - 9.9 s / 0.1 s / $\pm (1\%$ R + 1 ct); Socket & three-point: 34 V; 60 V; 120 V		■
Power values			
Quantities	Socket : U, I, P, S, F, P _f , cos φ , THD U, THD I		■
Quantities	Three-point + clamp: U, I, P, S, F, cos ϕ , P _f , THD U, THD I		
Phase rotation			
Voltage et Frequency de l'installation	190.0 - 440.0 V; 45-55 Hz		
Pince de Current G72 (option)			
Measuring range / Accuracy	0.5 mA to 40 A / ± 2.5 % R		
General characteristics			
Display	Colour touch screen; TN 800 x 480, 5"		
Data storage	50,000 tests	100,000 test	
Timer max.	40 min (depends on type of test)		
Communication	1 x USB-B ; 2 x USB-A ; Wifi		
Interfaces	START / STOP pedals, DOOR Open, HV gun trigger, 4 lamps, barcode reader, RFID reader, sticker printer		
Power supply	230 V _{AC} ; $\pm 10\%$		
Dimensions / weight	407 x 341 x 205 mm; 16 kg		
Temperature / Protection	Operation: 0; + 45 °C; Storage: - 40; + 60 °C / IP 40 open / IP 64 closed		
Electrical safety	IEC 61010-1; IEC 61010-2-030; IEC 61010-2-034; 300 V CAT II; 300 V CAT III; 600 V CAT III ; IEC 61010-2-032		
Standards	IEC 61557-1; -2; -3; -4; -6; -7; -10; -13; -14; -16 (partiel)		

* hors prise d'essai



+ The extra

The WiFi connection

This allows the user to remain safe outside the test area while viewing the tests in real time.

The high-voltage gun with integrated trigger:

This allows a dielectric test to be triggered without having to press the TEST button. This ensures safety for the user, who then has both hands free.



CA 6161 & CA 6163 supplied with:

- 1 accessories bag containing:
- 2 High-Voltage test guns with cables (3 m)
- 2 cables with silicone insulation: 1 red, 1 black (3 m)
- 1 black test probe
- 1 three-point lead with separated wires (2.5 m)
- 1 three-point lead with Euro socket (2.5 m)
- 3 crocodile clips: blue, red and green
- 3 crocodile test probes: blue, red and green
- 1 bag containing 3 extension connectors
- 1 USB-A-USB-B cable
- 1 x C19 Euro mains power cable (2.5 m)
- 1 Quick Start Guide
- 1 product safety datasheet
- 1 test report with measurement list

CA 6161 with continuity accessories included:

- 2 x 10 A double continuity cables (2.5 m)
- 3 crocodile clips, 1 red, 2 black

CA 6163 with continuity accessories included:

- 3 crocodile clips (red, green, blue)
- 1 x 25 A Kelvin gun (3 m)
- 1 x 25 A Kelvin crocodile clip (2.5 m)

To order

CA 6161 Reference: P01145811

CA 6163 Reference: P01145831

Download the free software
Machine Tester Transfer (MTT)
compatible with CA 6161 and CA 6163

Electrical equipment controllers for machines and switchboards

CA 6165

600 V
CAT II

IP 50



Complete with DC dielectric test

- Capacitive colour touch screen
- Manual or automatic test sequences
- Storage of the tests on memory card up to 32 GB
- 5 kVac / 6 kVdc HV dielectric, 25 A continuity, insulation at 1,000 V
- Substitute direct leakage current, PE, differential leakage current and touch leakage current

CA 6165

High voltage				
AC / AC Programmable	Range	0 V to 1,999 V		2 kV to 5 kV
	Resolution/Accuracy	1 V / $\pm 3\%$ R		10 V / $\pm 3\%$ R
DC / DC Programmable	Range	0 V to 1,999 V		2 kV to 6 kV
	Resolution/Accuracy	1 V / $\pm 3\%$ R		10 V / $\pm 3\%$ R
Current				
	Range	AC: I apparent & resistive 0 mA to 99.9 mA I capacitive: -99.9 mA to + 99.9 mA DC: 0.01 mA to 9.99 mA		
	Resolution/Accuracy	AC: I apparent: 0.1 mA / $\pm 3\%$ R ± 3 cts, indicative for I capacitive and I resistive DC: 0.01 mA / $\pm (5\%$ R + 3 cts)		
Continuity 0.2 A ; 4 A ; 10 A ; 25 A , Voltage drop (10 A)				
	Range	0 to 19.99 Ω	20 to 99.9 Ω	100 to 199.9 Ω
	Resolution	0.01 Ω	0.1 Ω	0.1 Ω
	Accuracy	$\pm (2\%$ R + 2 cts)	$\pm 3\%$ R	$\pm 5\%$ R
	Voltage drop (10 A)	0.00 V to 99.9 V		
Insulation				
	Voltage	50 V / 100 V		250 V / 500 V / 1,000 V
	Range	0 to 19.99 M Ω	20 M Ω to 99.9 M Ω	0 to 19.99 M Ω
	Resolution	0.01 M Ω	0.1 M Ω	0.1 M Ω
	Accuracy	$\pm (5\%$ R + 2 cts)	$\pm 20\%$ R	$\pm (3\%$ R + 2 cts)
Leakage current				
	Method	Subs.	I PE	Diff.
	Range	0.00 to 19.99 mA	0.00 to 19.99 mA	0.00 to 19.99 mA
	Resolution	10 μ A	0.01 mA	0.01 mA
	Accuracy	$\pm (5\%$ R + 3 cts)	$\pm (3\%$ R + 3 cts)	$\pm (3\%$ R + 5 cts)
Discharge time at 34 V, 60 V, 120 V				
	Time	Range: 0 to 9.9 s	Res.: 0.1 s	Accuracy: $\pm (5\%$ R + 2 cts)
	Up voltage	Range: 0 to 550 V	Res.: 1 V	Accuracy: $\pm (5\%$ R + 3 cts)
Power values				
		Active (P)	App. (S)	Reactive (Q)
	Range / resolution	0 to 3.70 kW / 0.01 W to 10 W	0 to 3.70 kVA / 0.01 VA to 10 VA	0 to 3.70 kVar / 0.01 Var to 10 Var
	Accuracy	$\pm (5\%$ R + 5 cts)	$\pm (5\%$ R + 10 cts)	$\pm (5\%$ R + 10 cts)
	Others	PF, Cos ϕ , THDi, THDu ; $(5\%$ R + 5 D)		
	Voltage	0.0 V to 199 V / 0.1 V / $\pm (3\%$ R + 10 cts)		
	Current	0 to 999 mA / 1 mA / $\pm (3\%$ R + 5 cts)		
General specifications				
	Display	TFT colour screen, 480 x 272 pixels		
	Data storage	On microSD card		
	Communication interfaces	RS232, USB, Bluetooth, Input / Outputs (2 x DB9)		
	Power supply	110 V / 230 V - 50 Hz / 60 Hz; Max. consumption: 600W / 4.5 kW if charged on mains test socket		
	Dimensions / weight	435 x 292 x 155 mm / 17 kg		
	Temperature	Operation: 0 °C to +40 °C; Storage: -10 °C to + 60 °C		
	Protection	IP40 open / IP50 closed		
	Electrical safety	300 V CAT II / 600 V CAT II (DISCH1 / DISCH2)		



+ The extra

- External and internal discharge time up to 10 s / 550 V peak
- Functional test: P, Q, S, PF, Cos ϕ , THDU, THDI, U and I
- Inputs-outputs transmitted to pedal, indicator lamps, PC
- Compatible with 230 V / 115 V TT, TN or IT networks



CA 6165 delivered with:

- 1 accessories bag containing
- 2 high-voltage guns with cables (2 m)
- 2 test probes (red / black)
- 3 red crocodile clips, 2 black crocodile clips
- 1 RS232 cable
- 1 USB cable
- 1 EURO mains power cable
- 2 double continuity cables 2.5 m long
- 1 set of insulation cables 2.5 m long (red / black)
- 1 single continuity cable 1.5 m long (red)
- MTLINK PC software on CD-ROM
- 1 EURO discharge cable
- 1 multilingual safety datasheet
- 1 measurement report

To order

CA 6165

Reference: P01145851

Download the free software MTLINK
compatible with CA 6165

Micro-ohmmeter

CA 6240

50 V
CAT III

IP 53



Quality control of contacts

- M4-wire measurement method
- Automatic current reversal
- Test current up to 10 A
- 1 $\mu\Omega$ resolution
- Automatic recording "on the fly" or manual recording

	CA 6240					
Measurement method	4-wire method					
Range	4,000 $\mu\Omega$	40 m Ω	400 m Ω	4,000 m Ω	40 Ω	400 Ω
Accuracy	0.25 % ± 2 cts	0.25 % ± 2 cts	0.25 % ± 2 cts	0.25 % ± 2 cts	0.25 % ± 2 cts	0.25 % ± 2 cts
Resolution	1 $\mu\Omega$	10 $\mu\Omega$	0.1 m Ω	1 m Ω	10 m Ω	100 m Ω
Measurement current	10 A	1 A	1 A	100 mA	10 mA	10 mA
Data storage	100 measurements					
Communication output	Optical link / USB					
Power supply	NiMH rechargeable battery					
Dimensions / weight	270 x 250 x 180 mm / 5 kg					
Electrical safety	IEC 61010 - 50 V CAT III					

Diagnostics
& control

Education



Transport



Industries

Production, transport
& distribution

+ The extra

- The CA 6240 is compatible with the DataView® software



CA 6240 supplied with:

- 1 shoulder bag
- 1 set of 2 x 10 A Kelvin clamps with 3 m cable
- 1 European 2P mains power cable
- Data export software
- 1 optical / USB communication cable

To order

CA 6240

Reference: P01143200

Recommended accessories



P01102056

Double test probes 1 A (set of 2)



P01101783

Mini Kelvin clamp 1 A (set of 2)

Download the free software Micro-Ohmmeter
Transfer (MOT) compatible with CA 6240

Micro-ohmmeter

CA 6255



50 V
CAT III

IP 53

Optimized measurement on inductive objects

- 4-wire measurement method
- Automatic compensation of stray currents
- Test current of up to 10 A
- Measurements up to 2,500 Ω, resolution 0.1 μΩ
- Integrated “temperature compensation” function

	CA 6255						
Measurement method	Method 4 fils						
Range	5.0000 mΩ	25.000 mΩ	250.00 mΩ	2500.0 mΩ	25.000 Ω	250.00 Ω	2500.0 Ω
Accuracy	0.05 % +1 μΩ	0.05 % +3 μΩ	0.05 % +30 μΩ	0.05 % +0.3 mΩ	0.05 % +3 mΩ	0.05 % +30 mΩ	0.05 % +300 mΩ
Resolution	0.1 μΩ	1 μΩ	10 μΩ	0.1 mΩ	1 mΩ	10 mΩ	100 mΩ
Measurement current	10 A	10 A	10 A	1 A	100 mA	10 mA	1 mA
Measurement mode	Inductive, non-inductive, non-inductive with automatic trigger						
Temperature compensation	By temperature sensor or manual						
Data storage	1,500 measurements						
Communication output	RS232 link						
Power supply	NiMH rechargeable battery						
Dimensions / weight	270 x 250 x 180 mm / 4 kg						
Electrical safety	IEC 61010 - CAT III 50 V						



+ The extra

- The CA 6255 is compatible with the DataView® software
- Possibility of connecting the Pt100 sensor (option) directly to the instrument



CA 6255 delivered with a bag containing:

- 1 set of cables 3 m long terminated by Kelvin clamps
- 1 Euro mains power cable 2 m long
- 1 CD-ROM containing the MOT (Micro-Ohmmeter Transfer) software
- 1 RS 232 communication cable
- 1 CD-ROM containing the user's manual in 9 languages

To order

CA 6255
Reference: P01143221

Recommended accessories

- 

P01102056
Doubles 1 A test probes (x 2)
- 

P01101783
Mini Kelvin clamp (set of 2)
- 

P01102013
Pt100 temperature probe

Download the free software Micro-Ohmmeter Transfer (MOT) compatible with CA 6255

Micro-ohmmeter

CA 6292



IP 54



The CA 6292 is suitable for many sectors of activity, for :

- Testing the contact resistance of HTA/HTB cells
- Checking the quality of contacts on circuit breakers, switches, relays, etc.
- Resistance testing on busbars, cables, etc.
- Continuity testing on rails, axles or welded joints
- Inspection of surface condition and metallisation
- Testing of cut-off devices

CA 6292

Test current	Programmable from 20 to 200 A		
Resistance	0.1 $\mu\Omega$ to 2 m Ω	2 to 200 m Ω	200 m Ω to 1 Ω
Resolution	0.1 $\mu\Omega$ (200 A max)	10 $\mu\Omega$ (25 A max to 200 m Ω)	1 m Ω (5 A max at 1 Ω)
Accuracy	$\pm 1\%$ from 50 $\mu\Omega$ to 1 Ω		
Output voltage	110 V _{AC} : 4.2 V @ 200 A 220 V _{AC} : 8.6 V @ 200 A		
Maximum load resistance	110 V _{AC} : 20 m Ω @ 200 A 220 V _{AC} : 42 m Ω @ 200 A		
Measurement method	4 Kelvin-type connection terminals		
Test mode	Normal or Both Sides Grounded (BSG)		
Test duration	Adjustable from 5 to 120s @ 200 A Unlimited below 100 A		
Data storage	Up to 8,000 measurement results		
Interface	USB 2.0		
Software	DataView®		
Power supply	100 to 240 V _{AC} - 50/60 Hz		
Dimensions	502 x 394 x 190 mm		
Weight	Approx. 13 kg		
Operating temperature	0 °C to +55 °C		
Storage temperature	-10 °C to +70 °C		
Humidity	95 % HR		
Protection	Protected against voltage surges, short-circuits, overheating and overvoltage on the safety terminals		
Ingress protection	IP 54		
Electrical safety	IEC 61010-1		
Consumption	1,500 VA max		

Current measurement with the MR6292 clamp available as an option

Measurement range	1.0 - 50.0 A _{ac}
Resolution	0.1 mA
Intrinsic uncertainty	$\pm (3\% + 2 \text{ cts})$
Output signal	10 mV / A _{ac}
Load impedance	> 100 k Ω // 100 pF
Influence of conductor position in jaws	0.50 %



+ The extra

- Permanent test at 100 A and for up to 120 s at 200 A
- Test current up to 200 A
- Resistance from 0.1 $\mu\Omega$ to 1 Ω
- Safe measurements: BSG method (Both Sides Grounded)
- Storage of up to 8,000 measurement results

CA 6292 delivered with a hard case containing:



- 1 set of 2 Kelvin leads 6 m long (red / black) with adjustable-clamp connections
- 1 green earth lead 3 m long with 1 crocodile clip
- 1 USB cable 1.5 m long
- 1 T1 5 A 250 V fuse mounted in the instrument
- 1 European mains power lead
- 1 CD-ROM containing the DataView® software
- 1 CD-ROM containing the user manual in 5 languages

To order

CA 6292 Reference: P01143300

Recommended accessories



P01295486

1 set of 2 Kelvin cables, 6 m (red/black) with clamp connections



P01295488

1 green earth cable with crocodile clip



P01120470

MR 6292 clamp



Cable and metal conductor locator

CA 6683 LOCAT



For your maintenance, renovation and home improvement projects

The CA 6683 LOCAT locator allows you to find the location of electrical power cables, network/telecommunications cables, pipes, ducts, conduits or any metal conductors.

- Can be used on live and non-live installations
- Digital, visual and audible indication for intuitive conductor tracking
- Large LCD display with indication of the transmission power of the identification code and the voltage present on the tested circuit

CA 6683E transmitter	
Display	Backlit graphic LCD display
Information displayed	Measured voltage level, polarity (AC or DC), transmitted signal power, battery status, identification code, high voltage presence.
External voltage identification range	12 V, 50 V, 120 V, 230 V and 400 V 50/60 Hz or DC
Output signal frequency	125 kHz
Signal power	Adjustable (3 levels)
Transmitter identification	Digital signal coding allowing the use of 7 transmitters simultaneously
Power supply	6 x 1.5 V LR03/AAA batteries
Security	Compliant with IEC 61010 300 V CAT III
Operating temperature	0 to 40 °C
Storage temperature	-20 to +60 °C
Dimensions	160 x 84 x 40 mm
Weight	Approx. 350 g

CA 6683R receiver	
Screen	Backlit graphic LCD display
Information displayed	Signal amplitude (digital value + graduated scale), detection sensitivity, transmitter identification code and transmitted signal strength, battery status, high voltage presence.
Detection distance with transmitter	- in unipolar mode: 2 m typical - in bipolar mode: 0.5 m typical - single loopback line: up to 2.5 m
Detection sensitivity	Automatic or manual adjustment (7 levels)
Non-contact voltage detection (NCV)	12 V to 1,000 V AC at 50/60Hz voltage referenced to earth
Other functions	Torch; audible signal deactivation
Power supply	6 x 1.5 V LR03/AAA batteries
Safety	Type F probe compliant with IEC 61010-031 300 V CAT III
Operating temperature	0 to 40 °C
Storage temperature	-20 to +60 °C
Dimensions	198 x 67 x 36 mm
Weight	Approx. 310 g



1 CA 6683E transmitter and 1 CA 6683R receiver delivered in a case with:

- 1 set of 2 cables
- 1 set of 2 crocodile clips
- 1 T-shaped earth stake
- 2 sets of 6 1.5V LR03/AAA alkaline batteries
- 1 set of 3 adapters: P/N mains plug, bayonet socket B22 and screw socket E27.
- 1 operating manual in 5 languages.
- 1 certificate of verification

To order

CA 6683 LOCAT

Reference: P01141627

Phase rotation testers

CA 6608 - CA 6609



600 V
CAT III

IP 40

IEC
61557

Phase rotation and / or motor testers

- Indication of phase presence or absence
- Determination of a motor's rotation direction with or without contact (CA 6609 only)
- Automatic tests as soon as the connections have been set up
- Terminals and cables identified by colour coding to simplify connection

	CA 6608	CA 6609
Operating voltage according to phase rotation	40 to 650 V _{AC} between phases	With connections: 40 to 600 V _{AC} between phases Without connection: 120 to 400 V _{AC} between phases
Frequency range	15 to 400 Hz	
Power supply	Self-powered via the measurement inputs	9 V battery
Dimensions	130 x 69 x 32 mm	
Weight	130 g	170 g
Electrical safety	IEC 61010-1 600 V CAT III IEC 61557-7	



CA 6608 phase rotation testers delivered in a shoulder bag with:

- 3 test leads
- 3 crocodile clips

CA 6609 phase rotation and motor tester delivered in a shoulder bag with:

- 3 test leads
- 3 crocodile clips

To order

CA 6608

Reference: P01191304

CA 6609

Reference: P01191305

Battery capacity tester

CA 6630



50 V
CAT III

IP 53

Battery capacity tester

- Zero adjustment function for compensation of the voltage circuit displayed
- 2-display LCD screen
- 7-hour battery life in continuous operation with 6 x 1.5 V batteries (not supplied)
- Capacity test from 35 Ah to 500 Ah
- Nickel-Cadmium, Lithium-Ion, Nickel-Metal-Hybrid or Lead-Acid batteries



+ The extra

- Simultaneous display of internal resistance (precise 4-wire method) and open-circuit voltage
- Comparator function for quick assessment of battery deterioration

	CA 6630			
Resistance measurement				
Range	40 mΩ	400 mΩ	4 Ω	40 Ω
Resolution	10 μΩ	100 μΩ	1 mΩ	10 mΩ
Measurement current	37.5 mA	3.75 mA	375 μA	37.5 μA
Accuracy	± (1 % R + 8 digits) Temp. coeff.: ± (0.1 %R + 0.5 digit) / °C			
Measurement	1.5 mV _{AC}			
Measurement frequency	1 kHz ± 10 %			
Voltage measurement				
Range	4 V		40 V	
Resolution	1 mV		10 mV	
Accuracy	± (0.1 % R + 6 digits)			
Max. consumed power	1 VA			
Mechanical specifications				
Dimensions	250 x 100 x 45 mm			
Weight	500 g batteries included			



CA 6630 delivered in a hard case containing:

- 1 set of 2 measurement leads 1 m long terminated by retractable test probes
- PC data transfer software to export and process the stored data
- 1 CA 6630 / PC connection cable

To order

CA 6630
Reference: P01191303

Recommended accessory

P01102103
Set of 2 leads with retractable test probes

Ratiometer

DTR 8510

50 V
CAT IV

IP 53



Accuracy for qualifying transformers

- Measurement of the transformation ratio of power, potential and current transformers
- Storage of up to 10,000 measurement results
- Displays the transformation ratio, excitation current, winding polarity and percentage deviation from nominal values
- Direct reading of the transformation ratio from 0.8000:1 to 8000.0:1
- Tests performed by primary excitation with secondary measurement

	DTR 8510
Range of ratios (TT / TP)	Automatic: 0.8000 to 8,000:1
Accuracy (VT / PT)	Range of ratios
	0.8000 to 9.9999
	10.000 to 999.99
	1,000.0 to 4,999.9
	5,000.0 to 8,000.0
Accuracy (% of reading)	
± 0.2 %	
± 0.1 %	
± 0.2 %	
± 0.25 %	
Range of ratios (CT)	Automatic range: 0.8000 to 1,000.0
Accuracy (CT)	± 0.5 % L
Excitation signal	VT / PT mode: 32 Vrms max. CT mode: auto level 0 to 1 A, 0.1 to 4.5 Vrms
Display of excitation current	Range: 0 to 1,000 mA; Accuracy: ± (2 %R + 2 mA)
Excitation frequency	70 Hz
Display	Alphanumeric LCD, 2 lines of 16 characters with adjustment of the contrast and backlighting. Easy to read in both day and night conditions
Available languages	French, English, Spanish, Italian, German, Portuguese
Measurement method	As per the IEEE Std C57.12.90™ standard
Power supply	2 x 12 V, NiMH rechargeable batteries, 1,650 mAh
Battery life	Up to 10 hours in continuous operation, low battery alert
Battery charger	Universal input (90 to 264 Vrms), smart charger
Charging time	< 4 hours for full charge
Data storage	10,000 tests
Date / time	Power supply by dedicated battery, real-time clock
Communication	USB 2.0, optical isolation, 115.2 kB
Software	Delivered with the DataView® analysis software
Dimensions / weight	272 x 248 x 130 mm / 3.7 kg
Connection	XLR connectors
Cables	Screened H and X cables, length 4.6 m (15 ft), equipped with colour-coded crocodile clips
Casing	Rugged polypropylene casing, UL 90 V0
Vibrations	IEC 68-2-6 (1.5 mm at 55 Hz)
Shocks	IEC 68-2-27 (30 G)
Falls	IEC 68-2-32 (1 m)
Ingress protection	IP 40 with lid open as per EN 60529 IP 53 with lid closed as per EN 60529
Safety	EN 61010-1, 50 V CAT IV; pollution degree 2

Diagnostics
& control

Education



Industries

Production, transport
& distribution

+ The extra

- Up to 10 hours of continuous operation thanks to NiMH battery power supply



DTR 8510 delivered with:

- 1 carrying case
- 1 set of 4.6 m cables with crocodile clips
- 1 external battery charger with power cord
- 1 USB cable
- 1 NiMH battery pack
- 1 DataView software

To order

DTR 8510

Reference: P01157702

Recommended accessories

P01295143A
Set of 2 cables, length 4.6 mP01295293
USB cable

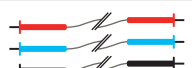
Accessories for multifunction installation testers

■ Accessories ■ Included in the initial delivery

	Article code	Description	CA 6113	CA 6116N	CA 6117	CA 6131	CA 6133
MEASUREMENT LEADS AND SENSORS	 P01295398	.5 m three-point lead with separate wires	■	■	■		
	 HX0300	Three-point Euro cable				■	■
	 P01295393	Three-point cable for EURO mains socket test	■	■	■		
	 P01295094	2 elbowed-straight safety leads - (red and black) 3 m long	■	■	■		
	 P01101921	3 x Ø 4 mm test probes - (red, blue and green)	■	■	■		
	 P01101922	3 crocodile clips (red, blue and green)	■	■	■		
	 P01102092A	CA 6116N remote-control probe	■	■	■		
	 P01102157	CA 6131 - CA 6133 remote-control probe				■	■
	 P01101943	Spare black test probe for remote-control probe	■	■	■		
	 P01120335	C177 clamp (20 A)	■				
	 P01120336	C177A clamp (200 A)	■	■	■		
	 P01120460	MN77 clamp (20 A)	■	■	■		
	 P01120439	MN73A clamp					■
	 P01120421	MN73 clamp				■	
POWER SUPPLY / BATTERIES	 P01102057	PA 30 W mains power pack	■				
	 P01102129	Type-2 power pack / charger without mains lead (requires P01295174)		■	■		
	 P01296024	NiMH 4AH battery pack	■				
	 P01296047	Li-Ion battery pack		■	■		
	 P01102130	Li-Ion charging support without mains lead		■	■		
	 P01295174	EURO 2P mains lead	■	■	■		
	 HX0061	DC / DC vehicle cigarette-lighter charger	■				
MISCELLANEOUS	 P01102186	Type-R USB charger					■
	 P01102084A	Continuity rod	■	■	■	■	■
	 P01102017	15 m earth kit (red / blue / green)	■	■	■	■	■
		P01102018	■	■	■		
		P01102021	■	■	■		
		P01102022	■	■	■		
	 P01298081	4-point hands-free strap (Model 2)	■	■	■		
	 P01298057	Hand strap	■	■	■		
	 P01102094	CA 6116 screen protection film	■	■	■		
	 P01298056	Carrying bag no. 22	■	■	■		
	 P01295293	USB-A USB-B lead	■	■	■		
	 P01102095	DataView® software		■	■		
	 P01298082	Comfort strap	■	■	■		
	 HX0302	4-point strap				■	■

Measurement leads for insulation testers

■ Accessories ■ Included in the initial delivery

	Article code	Description	Longueur	CA 6505	CA 6545	CA 6547	CA 6549	CA 6550	CA 6555
5 KV RANGE		P01295231	Red simplified HV safety lead / black with rear connection	3 m	■	■	■	■	
		P01295232	Blue simplified HV safety lead + blue crocodile clip	3 m	■	■	■	■	
		P01295516	Blue guarded HV safety lead with rear connection	0.35 m	■	■	■	■	
		P01295510 + P01295506 + P01295513	Set of 3 safety leads with HV crocodile clip (red / blue / black)	3 m	■	■	■	■	
		P01295507	Safety lead with blue HV crocodile clip	8 m	■	■	■	■	
		P01295511	Safety lead with red HV crocodile clip	8 m	■	■	■	■	
		P01295514	Safety lead with rear connection and black HV crocodile clip	8 m	■	■	■	■	
		P01295508	Safety lead with blue HV crocodile clip	15 m	■	■	■	■	
		P01295512	Safety lead with red HV crocodile clip	15 m	■	■	■	■	
		P01295515	Safety lead with rear connection and black HV crocodile clip	15 m	■	■	■	■	
10/15 KV RANGE		P01295465	Set of 3 red, blue and black simplified HV safety leads with rear connection	3 m					■ ■
		P01295517 + P01295520 + P01295523	Set of 3 safety leads with red / blue / black HV crocodile clip with rear connection	3 m					■ ■
		P01295526	Blue guarded HV safety lead with rear connection	0.5 m					■ ■
		P01295521	Safety lead with blue HV safety lead	8 m					■ ■
		P01295518	Safety lead with red HV crocodile clip	8 m					■ ■
		P01295524	Safety lead with rear connection and black HV crocodile clip	8 m					■ ■
		P01295522	Safety lead with blue HV crocodile clip	15 m					■ ■
		P01295519	Safety lead with red HV crocodile clip	15 m					■ ■
		P01295525	Safety lead with rear connection and black HV crocodile clip	15 m					■ ■

Contents of the earth and resistivity kits

To order			Contents of the earth and resistivity kits							Recommended related products								
			Reels and winders				Other accessories			Installation testers			3P	3/4P+ρ	Expert		Pylon	
	Article code	Description	Green	Red	Blue	Black	Stake(s) / mallet	Spade lug / banana adapter	Carrying bag	CA 6133	CA 6113	CA 6116N CA 6117	CA 6422 CA 6424	CA 6460 CA 6462	CA 6470N	CA 6471	CA 6472	CA 6474
Kit 1P	P01102018	Black 30 m 1P earth kit				33 m	1 / -				■	■						
	P01102020	33 m 1P loop kit ³	33 m				1 / -											
Kit 3P	P01102017	15 m 3P earth kit (red / green / blue)	5 m	15 m	10 m		2 / -			■	■	■						
	P01102021	50 m earth kit for 3P method	10 m	50 m	50 m		2 / 1	5	Standard		■	■	■	■				
	P01102022	100 m earth kit for 3P method	10 m	100 m	100 m		2 / 1	5	Standard				■	■	■	■	■	
Kit 4P	P01102040	50 m 4P earth & resistivity kit	33 m	50 m	50 m	33 m	4 / 1	5	Standard					■	■	■	■	
	P01102024	100 m earth & resistivity kit	100 m 10 m	100 m	100 m	33 m	4 / 1	5	Prestige					■	■	■	■	
	P01102025	166 m earth & resistivity kit	100 m 10 m	166 m	166 m	33 m	4 / 1	5	Prestige						■	■	■	

Other accessories

Article code	Description	Reels and winders			
		Green	Red	Blue	Black
P01102026	Green cable H winder ¹	10 m			
P01102028	Set of 5 adapters for terminals ³				
P01102029	Set of 4 reel handles				
P01102031	T-shaped earth stake				
P01102046	Set of 3 adjustable clamps				
P01102047	H-shaped black cable winder - 10 m ¹				10 m
P01120310	C172 clamp				
P01295260	166 m red cable reel ¹		166 m		
P01295261	100 m red cable reel ¹		100 m		
P01295262	50 m red cable reel ¹		50 m		
P01295263	166 m blue cable reel ¹			166 m	
P01295264	100 m blue cable reel ¹			100 m	
P01295265	50 m blue cable reel ¹			50 m	
P01295266	100 m green cable reel ¹	100 m			
P01295267	33 m black cable reel ¹				33 m
P01295268	33 m green cable reel ¹	33 m			
P01295270	2 m black cable winder (2 m cable for clamps) ¹				2 m*
P01295291	5 m green cable H winder ²	5 m			
P01295292	5 m black cable H winder ²				5 m

Article code	Description								
P01102037	CA 647x continuity kit (4 red, black, blue and yellow crocodile clips), (2 black test probes), (4 red, black, blue and yellow cables 1.5 m long)						■	■	■
P01120550	5 m AmpFlex™ flexible current sensors								■
P01120551	8 m AmpFlex™ flexible current sensors								■
P01102046	Set of 3 adjustable clamps								■
P01120310	C172 clamp ³								
P01120335	C177 clamp	■							
P01120336	C177A clamp		■						
P01120333	C182 clamp							■	■
P01120872	G72 clamp ⁴					■ (CA 6424)			

+ The extra

Possibility of ordering carrying bag:

- Standard versionP01298066
- Prestige version.....P01298067



¹ connections: spring clip - banana

² connections: banana - banana

³ for CA 6030

⁴ only leakage current

* for CA 6470N and CA 6471

Accessories for electrical equipment testers

■ Accessories ■ Included in the initial delivery

	Article code	Description	Length	CA 6121	CA 6155	CA 6160	CA 6165
Test and measurement lead							
	P01295097	4 mm banana cable- red + black	3 m	■		■	■
	P01295137	Double crocodile cable - black	2.5 m	■			
	P01295140	Double crocodile cable - red	2.5 m	■			
	P01295141	Discharge cable (EURO)	2 m	■		■	■
	P01295236	Double continuity cables	2.5 m			■	■
	P01295234	Power cable (EURO)	2 m			■	
	P01102139	Red test lead	4 m		■		
	P01102136	Plug-in test cable	1.5 m		■		
	P01102137	Test cable with separate wires	3 m		■		
	P01102138	Black + red test lead	1.5 m		■		
	P01102140	Green test lead	1.5 m		■		
	P01102141	Black test probe for CA 6155			■		
	P01102142	Red test probe for CA 6155			■		
	P01102143	Green test probe for CA 6155			■		
	P01102144	Blue test probe for CA 6155			■		
	P01102145	Set of 3 black crocodile clips			■		
Pistolet et sonde HT							
	P01101919	HV test gun	2 m	■		■	
	P01102135	HV test probe for CA 6155, for P01146001			■		
	P01102182	HV test gun (set of 2)	2 m	■			■
Télécommande, signalisation et communication							
	P01101916	Remote-control pedals		■		■	
	P01101917	Red / green indicator lamps		■		■	
	P01101841	DB9F-DB25M adapter		■		■	
	P01295172	DB9F-25F cable x2		■		■	
	P01295173	DB9F-DB9M cable no. 1		■			
	P01102177	Control pedal					■
	P01102178	2-colour indicator lamp					■
	P01102179	4-colour indicator lamp					■
	P01102180	Power supply adapter for lamps					■
	P01101915	MachineLink software with communication cables		■			
		CALink software			■		
		MTLink software					■
	P01101996	CELink software with communication cables				■	
Fuses							
	P01297086	F 6x32T 16 A 250 V (set of 10 fuses)			■	■	
	P01297102	F 6x32T 16 A 500 V (set of 10 fuses)			■		■
	P01297103	F 5x20T 5 A 250 V (set of 10 fuses)			■		■

Accessories

■ Accessories ■ Included in the initial delivery

	Article code	Description	CA 6161	CA 6163
	P01102193	Set of 2 HV test guns, length 3 m 15 m length also available	■	■
	P01102195		■	■
	P01295236	Double continuity lead 3 m long x 2	■	■
	P01101784	25 A Kelvin croc. clip, length 2.5 m	■	■
	P01102199	25 A Kelvin test gun, length 3 m 25 A Kelvin test gun, length 6 m	■	■
	P01102200		■	■
	P01295499	Set of 2 elbowed-straight silicone leads, length 3 m	■	■
	P01295398	Tripod lead with separate wires, length 2.5 m	■	■
	P01295393	Tripod socket with Schuko socket, length 2.5 m	■	■
	P01101922	Set of 3 red, blue and green crocodile clips	■	■
	P01101921	Set of 3 red, blue and green test probes	■	■
	P01295457Z	Set of 2 red and black crocodile clips	■	■
	P01295454Z	Set of 2 black and red test probes	■	■
	P01102201	1 bag of 3 extension connectors	■	■
	P01295293	USB-A USB-B cable	■	■
	P01295234	C19 mains lead, length 2.5 m	■	■
	P01102191	Type-3 remote control pedal	■	■
	P01102192	Tower with 4 indicator lamps (red, green, blue and orange)	■	■
	P01102196	Barcode reader - USB	■	■
	P01102904	Label printer	■	■
	P01102197	RFID transponder	■	■
	P01102198	Set of 100 RFID tags	■	■
	P01102202	16 A three-phase adapter	■	■

Accessories for other testers

■ Accessories ■ Included in the initial delivery

	Article code	Description	Connectique	CA 6161	CA 6163	CA 6240	CA 6255	CA 6292	DTR 8510	CA 6681	CA 6630
Double test probes and Kelvin clamps for micro-ohmmeters											
	P01101794	10 A Kelvin clamps (set of 2), L=3 m	Spade lug			■	■				
	P01101783	1 A Kelvin mini-clamps (set of 2)	Spade lug			■	■				
	P01102056	1 A double test probe (set of 2) L=2.85 m	Spade lug and 4 mm banana			■	■				
	P01103081	10 A double gun-type test probe (set of 2) L= 3.15 m	Spade lug and 4 mm banana			■	■				
	P01103063	10 A double pivoting test probe (set of 2) L= 3.15 m	Spade lug and 4 mm banana			■	■				
	P01295486	Set of 2 Kelvin leads 6 m long (red / black) with adjustable-clamp connections						■			
	P01295487	Set of 2 Kelvin leads 15 m long (red / black) with adjustable-clamp connections						■			
	P01295494	Set of 2 leads 6 m long with 200 A Kelvin clamps						■			
	P01295495	Set of 2 leads 15 m long with 200 A Kelvin clamps						■			
	P01101784	1 x 25 A Kelvin crocodile clip		■	■						
	P01102199	1 x 25 A Kelvin test probe 3 m long		■	■						
	P01102200	1 x 25 A Kelvin test probe 6 m long		■	■						
	P01295488	Green earth lead with crocodile clip						■			
	P01120470	MR6292 clamp						■			
Other accessories											
	P01102013	Pt 100 probe					■				
	P01102201	Set of 3 Input / Output connectors		■	■						
	P01102202	Three-phase / 16 A Banana adapter		■	■						
	P01120872	G72 clamp		■	■						
Measurement lead for ratiometer											
	P01295143A	Set of 2 spare leads, primary H, secondary X L= 4.6 m, compatible with DTR 8500 / DTR 8510	4 mm banana						■		
Adapters for cable and metal conductor locator											
	P01102114Z	Kit of 3 measurement adapters for housing (B22, E27, mains socket)	B22 bayonet E27 screw socket 2P mains socket							■	
Measurement lead for battery capacity tester											
	P01102103	Set of 2 double-contact current / voltage measurement leads for CA 6630 battery tester. L=1 m	Jack								■

Accessories / replacement parts

INSTALLATION TESTERS

CA 6011

- Cable reeler no. 1 - 30 m P01295492
- 1 waist belt + 1 shoulder strap P01102171
- 30 m cable for reeler P01295493
- 2 elastic straps P01102172
- 1 set of replacement accessories P01102173
- Continuity rod P01102084A

CA 6030

- C172 current clamp P01120310
- C176 clamp P01120330
- MN20 current clamp P01120440
- 1P loop kit P01102020
- 3 crocodile clips (red / white / yellow) P01101905
- 3 test probes (red / white / yellow) P01101906A
- Optical / RS232 connection cable P01295252
- 10 m green cable H winder P01102026
- T earth stake P01102031
- 100 m reel of green cable P01295266
- 33 m reel of green cable P01295268
- Standard bag no. 5 P01298066

CA 6131, CA 6133

- Remote-control probe no. 4 P01102157
- Three-pole EURO cable HX0300
- Neck strap HX0302
- Continuity rod P01102084A
- Test probes (red + black) P01295454Z
- Crocodile clips (red + black) P01295457Z
- 2 cables 1.5 m long (red / black) P01295450Z
- Yellow bag no. 2 P01298006

CA 6131

- MN73 clamp P01120421
- 1.5 V LR6 alkaline battery P01296033

CA 6133

- MN73A clamp P01120439
- Type R USB charger P01102186
- 4 x 1.2 V NiMH 2.4 AH AALSD batteries HX0051B
- 15 m basic earth kit (yellow, green, red) P01102019
- 50 m earth kit P01102021

INSULATION TESTERS

CA 6501 and CA 6503

- Bag no. 2 P01298006
- CA 1246 thermo-hygrometer P01654246
- CA 1821 P01654821
- 0.2 A / HRC fuse for CA 6501 P01297095
- 2 crocodile clips (red / black) P01295457Z
- 2 test probes (red / black) P01295458Z
- 2 leads 1.5 m long (red / black) P01295289Z
- 3 crocodile clips (red, black, blue) P01103062
- 3 safety leads 1.5 m (red, black, blue) P01295171

CA 6511 and CA 6513

- CA 1246 thermo-hygrometer P01654246
- CA 1821 P01654821
- 2 crocodile clips (red / black) P01295457Z
- 2 test probes (red / black) P01295454Z
- 2 leads 1.5 m long (red / black) P01295289Z
- 1.5 V LR6 battery P01296033
- 1.6 A fuse P01297022
- Shockproof sheath no. 13 P01298016

CA 6522, CA 6524, CA 6526, CA 6532, CA 6534 and CA 6536

- Remote-control probe P01102092
- CA 1246 thermo-hygrometer P01654246
- CA 1821 P01654821
- Hands-free bag P01298049
- 1.5 V LR6 battery P01296033
- Test probes (red + black) P01295454Z
- Crocodile clips (red + black) P01295457Z
- Elbowed-straight safety leads
(red + black) 1.5 m long P01295453Z
- DataView® software P01102095

CA 6528

- CA 1246 thermo-hygrometer P01654246
- CA 1821 thermometer P01654821
- 1.5 V LR6 battery P01296033
- Test probes (red + black) P01295454Z
- Crocodile clips (red + black) P01295457Z
- Elbowed-straight safety leads
(red + black) 1.5 m long P01295289Z

CA 6541 and CA 6543

- Remote-control probe P01101935
- CA 1246 thermo-hygrometer P01654246
- CA 1821 P01654821
- Bag no. 6 for accessories P01298051
- 1.5 V LR14 battery P01296034
- Fuse F 2.5 A - 1200 V - 8 x 50 mm - 15 kA (x 5) P01297071
- Fuse F 0.1 A - 660 V - 6.3 x 32 mm - 20 kA (x 10) P01297072

CA 6543

- DataView® software P01102095
- 1.5 m safety leads (red, blue, black) P01295171
- RS232 PC DB 9F - DB 25F cable x 2 P01295172
- European 2P mains lead P01295174
- UK mains lead P01295253
- Battery pack P01296021

CA 6505, CA 6545, CA 6547 and CA 6549

- CA 1246 thermo-hygrometer P01654246
- CA 1821 P01654821
- Standard bag for accessories P01298066
- Fuse FF 0.1 A - 380 V -
5 x 20 mm - 10 kA (x 10) P03297514
- European 2P mains lead P01295174

CA 6547 and CA 6549

- DataView® report generation software P01102095
- RS 232 PC DB 9F - DB 25F cable x 2 P01295172

CA 6550 and CA 6555

- 2 red / black test probes P01295454Z
- 3 red / blue / black crocodile clips P01103062
- USB optical cable HX0056-Z
- Shoulder bag P01298066
- CA 1246 thermo-hygrometer P01654246
- CA 1821 P01654821
- European 2P mains lead P01295174

CLAMP MULTIMETERS FOR LEAKAGE CURRENT

F65

- Red / black crocodile clamps (set of 2) P01295457Z
- Elbowed test-probe leads, 1.5 m, (1 red / 1 black) P01295456Z
- Soft case 200 x 100 x 40 mm with belt clip P01298065Z
- CM1214S current measurement lead P03295509

EARTH AND RESISTIVITY TESTERS

CA 6421 and CA 6423

- Carrying strap P01298005
- Fuse HRC 0.1 A - 250 V (x 10) P01297012
- 1.5 V LR06 battery P01296033
- Shoulder bag no. 2 P01298006

CA 6422 and CA 6424

- 15 m earth kit (blue / green / red) P01102017
- 50 m expert earth kit P01102021
- Carrying bag P01298006
- 4-point hands-free strap HX0302

CA 6422

- 1.5 V LR6 battery P01296033
- CA 6424
- 4 x 1.2 V NiMH 2.4 AH AALSD batteries HX0051B
 - Type-R USB charger P01102186
 - G72 current clamp P01120872

CA 6416 and CA 6417

- DataView® software P01102095
- Bluetooth / USB modem P01102112
- Hard case P01298080
- CL1 calibration loop P01122301

CA 6418

- CL1 calibration loop P01122301
- MLT110* carrying case P01298080
- 1.5 V LR6 alkaline battery P01296033

*Requires 2 X convoluted foam inserts 691714A00

CA 6460 and CA 6462

- European 2P mains lead P01295174
- Fuse HRC 0.1 A - 250 V (x 10) P01297012
- Battery pack P01296021
- 1.5 V LR06 battery P01296033
- Standard bag P01298066

Accessories / replacement parts

CA 6470N, CA 6471 and CA 6472

- DataView® report generation software.....P01102095
- Adapter for battery charging
on vehicle cigarette lighter.....P01102036B
- Optical / RS communication cable.....P01295252
- UK mains lead.....P01295253
- Set of 10 fuses:
F 0.63 A - 250 V - 5 x 20 mm - 1.5 kA.....AT0094
- Adapter for battery charging
on the mains supply.....P01102035
- Battery pack.....P01296021
- Optical / USB communication cable.....HX0056-Z

CA 6471 and CA 6472

- MN82 clamp (diam. 20 mm) delivered with
2 m cable for connection to ES terminal.....P01120452
- C182 clamp (diam. 52 mm) delivered with
2 m cable for connection to ES terminal.....P01120333
- Standard bag.....P01298066

CA 6474

- Connection cable.....P01295271
- 15 m BNC / BNC cable.....P01295272
- 5 m AmpFlex® flexible current sensor.....P01120550
- 8 m AmpFlex® flexible current sensor.....P01120551
- Set of 12 identification rings for AmpFlex®.....P01102045
- Set of 3 adjustable clamps.....P01102046
- 5 m green cable (E terminal connection).....P01295291
- 5 m black cable (E terminal connection).....P01295292
- Spade lug / banana plug adapter.....P01102028
- Calibration loop.....P01295294
- Prestige bag.....P01298067

ELECTRICAL EQUIPMENT TESTERS

CA 6121

- Machine Link Windows processing software
(supplied with communication cable).....P01101915
- Series printer no. 5.....P01102903
- DB9F-DB25M adapter.....P01101841
- Remote-control pedal.....P01101916
- Indicator lamps (green / red).....P01101917
- Roll of paper for series printer (set of 5).....P01101842
- 2 crocodile clips (red / black).....P01295457Z
- 2 test probes (red / black).....P01295458Z
- 2 dielectric test guns with 6 m cable.....P01101918
- 2 dielectric test guns with 2 m cable.....P01101919
- 2 safety leads 3 m long (red / black).....P01295097
- Continuity test lead 2.5 m long (black).....P01295137
- Continuity test lead 2.5 m long (red).....P01295140
- Discharge-time cable (European).....P01295141

CA 6155

- 4 m red test lead.....P01102139
- Red + black 1.5 m test lead.....P01102138
- Red 1.5 m test lead.....P01102140
- 1.5 m plug-in test cable.....P01102136
- 3 m test cable with separate wires.....P01102137

- Black test probe.....P01101141
- Red test probe.....P01102142
- Green test probe.....P01102143
- Blue test probe.....P01102144
- Set of 3 black crocodile clips.....P01102145
- Set of 10 fuses: 16 A-250 V 6 x 32 T.....P01297086
- Set of 2 HV cables.....P01103071
- HV crocodile clip.....P01103072
- HV test probe.....P01103073

CA 6165

- 1 remote-control pedal (type 2).....P01102177
- 2-lamp tower (red / green).....P01102178
- 4-lamp tower (red / green / blue / orange).....P01102179
- Lamp power supply adapter.....P01102180
- 2 x 2 m HV guns.....P01102182
- 2 x 3 m cables (red / black).....P01295097
- EURO discharge cable.....P01295141
- 1 double continuity cable.....P01295236
- 2 test probes, CAT IV 1kV (red / black).....P01295454Z
- 2 crocodile clips, CAT IV 1kV (red / black).....P01295457Z
- Time-delay fuse, 6 X 32 mm, 16 A 250 V (x10).....P01297102
- Fuse 5 X 20 mm 5 A 250 V (x10).....P01297103
- Standard carrying bag.....P01298066

OTHER TESTERS

CA 6240 and CA 6255

- 1 A double test probe (x 2).....P01102056
- Mini Kelvin clamp (set of 2).....P01101783
- UK mains lead.....P01295253
- CA 1846 thermo-hygrometer.....P01654246
- European 2P mains lead.....P01295174
- Standard bag.....P01298066
- 10 A-P clamp (set of 2).....P01101794
- DataView®.....P01102095
- Straight probe with 10 A double pivoting
retractable test probe (x 2).....P01103063
- Gun with 10 A double retractable
test probe (x 2).....P01103065

CA 6240

- Set of 10 fuses: 6.3 x 32 / 12.5 A / 500 V.....P01297091
- Optical / USB communication cable.....HX0056-Z

CA 6255

- Pt 100 temperature sensor.....P01102013
- 2 m cable for remote Pt 100.....P01102014
- RS 232 PC DB 9F - DB 25F cable x 2.....P01295172
- Set of 10 fuses: 6.3 x 32 / 16 A / 250 V.....P01297089
- Set of 10 fuses: 5.0 x 20 / 2 A / 250 V.....P01297090

CA 6292

- 1 set of 2 Kelvin leads 6 m long (red / black)
with adjustable-clamp connections.....P01295486
- 1 set of 2 Kelvin leads 15 m long (red / black)
with adjustable-clamp connections.....P01295487
- 1 green earth lead with crocodile clip.....P01295488

- 1 set of 5 fuses: T1 5 A 250 V 5x20 mm.....P01297101
- 1 USB-A USB-B cable 1.5 m long.....P01295293
- 1 MR6292 clamp.....P01120470
- Set of 2 leads 6 m long with
200 A Kelvin clamps.....P01295494
- Set of 2 leads 15 m long with
200 A Kelvin clamps.....P01295495
- Standard carrying bag.....P01298066

DTR 8510

- Set of 2 replacement leads 4.6 m long.....P01295143A
- Set of 2 replacement leads 10 m long.....P01295145
- USB cable.....P01295293
- Shoulder bag.....P01298066

CA 6681

- 33 m reel of green wire, battery clip / 4 mm
male banana on winder with handle.....P01295268
- 10 m reel of green wire, battery clip / 4 mm
male banana on H winder.....P01102026
- Kit of 3 measurement adapters for housing
(B22, E27, mains socket).....P01102114Z

CA 6630

- Set of 2 leads with retractable test probes.....P01102103

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Portable oscilloscopes

Selection guide



	OX9062	OX9102	OX9104	OX9302-BUS	OX9304
Bandwidth (MHz)	60	100	100	300	300
Number of channels	2	2	4	2	4
Display	7-inch colour touchscreen				
Oscilloscope mode					
Vertical deflection					
Vertical scales	16 scales from 2.5 mV to 200 V/div.				
Maximum voltage	600 Vrms / 800 Vpeak with HX0030C/D probe				
Vertical resolution	12 bits				
Zoom factor	16 max.				
Input impedance	1 MΩ / 12 pF				
Horizontal deflection					
Time base scales	1 ns / .. / 200 s/div.				
Sampling	2.5 GS/s (real time), 100 GS/s (repeat signal mode)				
Triggering					
Source	1 channel of your choice. Threshold(s) adjustable directly on the screen				
Trigger mode	Automatic, Triggered, Single shot, Auto-Level 50%				
Trigger type	On edge, on pulse width (4 modes), after delays, after repetitions (counting), by comparison				
Measurement mode					
Time measurements	rise/fall time, positive/negative pulse, duty cycle, period, frequency, phase, count, integral				
Level measurements	DC/effective/peak-to-peak voltage, amplitude, max./min. voltage, upper/lower plateau, overshoot				
Spectrum analyser mode					
FFT	THD and 63-rank FFT (fundamental between 40 and 450 Hz). Real time for each trace (channel) displayed on the screen. Rectangular, Hamming, Hanning, Blackman windowing. Linear or logarithmic scale. Automatic adjustment using the 'Autoset' function.				
Multimeter mode					
Acquisition	TRMS AC+DC, 12 bits, 5 measurements/s				
V AC, DC, AC+DC	4 ranges from 600.0 mV to 600.0 Vrms / 800.0 to 800.0 V peak or DC - BP 200 kHz				
Resistance / Continuity / Diode	7 ranges from 0.01 Ω to 32.00 MΩ / < 30 Ω / Open circuit voltage approx. 3.3 V				
Capacity / Frequency	7 ranges from 5,000 nF to 5,000 mF/200 kHz				
Temperature	with probe for TcK HX0035B (optional)				
Power	W, var, VA, FP simultaneously with U & I				
Logger mode					
Acquisition	Continuous at a rate of 0.2 s with one recording every 100,000 measurements				
Other features					
Interfaces	USB, Ethernet, Wi-Fi/ScopeNet (JAVA interface) for remote control, data transfer, etc./Screen printing via network				
Power supply	Li-Ion battery, battery life up to 5 hours, mains power supply 98-264V@50/60 Hz				
Safety	IEC 61010-2-30 600 V CAT III				
Waterproofing / Dimensions / Weight	IP54 / 293 x 210 x 66 mm / 21 kg with battery.				

Portable oscilloscopes

OX 9302-BUS



600 V
CAT III

IP 54

Wi-Fi

MICRO
SD

A genuine SCOPIX IV,
with all its modes and
features, plus the BUS function!

- 1 button to activate an analysis
- 4 steps to qualify a data bus
- Intuitive and scalable Human Machine Interface
- Multi-interface communication
- Customisation of your fieldbus via the SX-BUS software provided
- Verification of signal transmission quality for fieldbus protocols: KNX, DALI, CAN, LIN, FlexRay™, ASi, Profibus®, RS-485, RS-232, Ethernet, etc.

Display

7» WVGA TFT colour touchscreen LCD with 800 x 480 pixels
LED backlighting (adjustable standby mode)

Bandwidth

300 MHz

Number of channels

2 isolated channels

The **BUS** function of **SCOPIX IV** allows you to perform electrical measurements to assess the integrity of fieldbuses, i.e. the operation of the physical layer (electrical specifications, synchronisation, etc.), in accordance with current standards.

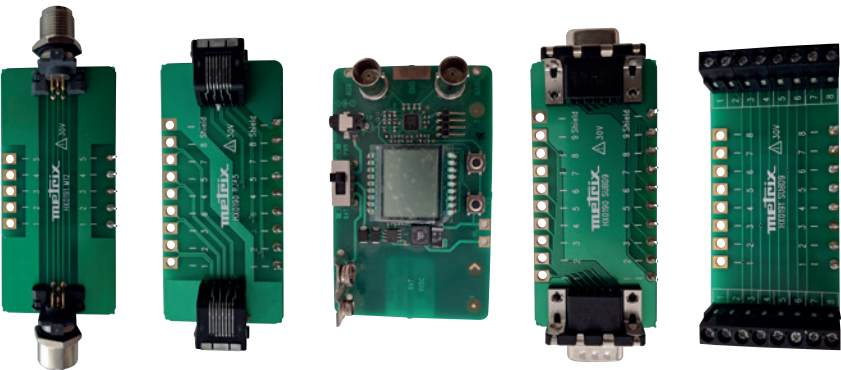
Once the bus diagnosis has been launched, it proceeds step by step and allows the calculation of the various parameters required by the standard to be viewed.

Efficiency: if the diagnosis stops before the end of the measurements, this means that the minimum level and amplitude criteria have not been met and do not allow the calculation of the other parameters.

- 1- Select the bus to be analysed from a list.
- 2- Display measurement tolerances.
- 3- Analyse the bus according to the associated standard.
- 4- Analysis result with interpretation assistance.

SCOPIX BUS offers connection assistance based on the bus to be checked with the corresponding wiring diagram.

The 5 **HX0190** and **HX0191** cards supplied provide connection assistance: these cards are equipped with SUBD9, RJ45, M12 or 8-wire screw connectors, which are the main types of connection to fieldbuses.



1 oscilloscope
OX 9302-BUS supplied with:

- a carrying bag,
- 1 PA40W-2 mains power
- pack/charger and 1 2P EURO mains power cable,
- 1 Li-Ion battery pack,
- 1 stylus,
- 1 Ethernet cable,
- 1 USB cable,
- 2 safety leads (red, black),
- 2 x Ø 4 mm test probes (red, black),
- 2 voltage probes depending on model,
- 1 µSD card (8 GB),
- 1 USB /µSD adapter,
- 1 wrist strap,
- 1 PROBIX BANANA connector,
- 1 USB installation procedure for use of the ScopeNet data export software on CD-ROM,
- 1 PDF user's manual on CD (more than 5 languages),
- 1 Quick Start Guide on paper
- 1 safety datasheet in 20 languages.
- 5 HX090 and HX091 cards

To order

1 oscilloscope 2 x 300 MHz BUS
Reference: OX9302-BUS

Portable oscilloscopes

SCOPIX IV

The functions and performance of the SCOPIX IV models have been improved. For example, their bandwidth has been increased, as have their recording possibilities, their storage capacity, etc., and this evolution will continue to facilitate your measurements.

	ScopiX IV			
	Electronics	Electrical		Industrial
Selection families	OX9304	OX9104	OX9102	OX9062
Bandwidth	300 MHz	100 MHz		60 MHz
Channels (number/type)	4 isolated	4 isolated	2 isolated	2 isolated
Analogue filters	15 MHz, 1,5 MHz, 5 kHz			
Single-shot digital sampling	2,5 GS/s			
Repetitive mode max sampling	100 GS/s			
Vertical resolution	12 bits			
Safety according to IEC61010	600 V cat III			
Display mode	Vector, envelope, entire acquisition			
Signal type	Automatic ROLL (> 100 ms), repetitive, min/max			
Averaging	2/4/16/64			
Oscilloscope specifications				
Minimum input sensitivity	156 μ V/div (zoom) - 2.5 mV			
Maximum input amplitude	200 V/div			
Time base (per division)	1 ns - 200 s			
FFT+signal mode	2500 pts, log and linear echo, weighting window			
XY mode	According to X(T) time base + waveform			
Memory depth	100 kpts/channel			
Acquisition memory	> 2 GB on SD card, all μ SDHC/XC card formats			
Automatic measurements/cursors	20 auto measurements + cursors			
Front triggering	Rising or falling on 2 or 4 channels			
Pulse triggering	< T1; >T2; or between T with T1 and T2: [16 ns, 20 s]			
Delay Trigger	From 48 ns to 20 s sources and 2 or 4 channel trigger			
Counting Trigger	From 3 to 16,384 events sources and 2 or 4 channel trigger			
Hold-Off / Adjustable Delay	Adjustable from 64 ns to 15 sec			
Calculation functions	Simple (addition/subtraction/multiplication/division) or advanced via the equation editor. Between tracks			
Autoset	With track selection			
Other functions				
TRMS multimeters	200 kHz	200 kHz		200 kHz
Logger	REC mode Multimeter / 100 kpts file / 0.2s period			
Harmonic analysis	63 ranks, Vrms, overall THD and per rank			
Viewer number of channels	4	4	2	2
Power measurement	Single-phase/Three-phase, Active, reactive, apparent power and PF, Min/MAX			
General features				
Colour screen	7" wide - Resolution 800 x 480 pixels			
LI-ION battery	Battery life: 5 hours			
Terms and conditions of registration	Internal memory 1 GB, μ SD memory card from 2 GB to 2 TB			
Communication	USB, Ethernet (RJ45), Wi-Fi/ScopeNet (JAVA interface for PC) or SX-METRO/P (software)			



1 SCOPIX IV oscilloscope delivered with:

- 1 carrying case
- 1 PA40W-2 power supply/charger and 1 2P EURO power cord
- 1 Li-Ion battery pack
- 1 stylus
- 1 Ethernet cable
- 1 USB cable
- 2 safety cables (red, black)
- 2 $\emptyset$ 4 mm test probes (red, black)
- 2 or 4 voltage probes depending on model
- 1 μ SD card (8 GB), 1 USB/ μ SD adapter
- 1 hand strap
- 1 ProbiX adapter - $\emptyset$ 4 safety plugs
- 1 USB installation procedure for use ScopeNet data export software on CD-ROM
- 1 operating manual in .pdf format on CD (>5 languages)
- 1 paper quick start guide
- 1 safety data sheet in 20 languages.

To order

1 x 2 x 60 MHz oscilloscope **Reference: OX9062**

1 x 2 x 100 MHz oscilloscope **Reference: OX9102**

1 x 4 x 100 MHz oscilloscope **Reference: OX9104**

1 x 4 x 300 MHz oscilloscope **Reference: OX9304**

Recommended accessories

SX-METRO/P

SX-METRO software (complete software solution for ScopiX series oscilloscopes)

HX0073

MiniFlex 300 A 2.5 MHz ProbiX flexible current sensor

HX0080

μ SD memory card
+ μ SD/SD adapter
+ USB reader

HX0121

ScopiX IV replacement stylus

Industrial oscilloscopes

ProbiX

The advantages of the patented ProbiX system

The advantages of the patented ProbiX system Scopix portable oscilloscopes benefit from intelligent Probix accessories, which offer users a whole range of innovative features guaranteeing simplicity, efficiency, versatility and safety.

The Probix system, with its smart probes, accessories and adapters, ensures quick and error-free instrument implementation.

A kind of 'plug and play' for measurement, the probes and adapters are immediately recognised once connected. The instrument not only identifies them, but also provides information about their characteristics.

Active safety is integrated, in particular in the form of safety information and recommendations for the user, taking into account their specific configuration.

The coefficients, scales and units of the sensors, as well as the channel configuration, are automatically managed.

This system also allows accessories to be powered directly from the oscilloscope, without the need for batteries or additional mains adapters.

Some Probix accessories have three control buttons directly accessible on the probe. For example, the first two control buttons on the probes are used to directly modify the settings of the channel to which they are connected.

ProbiX - measuring accessories (current, voltage, temperature)

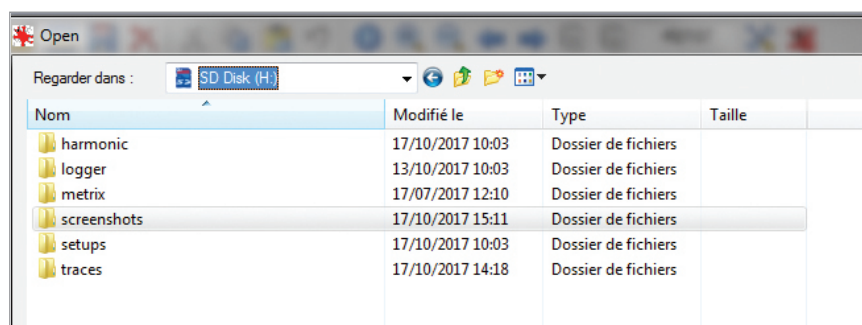
		Connections							Measurement range	Measurement type
		Ratio	Probe	BNC	Banana	Amp FLEX	SK1-20 Mini AmpFLEX	SK1-19 sensors		
HX0130		1/10	■						300 V CAT III 500 MHz	Voltage
HX0030C/ HX0030D		1/10	■						600 V CAT III 250 MHz	Voltage
HX0031				■					300 V CAT III 250 MHz	Voltage-Resistance-Capacitance-Tester
HX0032		50 Ω		■					30 V CAT I 250 MHz	Voltage
HX0033					■				300 V CAT III	Voltage-Resistance-Capacitance-Tester
HX0093					■				300 V CAT III 300 Hz filter	Voltage-Resistance-Capacitance-Tester
HX0072						■			5 - 3,000 A 200 kHz	Current
HX0073							■		1 - 300 Arms 2.5 MHz	Current
HX0094					■				4 - 20 mA	Current
HX0035B								■	-10 °C to +1,250 °C	Temperature K thermocouple

Find all the available accessories, sensors and clamps in the accessories chapter.

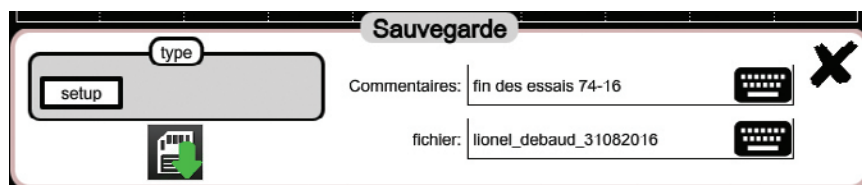
Communication tools in SCOPIX IV

File management

Oscilloscope mode traces or backups are available in two formats: .trc for recall on screen or .txt for direct export to another standard Windows application, such as a spreadsheet



It is also very easy to take .png screenshots from the front panel of the oscilloscope, which are stored in the screenshot directory, print to a network printer, transfer or delete files in the file manager.



In each mode, the configuration can be saved to make adjustments easier.

The use of data



- On the oscilloscope, recall .trc curves stored in memory and screen copies via a PNG viewer.
- On a PC via the Java ScopeNet application over USB or Ethernet: remote control, data viewing and transfer, programming via SCPI commands or via SX-METRO software.
- The multiple communication tools with ScopiX IV allow you to view curves in real time on a PC, perform additional measurements and remote analyses, capture screenshots and control your oscilloscope. ScopiX IV provides you with comprehensive post-acquisition expertise.

SEE ALSO

SX-METRO, software solution dedicated to oscilloscopes SEE ALSO Scopix series - page 155

The numerous interfaces of ScopiX IV



The communication interfaces are grouped together in a dedicated space on the right side of the product and protected by a protective cap: USB host, wired Ethernet or WiFi for communicating with a PC or printing to a network printer. A slot for a high-capacity μ SD memory card allows you to expand the data storage capacity.

You can choose the type of communication that best suits your needs:

- Wired RJ45 Ethernet LAN network with integrated DHCP for easy connections to your network, option to activate the WiFi radio link to communicate with a PC.
- USB type A to interface with a PC to save, recall or load configurations.
- μ SD to store data, update the internal software if necessary, a direct interface that does not require a connection;

Climate engineering and environmental measurements

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Thermal camera

CA 1954



IP 54

160 x 120



PNG

FREE
software
CAmReport with
automatic report
generation

High-performance and user-friendly

The CA 1954 thermal camera is suitable for all applications in the building, electrical and mechanical maintenance sectors.

- Unprecedented! Up to 9 hours of battery life
- Drop resistance up to 2 metres
- Focus free with 38° x 28° field of view
- Data retrieval from other measuring devices (current, humidity, dew point, etc.)
- Practical: voice recording, built-in emissivity table to be expanded, file organisation by site

	CA 1954
Detector	160 x 120
Type	UFPA microbolometer, 8 -14 µm
Frequency	9 Hz
Sensitivity (N.E.T.D)	80 mK @ 30 °C (0.08 °C @ 30 °C)
Temperature measurement	
Temperature range	-20 °C to +250 °C
Accuracy	±2 °C or ±2 % of the reading
Imaging performance (thermal image)	
Field of view	38° x 28°
IFOV (spatial resolution)	4.1 mrad
Focusing	Fixed
Minimum focal distance	30 cm
Real image	Yes (320 x 240 pixels)
Display mode	Thermal image, real image with automatic parallax compensation. Image merge function available in the PC software
Analysis functions	
Measuring tools	1 manual cursor + 1 automatic detection function + Min Max Avg on adjustable area + temperature profile + Isotherm
Parameter settings	Emissivity, environmental temperature, distance, relative humidity
Voice comments	Yes via Bluetooth (earpiece supplied)
Connectivity	CA 1821/22/23, CA 1246, CA 1227, F407, F607, MTX 3292, MTX 3293
Data storage	On removable 2 GB micro SD card (approx. 4,000 images), up to 32 GB possible
Image format	.png (thermal images and real images saved simultaneously)
Laser pointer	Yes
Presentation of the image	
Adjustment	Automatic or manual adjustment of palette min-max
Image hold	Animated or fixed image
Image display	Multiple palettes
Screen	2.8 inches
Power supply	
Type	NiMH rechargeable batteries with low self-discharge
Recharging mode	External (charger supplied)
Battery life	9 hours (typical) / 50 % brightness, Bluetooth deactivated
Environmental specifications	
Operating temperature	-15 °C to +50 °C
Storage temperature range	-40 °C to +70 °C
Compliance	IEC 61326-1, IEC 61010-2-030, IEC 60825-1
Resistance to falls	2 metres on all surfaces
Physical specifications	
Weight	700 g with rechargeable batteries
Dimensions	225 x 125 x 83 mm
Protection class	IP54
Interfaces	
	- USB link and Mass Storage function - Bluetooth for connectivity with earpiece
Tripod mount	Yes, 1/4" insert on camera
General information	
Report generation software	Supplied as standard with automatic report generation (.pdf / .docx) Compatibility with W7, W8, W10, 32 and 64 bits
Warranty	2 years



+ The extra

- The combination of thermograms and intensities from the F407/F607 clamps allows you to determine the load level at the time of measurement and facilitates the identification and criticality of the defect.
- The isotherm coupled with the dew point value of the CA 1246 allows you to detect areas at risk of mould
- Recording of ambient, outdoor or indoor temperature via the CA 1246 via Bluetooth



CA 1954 livrée en mallette durcie avec :

- 4 NiMH batteries
- 1 battery charger
- 1 2GB HD micro SD card
- 1 USB cable
- 1 Bluetooth headset
- CAmReport software download
- 1 measurement report

To order

CA 1954 thermal camera

Reference: P01651904

Thermometer

Selection guide



	CA 1860	CA 1862	CA 1864	CA 1866	CA 876	CA 1821	CA 1822	CA 1823	TK 2000	TK 2002
Infrared measurement										
	■	■	■	■	■					
Field of view										
10/1	■				■					
12/1		■								
30/1			■							
50/1				■						
Emissivity										
Fixed: 0.95	■									
Variable: 0.1 to 1		■	■	■	■					
Laser sight	■	■ Double	■	■	■					
Contact measurement										
1-input thermocouple sensor					■	J, K, T, N, E, R, S	J, K, T, N, E, R, S		K	K
2-input thermocouple sensor							J, K, T, N, E, R, S			K
1-input resistive probe								Pt100 Pt1000		
General functions										
HOLD	■	■	■	■	■	■	■	■	■	■
Max	■	■	■	■	■	■	■	■		
Min	■	■	■	■	■	■	■	■		
Avg	■	■	■	■		via Data Logger Transfer	via Data Logger Transfer	via Data Logger Transfer		
Alarm	■	■	■	■	■	■	■	■		
Choice of units	■	■	■	■	■	■	■	■		
Backlighting	■	■	■	■	■	■	■	■		



No-contact thermometers

CA 1860 - CA 1862 | CA 1864 - CA 1866



IP65 °C

To identify all your hot spots in seconds, the ergonomic design of these thermometers makes them very easy to use.



CA 1860 - CA 1862

- Compact and rugged thanks to its resistance to falls from up to 3 metres and IP65 ingress protection
- Excellent metrological performance
- Wide dynamic range for measurement: -35 °C to +650 °C
- Double LASER sight (CA 1862) for precise targeting of the test area
- Parameterizable high and low alarms

CA 1864 - CA 1866

- Extended temperature range: measure up to 1,000 °C
- Use the variable emissivity to perform your inspections in accordance with reality
- High distance/spot ratio for better accuracy at long distances
- Set your alarm thresholds so that you are alerted every time there is an abnormal temperature!

	CA 1860	CA 1862	CA 1864	CA 1866
Measurement range	- 35 °C to + 450 °C	- 35 °C to + 650 °C	- 50 °C to +1000 °C	
Measurement accuracy	≥ 0° C : ± 1,8 °C ou ± 1,8 % de la lecture (prendre la valeur la plus haute) < 0 °C : ± (1,8 °C + 0,1 °C / °C)		- 50 °C to - 20 °C : ± 5 °C - 20 °C to +200 °C : ±1.5 % L + 2 °C +200 °C to +538 °C : ±2.0 % L + 2 °C +538 °C to +1,000 °C : ±3.5 % L ± 5 °C	
Display resolution	0.1 °C			
Field of view	10 : 1	12 : 1	30 : 1	50 : 1
Emissivity	0.95	Adjustable from 0.1 to 1.0		
Spectral response	8 µm ~ 14 µm			
Number of lasers	Single laser	Double laser	Single laser	
Measurement functions	Instantaneous mode, MAX, MIN, AVG, differential (DIF), continuous measurement by blocking the measurement trigger, alarms		MAX, MIN, AVG, DIFF, HOLD	
Alarms			High and low	
Backlit display			Yes	
Battery type			9V 6LR61 battery	
Tripod insert	Yes		-	-
Dimensions/Weight	189 mm x 118 mm x 55 mm / 292 g		230 x 100 x 56 mm / 290 g	

1 thermometer CA 1860 or CA 1862 or CA 1864 or CA 1866 delivered with:

- 1 carrying bag
- 1 x 9 V 6LR61 battery

To order

CA 1860
Reference: P01651815

CA 1862
Reference: P01651816

CA 1864
Reference: P01651813

CA 1866
Reference: P01651814

Recommended accessory



P01298033
Bag

Infrared thermometer with K-type thermocouple input

CA 876



Monitor temperature variations

- Robust thanks to a shock-resistant protective sheath
- Temperature control up to 1350 °C
- Measurement accuracy
- Sensor stability over time
- Infrared measurement possible
- 100% reliable

	IR measurement	Thermocouple probe input
Field of view	10/1	-
Emissivity	0.1 to 1	-
Measuring range	-20 °C to +550 °C	-40 °C to +1,350 °C
Accuracy	± 2% of reading or ± 3 °C	± 0.1% of reading + 1 °C
Functions	Max., Min., HOLD, Alarms	
Dimensions / weight	173 x 60.5 x 38 mm / 255 g	

Probe thermometers

TK 2000 - TK 2002



IP65

°C

Connect your probe and take a measurement

- Compact, accurate and easy to use
- Can be used in any environment thanks to their IP 65 protection
- Measures the temperature difference using the TK 2002's 2 thermocouple inputs

	TK 2000	TK 2002
No. of inputs	1	2
Range	-50 °C to +1,000 °C	-50 °C to +1,000 °C
Accuracy	± 1.5 % + 0.5 °C	± 1.5 % + 0.5 °C
Functions	HOLD, °C	HOLD, °C
Dimensions	163 x 63 x 37.5 mm	163 x 63 x 37.5 mm
Weight	200 g	200 g



Diagnostics & control



Education



Energy efficiency



Transport



Tertiary & residential



Industries



Production, transport & distribution



Laboratory & metrology



TK 2000 supplied with:

- 1 K-type thermocouple cable probe
- 1 x 9 V 6LR61 battery

TK 2002 supplied with:

- 2 K-type thermocouple cable probes
- 1 x 9 V 6LR61 battery

CA 876 supplied with:

- 1 shockproof sheath
- 1 K-type thermocouple cable probe

To order

1 thermometer TK2000

Reference: P01653100

1 thermometer TK2002

Reference: P01653110

1 thermometer CA 876

Reference: P01651403Z

Recommended accessory



K thermocouple probe range for ambient, surface or immersion measurement.

> page 117

Probe thermometers

CA 1821 - CA 1822 - CA 1823



IP 54



Compact and magnetic for fixed or portable use, these thermometers are accurate, versatile and durable. Communicating via USB or Bluetooth, the free Android CA Environmental Loggers app allows you to configure the products, view data in real time, export recorded data and send it by email.

- IP54 magnetic housing
- Large backlit display
- Records up to 1 million data points
- Connects via USB or Bluetooth
- Alarms and alarm-triggered recording
- Up to 3 years of battery life
- Android app & Data Logger Transfer software with automatic report generation provided free of charge

	CA 1821	CA 1822	CA 1823
Probe type	Thermocouples J, K, T, N, E, R, S	Thermocouples J, K, T, N, E, R, S	Pt100, Pt1000
Number of channels	1	2	1
Temperature range	-250 °C to +1,767 °C		-100 °C to +400 °C
Resolution	$\theta < 1,000\text{ °C}$: 0.1 °C $\theta \geq 1,000\text{ °C}$: 1 °C		0.1 °C
Basic accuracy	$\pm (0.1\% \text{ of reading} + 0.6\text{ °C})$		$\pm (0.4\% \text{ of reading} + 0.3\text{ °C})$
Functions	Min, Max, HOLD, Alarms		
Recording	Manual start and stop on the product Programmed recording		
Alarms	Visual alert when configurable threshold is exceeded via Data Logger Transfer. Recording can be triggered at alarm threshold		
Battery life	1,000 hours (portable mode) / 3 years in recording mode (based on 15-minute measurements)		
Protection rating	IP54 enclosure		
Mounting	Bracket featuring: a magnet, a wall mounting system, a slot for hanging the product. Compatible with the Multifix accessory		
Connectivity	Miniature female compensated		Type 3-point flat pin
Dimensions / weight	150 x 72 x 32 mm / 260 g with batteries		



CA 1821, CA 1822, CA 1823 supplied with:

- 1 carrying case
- 3 x 1.5 V LR6 batteries
- 1 USB cable
- 1 measurement report

PC software
DL Transfer
free available
for download on
the website
Chauvin Arnoux

To order

CA 1821 thermometer with thermocouple probes, 1 channel
Reference: P01654821

CA 1822 thermometer with thermocouple probes, 2 channels
Reference: P01654822

CA 1823 thermometer with resistance probes, 1 channel
Reference: P01654823

Recommended accessories



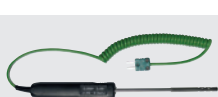
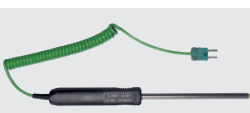
Range of K thermocouple probes
for ambient, surface or immersion
measurement.



P01654242
Shockproof sheath

Accessories for thermometers

K thermocouple sensors

Model	Sensor head	Description	Type / Application	Measurement range	Tolerance class	Response time at 63%	Plunger diameter	Plunger length	Ref.	Model
	 SK20	Sheathed sensor as per the NF EN 61615 standard. Hot junction isolated from chassis-earth. Inconel 600 protective sheath	Flexible general purpose sensor	-40 °C to 450 °C	Cl. 1	1 s	1.5 mm	1 m	P01655010	SK20
	 SK6	"General-purpose" sensor recommended for measurements where access is difficult. Do not use in liquids (tip is not watertight)	Flexible sensor	-50 °C to 285 °C	Cl. 2	1 s par contact	1 mm	1 m	P03652906	SK6
	 SK2	Sensor with stainless-steel sheath which can be bent as required. Radius of curvature > 4 mm	Bendable general purpose sensor	-50 °C to 1,000 °C	Cl. 2	3 s en ambiance	2 mm	1 m	P03652902	SK2
	 SK3	Slightly bendable sensor with stainless-steel sheath	Semi-rigid general purpose sensor	-50 °C to 1,000 °C	Cl. 2	2 s	4 mm	50 cm	P03652903	SK3
	 SK13	Sensor with stainless-steel sheath	General purpose sensor	-50 °C to 1,100 °C	Cl. 2	6 s	3 mm	30 cm	P03652918	SK13
	 SK7	In "calm" conditions without air movement, shake the sensor to encourage heat exchange	Air sensor for ambient measurement	-50 °C to 250 °C	Cl. 2	12 s	5 mm	15 cm	P03652907	SK7
	 SK17	In "calm" conditions without air movement, shake the sensor to encourage heat exchange	Air sensor for ambient measurement	-50 °C to 600 °C	Cl. 2	5 s	6 mm	13 cm	P03652921	SK17
	 SK1	Sensor with stainless-steel sheath for penetration (20 mm min.) in pasty, viscous or liquid specimens	Needle sensor for penetration	-50 °C to 800 °C	Cl. 2	1 s	3 mm	15 cm	P03652901	SK1
	 SK11	Sensor with stainless-steel sheath for penetration (20 mm min.) in pasty, viscous or liquid specimens	Needle sensor for penetration	50 °C to 600 °C	Cl. 2	12 s	3 mm	13 cm	P03652917	SK11
	 SK4	Sheathed sensor with stainless-steel sensing element and Teflon base. For small flat surfaces. Contact can be improved by using silicone grease.	Surface sensor	0°C to 250°C	Cl. 2	1 s	5 mm	15 cm	P03652904	SK4
	 SK14	For surface temperatures when access is difficult	Elbowed surface sensor	-50°C to 450°C	Cl. 2	8 s	6 mm	13 cm	P03652919	SK14
	 SK5	For flat surfaces. The spring ensures optimum contact even if the sensor is not positioned perpendicularly. Contact can be improved by using silicone grease	Surface sensor with spring	-50°C to 500°C	Cl. 2	1 s	5 mm Ø in contact 8.5 mm	15 cm	P03652905	SK5
	 SK15	For flat surfaces. The spring ensures optimum contact even if the sensor is not positioned perpendicularly. Contact can be improved by using silicone grease.	Surface sensor with spring	-50°C to 900°C	Cl. 2	2 s	8 mm	13 cm	P03652920	SK15
	 SK8	For measurements on pipes. The copper sheet is applied to the clean, dry pipe. The two-sided Velcro strip ensures contact by winding.	Pipe sensor	-50°C to 140°C	Cl. 2	10 seconds on stainless-steel pipe with 12 mm diameter	Ø 10-90 mm	32 cm	P03652908	SK8
	 SK19	Sensor with magnet for flat metal surfaces	Magnetic sensor	-50°C to 200°C	Cl. 2	7 s	4 mm	1 m	P03652922	SK19

Accuracy Class I / -40 °C to +375 °C: $\pm 1.5^\circ\text{C}$ / +375 °C to +1000°C: $\pm 0.004 \times T^\circ\text{C}$.Accuracy Class II / -40 °C to +333 °C: $\pm 2.5^\circ\text{C}$ / +333 °C to +1200°C: $\pm 0.0075 \times T^\circ\text{C}$.

Standard compensated miniature male 2-pole connector.

Spiral cable from 45 cm to 1m

Accessories / replacement parts

Extensions for thermocouples



CK 3

CK 2

CK 1

CK 4

Models	Description	Ø	Length
CK 1	Terminated by male plug / female plug	4 mm	1 m
CK 2	Terminated by male plug / 2 bare wires	4 mm	1 m
CK 3	Terminated by 5-pin DIN plug / female socket	4 mm	1 m
CK 4	Terminated by 2 banana plugs / female socket	4 mm	1 m
Temperature withstand of extensions: -40 °C to +100 °C			

To order

CK 1 - Extension cables for thermocouples

Reference: P03652909

CK 2 - Extension cables for thermocouples

Reference: P03652910

CK 3 - Extension cables for thermocouples

Référence :P03652913

CK 4 - Extension cables for thermocouples

Reference: P03652914

Recommended accessory

**P03652912**

PP1 handle for CK extensions

Pt 100 Ω temperature sensors

Model	Type / Application	Description	Measurement range	Tolerance class	Response time at 63%	Plunger diameter	Plunger length	Ref.
 SP 10	Surface sensor with spring	For flat surfaces The spring ensures optimum contact, even if the sensor is not set up perpendicularly. Silicone grease can be used to improve contact.	-50 °C to 200 °C	Cl. B	6 s	5 mm	13 cm	P03652712
 SP 11	Needles sensor for penetration	For penetration (20 mm minimum) in pasty, viscous or liquid media.	-100 °C to 600 °C	Cl. B	7 s	3 mm	13 cm	P03652713
 SP 12	Air sensor	In "calm" conditions without air movement, shake the sensor to encourage heat exchange	-100 °C to 600 °C	Cl. B	5 s	5 mm	13 cm	P03652714
 SP 13	Sensor for immersion	Sensor with stainless-steel sheath specially designed for liquids	-100 °C to 600 °C	Cl. B	7 s	3 mm	13 cm	P03652715
 SP 14	General purpose sensor	316L stainless-steel sensor for general use	-100 °C to 450 °C	Cl. A	7 s	3 mm	20 cm	P01655020

Accuracy Class A / $0.15\text{ °C} + 0.002 \times T\text{ °C}$ Accuracy Class B / $0.3\text{ °C} + 0.005 \times T\text{ °C}$

Miniature 3-pole flat-pin connector

Spiral cable from 45 cm to 1m

Luxmeter

CA 1110



LUX

FC

CLASSEC
NFC 42-710

LED

FLUO



Measures illuminance from all light sources

- Illuminance measurement in full compliance and in all directions
- Measure up to 200,000 lux
- Mapping of measured illuminance for a surface or room (MAP mode)
- Metrological compensation on LED and fluorescent lamps.
- Min., Max., Avg., HOLD functions
- Records up to 1 million points

	CA 1110
Functions	Min., Max., HOLD, Average
Recording	Manual Start / Stop on the product Programmed recording
MAP mode	The MAP function can be used to map the lighting on a surface or in a room. In this way, the lighting measurements are saved in the same file.
Data storage	More than 1 million points
Power supply	- 3 x 1.5V AA / LR6 alkaline batteries or NiMH rechargeable battery - Mains connection possible with the mains / micro USB adapter (option)
Battery life	500 hours (portable mode) / 3 years of recording (15-minute measurement interval)
Dimensions	Casing: 150 x 72 x 32 mm Sensor: 67 x 64 x 35 mm (with protective cover) Spiral cable: 24 to 120 cm
Weight	345 g with batteries
Ingress protection	Casing IP50
Operating temperature / humidity	-10 to +60 °C - 10 to 90 % HR
Standards	Class C as per the NFC 42-710 standard
Measurement range	0.1 to 200,000 lx
Accuracy in standard mode	
Incandescent lamp	± 3 % of reading
LED	± 6 % of reading (3,000 K to 6,000 K)
Fluorescent lamp	± 9 % of reading
Accuracy in compensation mode	
LED mode	± 4 % of reading (at 4000 K)
Fluo mode	± 4 % of reading (type F11, 4000 K)



+ The extra

- Remote probe limits the risk of the sensor being obscured by the operator or integrated into the product for one-handed use



1 CA 1110 lux meter delivered with:

- 1 carrying case
- 3 x 1.5 V LR06 batteries
- 1 USB cable
- 1 measurement report

Software
Data Logger
Transfer
available for
download

To order

1 CA 1110 lux meter
Reference: P01654110

Recommended accessories



P01654252
Shockproof case
+ MultiFix accessory



P01651023
Mains adapter

Sound level meter

CA 1310

	CA 1310
Measurement range	30.0 to 130.0 dB
Frequency range	20 Hz to 8 kHz
Accuracy (in reference conditions at 94 dB, 1 kHz)	± 1 dB
Frequency weighting	A / C
Time weighting	FAST:125 ms / SLOW: 1 second
Function	
Measurement modes	SPL (Sound Pressure Level) Leq (Equivalent Continuous Sound Level) MaxL (Maximum Equivalent Sound Level) MinL (Minimum Sound Level)
Leq (equivalent continuous sound level) integration time	Available values: 10 sec, 1 min, 5 min, 10 min, 15 min, 30 min, 1 h, 8 h, 24 h
Recording	64 000 points
Display	Digital and bargraph Time/date-stamping
Physical specifications	
Tripod insert	Yes
Dimensions / weight	262 x 75 x 39 mm / 390 g
General specifications	
Compliance	IEC 61672-1 Class 2
Warranty	2 years
Software	SL-Software: - Values displayed in graph or table format - Data export - Real-time mode

dBA

dBc



Leq



Precise measurement of the sound environment indoors and outdoors

- Measurement of the equivalent continuous sound level Leq
- Recording of up to 64,000 measurement points and data analysis software supplied as standard
- Large backlit display with digital display and bar graph
- Remote microphone (extension cable available as an accessory)



CA 1310 sound level meter delivered in a case with:

- Batteries
- Windscreen
- SL software
- 1 male jack plug
- Operating instructions
- Verification certificate

To order

CA 1310

Reference: P01651030

Sound level meter

CA 832

	CA 832
Measurement range	37.0 to 130.0 dB
Frequency range	31.5 Hz to 8 kHz
Accuracy (in reference conditions at 94 dB, 1 kHz)	± 2 dB
Frequency weighting	A / C
Time weighting	FAST: 125 ms / SLOW: 1 second
Function	
Measurement modes	MaxL (Maximum sound level)
Physical specifications	
Tripod insert	Yes
Dimensions / weight	237 x 60.5 x 38 mm / 230 g
General specifications	
Compliance	IEC 651 type 2
Warranty	2 years

dBA

dBc



Key features

- Noise level control
- Ease of use



CA 832 delivered with:

- 1 shockproof case
- 1 jack plug for analogue output
- 1 universal adapter for mounting on a tripod
- 1 9 V 6LR61 battery

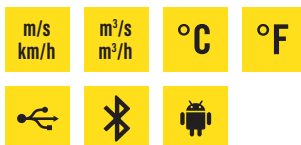
To order

CA 832

Reference: P01185501Z

Thermo-anemometer

CA 1227



Air velocity and flow rate measurements in all situations

- Air temperature, velocity and flow rate
- Mapping of measured air velocities (MAP mode)
- Min., Max., Avg. and HOLD functions
- Recording of up to 1 million data points

	CA 1227
Air speed / flow rate sensor	Rotating vane with optical detection
Air speed range	0.50 m/s to 27.0 m/s
Air speed accuracy	± 3 % of reading ± 0,1 m/s
Air flow rate range	0 to 2,999 m³/h
Air flow rate accuracy	± 8 % L
Temp. range °C/°F	- 20 to +50 °C
Temp. accuracy °C	0 to 50 °C: ± 0.8 °C -20 to 0 °C: ± 1.6 °C
Functions	Min., Max., HOLD, Average
Recording	Manual Start / Stop on the product Programmed recording
Data storage	More than 1 million points
Power supply	- 3 x 1.5V LR6 alkaline batteries or NiMH rechargeable battery - Mains connection possible with the mains / micro-USB adapter offered as an accessory
Battery life	200 hrs (portable mode) / 8 days of recording (measurements at 15-minute intervals)
Dimensions	Casing: 150 x 72 x 32 mm Sensor: 160 x 80 x 38 mm Spiral cable: 24 to 120 cm
Weight	Approx. 400 g
Ingress protection	IP40 casing
Operating temperature / humidity	-10 to +60 °C / 10 to 90 % HR
Standards	IEC 61010-1 - IEC 61326-1



+ The extra

- Data export in .xls format and email delivery directly to the field thanks to the CA Environmental Loggers Android app



CA 1227 supplied with:

- 1 carrying case
- 3 x 1.5 V LR6 batteries
- 1 USB cable
- 1 measurement report

PC software
DL Transfer
free available
for download
on the website
Chauvin Arnoux

To order

1 Thermo-anemometer CA 1227
Reference: P01654227

Recommended accessories



P01654250
Set of 2 cones for flow measurement with propeller (circular section Ø 210 mm and rectangular 346 x 346 mm)



P01654251
Propeller sensor Ø 80 mm (spare part)

Thermo-hygrometer

CA 1246



%HR

°C

°F



Precise and simultaneous control of humidity and temperature

- Hygrometry, temperature and dew point
- Recording of up to 1 million points
- Visual alarm when thresholds are exceeded
- MultiFix-compatible magnetic product
- Recording triggered when alarm threshold is reached

	CA 1246
RH range	3 to 98 % RH
RH accuracy	10 to 90 %RH: $\pm (2 \%RH \pm 1 \text{ ct})$ outside that range: $\pm (4 \%RH \pm 1 \text{ ct})$
Temp. range °C/°F	-10 to +60 °C
Temp. accuracy °C/°F	10 to 40°C: $\pm (0.5^\circ\text{C} \pm 1 \text{ ct})$ outside that range: $\pm (0.032 \times (T-25) \pm 1 \text{ ct})$ / T=temperature in °C
Dew point range	-10 to +60 °Ctd
Dew point accuracy	1.5 °C from 20 % RH to 30 % RH 1 °C above 30 % RH
Functions	Min, Max, HOLD, Alarms
Recording	Manual Start / Stop on the product Programmed recording
Alarms	Visual alert on threshold overrun set via Data Logger Transfer Recording can be triggered on alarm threshold
Data storage	More than 1 million points
Power supply	- 3 x 1.5V AA / LR6 alkaline batteries or NiMH rechargeable battery - Mains connection possible with the mains / micro USB adapter (option)
Battery life	1,000 hrs (portable mode) / 3 years for recording (15-minute measurement interval)
Dimensions / weight	187 x 72 x 32 mm / 260 g with batteries
Ingress protection	IP54 casing
Operating temperature / humidity	-10 to +60 °C / 10 to 90 % RH
Standards	IEC 61010-1 - IEC 61326-1

+ The extra

- Data export in .xls format and email delivery directly to the field thanks to the CA Environmental Loggers app

CA 1246 supplied with:

- 1 carrying case
- 3 x 1.5 V LR06 batteries
- 1 USB cable
- 1 measurement report



PC software
DL Transfer
free available
for download
on the website
Chauvin Arnoux

To order

CA 1246

Reference: P01654246

Recommended accessory



P01156401
75% salt cartridge

Material moisture meter

CA 847



Measuring moisture content in materials

- Measure wood moisture with ease: insert the probe and read the corresponding value on the LED display

	CA 847
RH range	6 to 100 % RH
RH accuracy	$\pm 1 \text{ LED}$
Dimensions	173 x 60.5 x 38 mm
Weight	160 g



CA 847 delivered with:

- 1 x 9 V 6LR61 battery
- 1 x shockproof case

To order

CA 847

Reference: P01156302Z

Manometer

CA 1550 - KIT CA 1550



Accurate verification of the proper functioning of HVAC installations

- Accurate and easy to use
- Time-stamped monitoring
- Differential measurements Function
- Thermometer function and speed/flow function with Pitot

CA 1550

Differential pressure measurement	
Measuring range	- 2,450 to + 2,450 Pa
Accuracy / Resolution	± 0.5% Full scale ± 1 pt / 0.1 Pa for measurements between ± 200 Pa / 1 Pa beyond
Air velocity and flow rate with Pitot probe accessory	
Air velocity range	from 2 m/s to 60 m/s
Accuracy	from 2 to 5 m/s: ± 0.7 m/s - from 5 m/s to 60 m/s: ± 0.5% of reading ± 0.3 m/s
Air flow range	0.00 to 9,999 m³ / h
Accuracy	± 0.5% of reading ± 1 pt
Compensations	Manual or automatic temperature compensation (K thermocouple input) Automatic atmospheric pressure compensation
Functions	Min-Average-Max-Hold-Auto-Zero-MAP mode
Recording	Manual triggering and stopping on the product or programmed
Memory	Capacity : over 1 million points
Power supply	- Alkaline batteries: 3 x 1.5V LR06 or rechargeable NiMH battery - Mains connection via mains adapter/micro USB (optional)
Autonomy	500 hours (portable mode) / 3 years in recording mode (based on 15-minute measurements)
Dimensions / weight	150 x 72 x 32 mm / 260 g with batteries
Operating environment	Temperature: -10 to 50 °C / Humidity: 10 to 90% RH
Standards	IEC 61010-1 - IEC 61326-1

Manometer

CA 850



Bar

Pressure level measurement in air conditioning installations and pneumatic control systems

- Accurate and easy to use
- Time-stamped monitoring
- Differential measurements
- Compact and lightweight

CA 850

Measurement range	-6.89 to +6.89 bar
Accuracy	1 % at full scale + 1 ct
Units	psi, bar, mbar, mmH ₂ O, inH ₂ O kbar, cmH ₂ O, FtH ₂ O, mmHg, OZin ² , kg/cm ²
Functions	Differential measurements, Min., Max., HOLD
Dimensions / weight	182 x 72 x 30 mm
Weight	220 g



+ The extra

- Android app: data recovery and transmission of measurement reports by email
- The CA 1550 is available in a kit version, supplied with the P01654555 Pitot tube
- The CA 1550 has an input for a K thermocouple temperature sensor for temperature compensation during measurement with a Pitot tube.

CA 1550 delivered with:

- 1 carrying case
- 3 x 1.5V AA alkaline batteries
- 2 transparent connecting tubes
- 1 USB cable
- 1 measurement report and quick start guide

CA 850 comes with:

- 1 carrying case
- 2 transparent tubes
- 1 9V 6LR61 battery

PC software
DL Transfer
free available
for download
on the website
Chauvin Arnoux

To order

CA 850	Reference: P01184101
CA 1550	Reference: P01654550
KIT CA 1550	Reference: P01654555

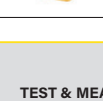
Recommended accessories



P01654560
Pitot tube (length 324 mm, connection Ø 6 mm, tube head Ø 8 mm)



P01654561
Transparent tube (internal Ø 5 mm, length 2 metres)



P01654242
Shockproof sheath

Tachometers

CA 1725 - CA 1727



Measures the rotational speed of a motor, the pulse frequency or the opening time of the contacts of a relay

- Measurements up to 100,000 rpm
- Contactless and contact measurements
- Numerous functions available: rotational speed, linear, counting, frequency, period
- Programmable and memory capacity CA 1727

CA 1727

- USB connection for evaluating recordings on a PC for the CA 1727

	CA 1725	CA 1727
RPM function		
Range	60 to 100,000 rpm	
Accuracy	10 ⁻⁴ of reading ± 6 cts	
m/min function		
Range	60 to 10,000 m/min.	
Accuracy	10 ⁻⁴ of reading ± 1 increment	
Hz function		
Range	0.1 to 1000 ms	
Accuracy	4 x 10 ⁻⁵ of reading ± 4 cts	
ms functions		
Range	0.1 to 1000 ms	
Accuracy	10 ⁻⁴ of reading ± 5 cts	
Duty cycle function		
Range	0.1 to 100 %	
Accuracy	0.1 % to 1 %	
Counting function		
Range	-	0 to 100,000 events
Accuracy	-	± 1 event
Functions	Min., Max., HOLD, Smooth	
	-	High and low alarms
Data storage	-	4,000 points
Dimensions	216 x 72 x 47 mm	
Weight	250 g	



CA 1725 delivered with:

- 1 case
- 1 FRB F connector
- 1 9 V 6LR61 battery
- 1 set of 15 reflective retro films (length 0.1 m)
- 1 CD-ROM containing the operating instructions

CA 1727 delivered with:

- 1 case
- 1 FRB F connector
- 1 9V 6LR61 battery
- 1 set of 15 retro-reflective films (length 0.1 m)
- 1 CD-ROM containing the TACHOGRAPH software

To order

CA 1725

Reference: P01174810

CA 1727

Reference: P01174830

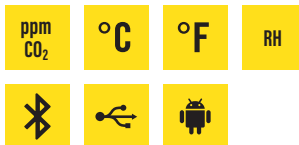
Recommended accessory



P01174902
Mechanical accessory kit

Air quality measurement

CA 1510

3 in 1: CO₂ logger -
Temperature - Humidity

- CO₂, temperature and humidity logger (up to 1 million data points)
- Compact: for fixed or portable use
- User-friendly: thanks to comfort level indicators based on CO₂ levels and hygrothermal criteria
- User-configurable threshold values (e.g. 800 ppm)
- Accurate: Compliant with decrees no. 2022-1689 & no. 2022-1690 and the order of 27 December 2022 on air quality monitoring
- Low gas consumption thanks to its on-site calibration kit

CA 1510	
Specifications for CO₂	
Measurement range	0 to 5,000 ppm
Accuracy	± 50 ppm ± 3% of measured value
Resolution	1 ppm
Temperature measurement	
Measurement range	-10°C to +60°C
Accuracy	± 0.5 °C
Resolution	0.1°C
Humidity	
Measurement range	5 to 95 % RH
Accuracy	± 2% RH
Resolution	0.1% RH
Possibilities of the product	
Portable measurement	Quick measurement and display of the CO ₂ , temperature and relative humidity values
Indicator	1D mode: CO ₂ confinement indication Visual indication (two-colour backlighting and pictograms) and/or audible indication of high confinement when the CO ₂ concentration is between 1,000 ppm and a 1,700 ppm threshold. 3D mode: indication of optimum comfort zone on the basis of hygrothermal criteria and the CO ₂ concentration
Energy saving (ECO)	
	For fixed use on battery power, the product performs measurements every 10 minutes over a programmable time range for a battery life of up to one year
Logger	Activation of programmed recording (P_REC) The start date, recording rate and end date can be customized with the PC software or the Android application. Possibility of locking the display in this mode (no values displayed). Manual activation (M_REC) Manual start and stop controls on the product. Recording is performed at the rate of the mode currently selected.
Specifications	
Recording rate	Customizable from 1 minute to 2 hours
Data storage	More than 1 million points
Buzzer and units	Yes / °C or °F
Backlighting / Hold / Min Max	Yes
Dimensions / weight	125 x 65.5 x 32 mm / 190 g with batteries
Power supply	Batteries: 2 x 1.5 V AA / LR6 or rechargeable battery Connection to mains possible with mains / micro USB adapter supplied as standard
Interfaces	2 communication modes possible: Bluetooth wireless communication and USB link; the product is then recognized as a USB key for easy file transfer
Mounting	CA 1510 casing equipped with a magnet, a wall-suspension system and a slit for hanging the product. A wall support for use with a padlock (padlock not supplied) is available as an accessory, as is a desktop stand (supplied as standard with the CA 1510W).
Processing software supplied as standard	Representation in graph or table format / Data export - Real-time mode / Report generation

Diagnostics
& control

Education

Energy
efficiency

Transport

Tertiary
& residential

Industries

Production, transport
& distributionLaboratory
& metrology

+ The extra

- CA 1510 is also available in black. This version comes in a metal case.
- Supplied in a metal case

CA 1510 delivered in a neutral
cardboard box with:

- 2 x 1.5 V LR06 batteries
- 1 USB mains adapter
- 1 USB-micro USB cable
- 1 desktop stand
- 1 operating manual (5 languages) on CD-ROM
- 1 verification certificate

Software
Data Logger
Transfer
available for
download

To order

CA 1510 white

Reference: P01651011

CA 1510 black

Reference: P01651010

Recommended accessories



P01651022

In Situ calibration kit



P01298071

Metal case

CO detector

CA 895



ppm
CO

Check that your
combustion appliances
are working properly

- Measures the level of carbon monoxide present in a room
- Checks the operation of combustion equipment
- Warning buzzer to indicate when there is a risk

	CA 895
Measurement range	0 to 1,000 ppm
Accuracy	± 5 % + 5 ppm
Measurement mode	Normal or Avg.
Functions	Alarme, Max., HOLD
Dimensions	237 x 60.5 x 38 mm
Weight	190 g



CA 895 delivered with:

- 1 shockproof protective sheath
- 1 x 9 V 6LR61 battery

To order

CA 895
Reference: P01651001Z

Stroboscope

CDA 9452



Flashes
/min

Speed measurement
without contact

- Frequency or speed measurement without contact with rotating parts
- Digital frequency display
- Quartz time base
- Flash lamp, white, 40 joules

	CDA 9452
LED display	10,000 counts
Measurement range	100... 1,000 flashes/min 1,000... 10,000 flashes/min
Résolution	1 flash/min
Accuracy	0.05 %
Power supply	220 V - 50/60 Hz
Climatic conditions	0... + 50 °C / RH < 80 %
Dimensions	210 x 120 x 120 mm
Weight	1kg



+ The extra

When the flashes of a strobe light are directed at an object moving at a regular speed, and the flashes have the same frequency as the observed phenomenon, the object appears to be stationary. Simply read the frequency expressed in flashes per minute on the CDA 9452. To obtain the frequency expressed in Hz, simply divide the reading by 60.

CDA 9452 delivered with:

- power cable

To order

CDA 9452
Reference: P03197704

Distance meter

CA 1730



All distance measurements up to 60 metres

- Distance measurement up to 60 metres
- Area / Volume / Addition / Subtraction
- Height calculation and continuous measurement mode
- 4-line backlit display
- Memory with 20 data points
- Ruler for offset measurement

	CA 1730
Measurement range	0.2 ~ 60 metres
Accuracy	$\pm 2 \text{ mm} + 5 \times 10^{-5} \text{ Distance}$
Area & volume measurement	Yes
Addition/Subtraction	Yes
Single measurement	Yes
Continuous measurement	Yes
Display	On 4 lines with backlighting
Audible signal	Yes
Data storage	History of 20 results
Units	m / in / ft / ft+in
Power supply	
Type	2 x 1.5 V AAA batteries
Battery life	Approximately 5,000 measurements
Auto power-off	LASER automatic power-off (30 seconds) Instrument automatic power-off (180 seconds)
Physical specifications	
Dimensions / weight	115 x 52 x 32 mm / 118 g
Protection	IP54
Operating range	Temperature: 0 to +40 °C without condensation Storage: -10°C to +60°C
Warranty	2 years

Diagnostics
& control

Education

Energy
efficiency

Transport

Tertiary
& residential

Industries

Production, transport
& distributionLaboratory
& metrology

CA 1730 delivered in a cardboard box with:

- 1 carrying case
- 2 AAA batteries
- Operating instructions in 5 languages
- Certificate of verification

To order

CA 1730

Reference: P01651730

Field testers

VX 0003 - VX 0100



Control exposure to electromagnetic pollution in the home or office

- Test for pollution generated by the distribution of electrical energy (0-3 kHz) (VX 0003/VX 0100)
- Tests pollution generated by connected equipment (3-100 kHz) (VX 0100)
- 2 complementary measurement methods for greater efficiency:
 - Representative method: fields taking into account the individual
 - Traditional method: fields referenced to earth
- External antenna for field measurement and cable detection (VX 0100)
- An audible alarm for immediate identification of field levels
- Control in accordance with current and future standards and directives

	VX 0003	VX 0100
Display & Buzzer		
Display on 2 scales of 7 LEDs each	■	
2,000-count backlit LCD display		■
Direct display in Volt/m (compatible with standards)	■	■
Buzzer proportional to E field level	■	■
Indication of measurement frequency range		■
"Low battery" & "Hold" indicators	■	■
Commands		
On / Off (with automatic shutdown after 30 min)	■	■
Measurement Hold	■	■
Buzzer On/Off	■	■
Measurement range selection	Manual	Automatic
3 kHz filter selection (<, >, full band)		■
Antenna & Reference		
Built-in «Field» antenna	■	
Removable «Field» antenna, diameter 62 mm + «cable detection» function		■
«Individual» field measurement reference + continuity rod	■	■
		Optional accessory
«Earth» field measurement reference	■	■
Measurements		
RMS electric field intensity in V/m	■	■
Sensitivity & Accuracy		
2 sensitivity ranges (compatible with standards)	5 to 100 V/m - 100 to 2,000 V/m	1.0 to 200.0 V/m - 200 to 2,000 V/m
Measurement accuracy (in laboratory conditions)	±10 % on LED thresholds	±3 % ± 20 D @ 50/60 Hz
Frequency range		
Analysis of electrical equipment 10 Hz to 3 kHz	■	■
Analysis of equipment connected to the mains	10 Hz to 3 kHz	10 Hz to 3 kHz (3 kHz low-pass filter) 3 kHz to 100 kHz (3 kHz high-pass filter) 10 Hz to 100 kHz (no 3 kHz filter)
General specifications		
Power supply	1 x 9 V battery (supplied) - Battery life 60 to 80 hours - Automatic power-off function (30 min)	
Mechanical specifications	IP65 watertight casing - Dimensions 63.6 x 163 x 40 mm - Weight approx. 200 g with battery	
Warranty	2 years	



+ The extra

The VX 0003 and VX 0100 BioTest field testers/measurers instantly indicate the level of low-frequency electric fields. Suitable for residential and commercial use, they can be used by both professionals and individuals.

In your home or office, control your exposure to electromagnetic pollution.

In your home or office, check your exposure to electromagnetic pollution.

The VX 0003 and VX 0100 are easy-to-use, economical and reliable testers!

They are mainly used in the field of electrical installation testing (new & renovation) and in technical and vocational education.

VX 0003 delivered in blister pack with:

- A carrying case
- An earth cable
- A socket tester
- A 9 V battery

VX 0100 delivered in case with:

- An earth cable
- A socket tester
- A 9 V battery

To order

VX 0003 Reference: P01651011

VX 0100 Reference: P01651011

Recommended accessories

For VX 0100



HX0104
Bag for VX testers



P01102084A
Continuity test probe

For VX 0003

HX0009
Case

Field meter

CA 40

Field meter
low frequencies

- Measurement of low-frequency magnetic fields
- Rapid assessment of radiation from devices and installations
- Handy unidirectional probe

	CA 40		
Magnetic field measurement	20 μ T	200 μ T	2,000 μ T
Accuracy	$\pm(4\%+3\text{ cts})$	$\pm(5\%+3\text{ cts})$	$\pm(10\%+5\text{ cts})$
Frequency range	30 to 300 Hz		
Probe	Unidirectional		
Dimensions	163 x 68 x 24 mm		
Weight	285 g		



CA 40 delivered with:

- 1 probe
- 1.9 V 6LR61 battery

To order

CA 40

Reference: P01167501

Recommended accessory



P01298036
Carrying case

LAN Network Tester

CA 7028



RJ45

LAN network testing

- Graphic display
- Detects, identifies and locates faults up to 150 metres
- Designed for use on UTP, STP, FTP, & SSTP cables equipped with RJ45 connectors and wired in accordance with TIA 568A/B, USOC or ISDN specifications

	CA 7028
Connector	RJ 45
Cable types	UTP, STP, FTP & SSTP
Faults indicated	Short-circuited pair Open-circuit wire Short circuit between pairs Crossed pairs Reversed pairs Shield continuity
Remote modules	Identifiers 1 to 9
Dimensions	165 x 90 x 37 mm
Weight	350 g



CA 7028 delivered with:

- 2 RJ45 cables
- 1 identifier no. 1
- 1 carrying case
- 4 1.5 V LR06 batteries

To order

CA 7028

Reference: P01129501

Recommended accessories



P01101994
Set of 4 identifiers no. 2 to 5



P01101995
Set of 4 identifiers no. 6 to 9

Temperature calibrators

CA 1621, CA 1623 Temperature Calibrators 132

CA 1631 process calibrator 133



Temperature calibrators

CA 1621 - CA 1623



°C °F

Accurate measurement and simulation of temperature probes

- Large screen for improved readability
- Calibration of devices without dismantling sensors
- Easy to handle thanks to its dimensions (205x97x45 mm) and weight (472 g)

CA 1621 : thermocouple probe temperature calibrator capable of measuring and simulating:

- up to 8 types of thermocouple: J, K, T, E, R, S, B and N
- mV voltage

CA 1623 : resistive probe temperature calibrator capable of measuring and simulating:

- up to 7 types of resistive probes:
Pt 10, Pt 50, Pt 100, Pt 200, Pt 500, Pt 1000, Pt 100 (JIS)
- resistance



+ The extra

- Optional mains power supply:
- Input: 100 V/240 V - 50/60 Hz – 1.8 A
- Output: 12 VDC, 2 A max
- Powered by batteries (6 x 1.5 V supplied) or mains power supply (optional)

CA 1621 delivered with:

- 1 calibrator
- 1 case
- 6 x 1.5 V LR06 batteries
- 2 thermocouple adapters

CA 1623 delivered with:

- 1 calibrator
- 1 case
- 6 x 1.5 V LR06 batteries
- 2 test leads and 2 alligator clips

To order

CA 1621 Reference: P01654621

CA 1623 Reference: P01654623

Recommended accessories



P01298075
MultiFix compatible bag
120 x 245 x 60 equipped



P01103057
Mains power supply

CA 1621

Input/output range		Resolution	Accuracy	
-10 mV ... 100 mV		0.01 mV	± 0.025 % + 2 counts	
Function	Range	Resolution	Accuracy	Reference junction error
Type J	-200 ... +1,200 °C	0.1°C	± (0.3 °C + 10 µV)	± 0.3 °C
Type K	-200 ... +1,370 °C	0.1°C	± (0.3 °C + 10 µV)	± 0.3 °C
Type T	-200 ... +400 °C	0.1°C	± (0.3 °C + 10 µV)	± 0.3 °C
Type E	-200 ... +950 °C	0.1°C	± (0.3 °C + 10 µV)	± 0.3 °C
Type R	-20 ... +1,750 °C	1°C	± (1 °C + 10 µV)	± 0.3 °C
Type S	-20 ... +1,750 °C	1°C	± (1 °C + 10 µV)	± 0.3 °C
Type B	+600 ... +1,800 °C	1°C	± (1 °C + 10 µV)	± 0.3 °C
Type N	-250 ... +1,300 °C	0.1°C	± (0.3 °C + 10 µV)	± 0.3 °C

CA 1623

Range	4-wire measurement accuracy ± Ω	Simulation accuracy ± Ω	Permissible excitation mA
0.00 Ω ... 400.0 Ω	0.1	0.15	0.1 ... 0.5
		0.1	0.5 ... 3.0
400.0 Ω ... 1,500.0 Ω	0.5	0.5	0.05 ... 0.8
1,500.0 Ω ... 3,200.0 Ω	1	1	0.05 ... 0.4
	2		

Mode	Range	Accuracy in °C			Permissible excitation mA
		4-wire input	2-wire/3-wire input	output	
Pt10 385	-200 ... +800 °C				0.1 ... 3.0
Pt50 385	-200 ... +800 °C	0.7	1.0	0.7	0.1 ... 3.0
Pt100 385	-200 ... +800 °C	0.33	0.5	0.33	0.1 ... 3.0
Pt200 385	-200 ... +250 °C	0.2	0.3	0.2	0.1 ... 3.0
	+250 ... +630 °C	0.8	1.6	0.8	
Pt500 385	-200 ... +500 °C	0.3	0.6	0.3	0.05 ... 3.0
	+500 ... +630 °C	0.4	0.9	0.4	
Pt1000 385	-200 ... +100 °C	0.2	0.4	0.2	0.1 ... 3.0
	+100 ... +630 °C	0.2	0.5	0.2	
Pt100 JIS	+200 ... +630 °C	0.2	0.5	0.3	0.1 ... 3.0

Process signal calibrator

CA 1631



°C

°F

Measurement and simulation of process signals

Voltage/current process signal calibrator used to measure or deliver:

- a direct current loop between 0 and 24 mA
- a direct voltage between 0 and 20 V

CA 1631

Calibre	Resolution	Accuracy ± (% of reading + points)
100 mV	0.01 mV	0.02 % + 3
20 V	0.001 V	0.02 % + 3

Input impedance: 2 MΩ (nominal value), < 100 pF
Surge protection: 30 V - Current delivered at 20 V: 1 mA

Calibre	Resolution	Accuracy ± (% of reading + points)
24 mA	0.001 mA	0.015 % + 3

Overload protection: 125 mA 250 V fast-acting fuse
Percentage display: 0% = 4 mA 100% = 20 mA
Source mode: 1,000 Ω load at 20 mA for battery voltage ≥ 6.8 V,
(700 Ω at 20 mA for battery voltage between 5.8 and 6.8 V
Simulation mode: external loop voltage condition:
24 V (nominal value), 30 V maximum, 12 V minimum.

Loop voltage supply: 24 V ± 10%



+ The extra

- Optional mains power supply
- Input: 100 V/240 V - 50/60 Hz - 1.8 A
- Output: 12 V_{DC}, 2 A max
- Powered by batteries (6 x 1.5 V supplied) or mains power supply (optional)



CA 1631 delivered with:

- 1 calibrator
- 1 case
- 6 x 1.5 V LR06 batteries
- 2 test leads
- 2 alligator clips
- 2 test probes

To order

CA 1631

Reference: P01654402

Recommended accessories



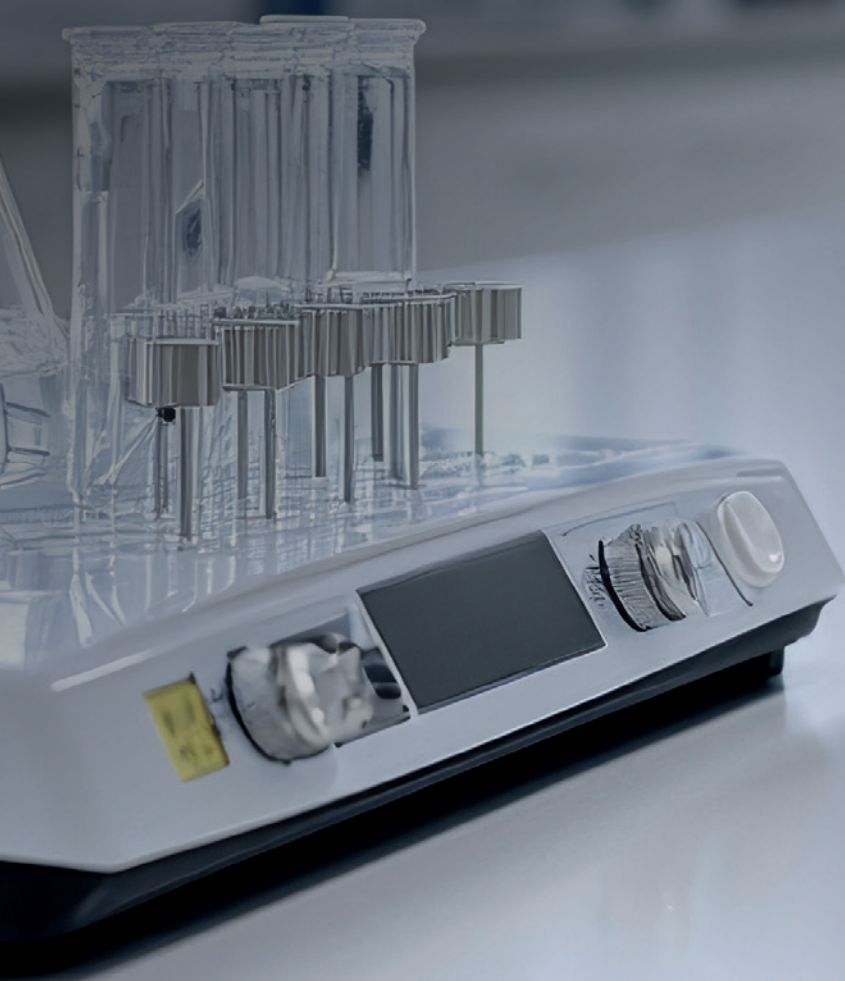
P01298075
MultiFix compatible bag
120 x 245 x 60 equipped (spare)



P01103057
Mains power supply

Electrochemistry

CA 10101 waterproof portable pH meter	136
CA 10141 waterproof portable conductivity meter	137
pH testers CA 10001 – CA 10002	138
pH meters and conductivity meters for laboratory use	
CA 10101E - CA 10141E	139
Electrodes for general use.....	140
Specific electrodes for Chauvin Arnoux devices	142
pH meters and conductivity meters for teaching purposes	
PSD1 PSD21 PPD26 P310 CSD22 C320 MPC25	143
Buffer and maintenance solutions	144



Waterproof portable ph meter

CA 10101



IP 67



Connexion PC



Rétro-éclairage



Indicateur de stabilité



État de l'électrode

pH meter designed for professionals

The CA 10101 comes in a kit with a carrying case to facilitate mobile measurements in the field or in a production environment. The stand stabilises the device and allows it to be used on a laboratory bench.

- **Large LCD screen with backlighting:** dual pH and temperature display
- **PC connection via micro-USB port:** compatible with Data Logger Transfer software
- **Automatic and optimised calibration:** calibration up to 3 points. 10 buffers stored with the option to add customised buffers. The device indicates the quality of the electrode that has just been calibrated.
- **Calibration log:** the device indicates the value of the slope and offset of the last calibration. The complete calibration log is available via PC
- **Signal stability indicator:** for accurate measurements
- **Data recording:** manual, automatic at intervals or programmed

	CA 10101
Waterproof device for field use	■
pH measurement	■
Redox measurement	■
Temperature measurement	■
Automatic calibration	■
Calibration log	■
Data recording	■

		CA 10101	
pH	Measuring range	2.00 to 16.00	
	Resolution (R)	0.01 pH	
	Uncertainty	± 0.01 pH ± R	
Redox	Measuring range	±199.9 mV	-1999 to -200 and +200 to +1999 mV
	Resolution (R)	0.1 mV	1 mV
	Uncertainty	± 0.1 mV ± R	± 1 mV ± R
Temperature	Measuring range	-10.0 to +120.0 °C / 14.0 to 248.0 °F	
	Resolution (R)	0.1 °C / 0.1 °F	
	Uncertainty	< 0.4 °C / < 0.7 °F	
Calibration	pH	Automatic, up to 3 points, 10 stored buffers (4.01; 7.00; 9.18; 1.68; 4.01; 7.00; 10.01; 4.005; 6.865; 9.180) and option to add your own buffer solutions	
	Redox	Automatic, 1 point, 2 stored buffers (220 mV and 468 mV) and option to add your own buffer solutions	
	Calibration log	Display of the slope and offset of the last calibration on the device Complete history saved and accessible via PC	
Temperature compensation		Automatic (ATC) or manual (MTC); from -10.0 to +120.0 °C / 14.0 to 248.0 °F	
Connectors	pH electrode input	8-point DIN (adapters for BNC, S7 and Jack optional)	
	Communication interface	Micro-USB	
Electrodes	pH	pH XRGST1 (supplied), combined pH electrode with integrated temperature sensor (PT1000), 8-pin DIN connector	
	Redox	XRPTST1 (optional), combined ORP electrode with integrated temperature sensor (PT1000), 8-pin DIN connector	
Data recording	Time stamp	Yes	
	Memory	> 100,000 measurements	
	Manual recording	Yes	
	Automatic recording	Yes, at intervals	
	Data transfer	Yes, to PC via USB with Data Logger Transfer software	
Batteries		4 x 1.5 V alkaline AA or LR06 batteries	
Battery life		Approximately 300 hours of continuous use	
Auto shut-off		Auto shut-off after 3, 10 or 15 minutes of non-use (adjustable)	
Dimensions/Weight		211 x 127 x 54 mm / 600 g	



Diagnostics & control



Industries



Laboratory & metrology



+ The extra

Scheduled recordings: using the Data Logger Transfer software, you can schedule immediate or delayed recordings. The device will automatically switch back on at the start of the recording if it is switched off.



CA 10101 delivered in a hard case with:

- 1 pH electrode with integrated temperature sensor XRGST1
- 4 x 1.5 V LR06 batteries
- 1 protective cover mounted on the device
- 2 ready-to-use buffer solutions (NIST/DIN compliant) with pH values of 4.01 and 7.00
- 2 plastic beakers
- 1 USB/μUSB cable
- 1 wrist strap

To order

pH meter CA 10101

Reference: P01710010

Recommended accessories

P01710052
ORP electrode XRPTST1

P01710057
pH electrode XRGST1 3 m cable

Buffer solutions
see page 145

Portable waterproof conductivity meter

CA 10141



IP 67



Conductivity meter designed for professionals

The CA 10141 comes with a carrying case to facilitate mobile measurements in the field or in a production environment. The stand allows the device to be stabilised and also used on a laboratory bench.

- **Large LCD screen with backlight:** dual display of conductivity and temperature
- **PC connection via micro-USB port:** compatible with Data Logger Transfer software
- **Automatic and optimised calibration:** 6 stored buffers with the option to add custom buffers.
- **Conversion of conductivity values:** resistivity, salinity and TDS
- **Calibration log:** the device displays the cell constant from the last calibration. The complete calibration log is available via PC
- **Signal stability indicator:** for accurate measurements

CA 10141

Waterproof device for field use	■
Measurement of conductivity, resistivity, salinity, TDS	■
Temperature measurement	■
Automatic calibration	■
Calibration log	■
Data recording	■

CA 10141		
Conductivity	Measuring range	0.050 µS/cm to 500.0 mS/cm
	Resolution (R)	1 nS/cm to 100 µS/cm (depending on range)
	Accuracy	± 0.5% L* ± R
TDS	Measuring range	0.001 mg/l to 499.9 g/l
	Resolution (R)	1 µg/L to 100 mg/L (depending on range)
	Accuracy	± 0.5% L* ± R
	TDS factor	2.000 Ω.cm to 19.99 MΩ.cm
Resistivity	Measuring range	1 mΩ.cm to 10 kΩ.cm (depending on range)
	Resolution (R)	1 mΩ.cm à 10 kΩ.cm (selon la plage)
	Accuracy	± 0.5% L* ± R
Salinity	Measuring range	2.0 to 42.0 psu
	Resolution (R)	0.1
	Accuracy	± 0.5% L* ± R
Temperature	Measuring range	-10.0 to +120.0 °C (14.0 to 248.0 °F)
	Resolution (R)	0.1 °C (0.1 °F)
	Accuracy	< 0.4 °C (<0.7 °F)
	Reference temperatures	20 or 25 °C (68 or 77 °F)
Calibration	Conductivity	Automatic, 1 point, 6 stored buffers (147.0 µS/cm; 1408 mS/cm; 12.85 mS/cm; 84.0 µS/cm; 1.413 mS/cm; 12.88 mS/cm) and option to add your own buffer solutions
	Calibration log	Display of the cell constant from the last calibration on the device Complete history saved and accessible via PC
Temperature compensation		Automatic (ATC) or manual (MTC); from -10.0 to +120.0 °C / 14.0 to 248.0 °
Temperature correction		Linear, non-linear, disabled
Connectors	pH electrode input	8-pin DIN (adapters for BNC, S7 and Jack optional)
	Communication interface	Micro-USB
Conductivity probe		XCP4ST1 (supplied), 4-pole conductivity sensor with integrated temperature probe (Pt 1000), 8-pin DIN connector, 1 m cable
Data recording	Time stamp	Yes
	Memory	> 100,000 measurements
	Manual recording	Yes
	Automatic recording	Yes, at intervals
	Data transfer	Yes, to a PC via USB using the Data Logger Transfer software
Batteries		4 x 1.5 V alkaline AA or LR06 batteries
Battery life		Approximately 300 hours of continuous use
Auto shut-off		Auto shut-off after 3, 10 or 15 minutes of non-use (adjustable)
Dimensions/Weight		211 x 127 x 54 mm / 600 g

* R: % of reading



+ The extra

Recordings programmed via Data Logger

Transfer software: programme immediate or delayed recordings.

The device will automatically switch back on at the start of the recording if it is switched off.



CA 10101 supplied in a hard case with:

- 1 four-pole conductivity cell with integrated temperature probe XCP4ST1
- 4 x 1.5 V LR06 batteries
- 4 x 1.5 V LR06 batteries
- 1 protective cover fitted to the device
- 1 x 1408 µS/cm conductivity standard solution
- 1 x plastic beaker
- 1 x USB to micro USB cable
- 1 x wrist strap

To order

CA 10141 Conductivity Meter
Reference: P01710020

Recommended accessories



Buffer solutions
see page 145

pH testers

CA 10001 – CA 10002



Waterproof pH and temperature testers for accurate, reliable and rapid spot measurements

The CA 10001 and CA 10002 are designed for measuring pH and conductivity, while the CA 10002 is designed for measuring pH and temperature.

- IP65 waterproof housing
- Designed to test samples with a narrow opening (electrode body diameter : 20 mm)
- Large screen with simultaneous display of pH and temperature
- Automatic calibration can be performed at 1, 2 or 3 points
- HOLD button to freeze the measurement for greater convenience when reading
- ATC (Automatic Temperature Compensation) mode for temperature-compensated pH values
- Compact, easy to transport

The pH tester for general use

The CA 10001 is designed for routine measurements in solution.

The special pH tester for the food industry

The CA 10002 is suitable for many applications in the food industry thanks to its penetrating and perforating glass tip.

Applications: dairy products, meat, yoghurt, semi-solid foods, etc.

	CA 10001	CA 10002
Pocket size for mobile applications, in the field or in the laboratory	■	■
pH tester for general use in solution	■	
pH testers for the food industry		■
pH measurement	■	■
Temperature measurement	■	■
HOLD button to freeze the measurement	■	■
Automatic calibration	■	■
Spherical tip electrode	■	
Pointed tip electrode		■
Waterproof tester for field use	■	■

		CA 10001	CA 10002
Measurement range	pH	0.00 to 14.00	2.00 to 12.00
	Temperature	0.0 to 60.0 °C / 32.0 to 140.0 °F	0.0 to 80.0 °C / 32.0 to 176.0 °F
Resolution	pH	0.01 pH	
	Temperature	0.1 °C / 0.1 °F	0.5 °C / 0.5 °F
Error	pH	± 0.1 pH	
	Temperature	± 1 °C / ± 2 °F	
Electrode tip		Spherical	Pointed
Calibration		Automatic, up to 3 points, stored buffers: 4.00; 7.00 and 10.00	
Temperature compensation		Automatic	
Electrode		pH electrode with integrated temperature sensor, plastic body, gel filling	
Connection		Canvas	
Power supply/lifespan		2 x 3V CR2032 batteries/<100 hours	
Auto-shutdown		After 20 minutes of inactivity	
Dimensions/Weight		226 x 36 x 20 mm / 65 g	228 x 36 x 20 / 65 g



CA 10001 and CA 10002 come with:

- 2 CR2032 3V batteries
- 1 storage bottle for the electrode
- 1 multilingual operating manual
- 1 verification certificate

To order

CA 10001 General purpose tester

Reference: P01710015

CA 10002 Specialised for the food industry

Reference: P01710016

Recommended accessories



P01298075
Carrying case
(120 x 245 x 60 cm)



See page 145
Buffer solutions

pH meter and conductivity meter for laboratory use

CA 10101E - CA 10141E



pH meter and conductivity meter suitable for teaching and compatible with the needs of professionals

- BNC connector
- Large LCD screen with backlighting
- Data transfer to Regressi, Graph2D and Data Logger Transfer software
- Compatible with ExAO interfaces via analogue outputs
- Signal stability indicator: for accurate measurements
- Automatic and optimised calibration: stored buffers with the option to add custom buffer values.
- Data recording: manual, automatic at intervals or programmed via Data Logger Transfer software

	CA 10101E	CA 10141E
pH measurement	■	
Redox measurement	■	
Conductivity, resistivity and TDS measurement		■
Temperature measurement	■	■
Analogue output(s)	■	■
Automatic calibration	■	■
Calibration log	■	■
Data logging	■	■

		CA 10101E	CA 10141E
pH	Measuring range	2.00 to 16.00 pH	-
	Resolution (R)	0.01 pH	-
Redox	Measuring range	±199.9 mV / from -1999 to -200 and +200 to +1999 mV	-
	Resolution (R)	0.1 mV / 1 mV	-
Conductivity	Measuring range	-	- 0.050 µS/cm to 200.0 mS/cm
	Resolution (R)	-	1 nS/cm to 100 µS/cm (depending on range)
TDS	Measuring range	-	0.001 mg/l to 200.0 g/l
	Resolution (R)	-	1 µg/l to 100 mg/l (depending on range)
	Facteur TDS	-	0.40 to 1.00
Resistivity	Measuring range	-	2 Ω.cm to 4999 kΩ.cm
	Resolution (R)	-	1 mΩ.cm to 1 kΩ.cm (depending on range)
Salinity	Measuring range	-	2.0 to 42.0 PSU
	Resolution (R)	-	0.1 PSU
Temperature	Measuring range	-10.0 to +120.0°C / 14.0 to 248.0°F	
	Resolution (R)	0.1 °C / 0.1 °F	
Calibration	pH	Automatic, up to 3 points, 10 buffers stored (4.01; 7.00; 9.18; 1.68; 10.01; 4.005; 6.865; 9.180) and option to add your own buffer solutions	
	Redox	Automatic, 1 point, 2 stored buffers (220 mV and 468 mV) and option to add your own buffer solutions	
	Conductivity	-	Automatic, 1 point, 6 stored buffers (147.0 µS/cm; 1408 mS/cm; 12.85 mS/cm; 84.0 µS/cm; 1.413 mS/cm; 12.88 mS/cm) and option to add your own buffer solutions
	Calibration log	Display of slope and offset from last calibration on device Complete history saved and accessible via PC Calibration certificate	Display of cell constant from last calibration on device Complete history saved and viewable via PC
Temperature compensation		Automatic (ATC) or manual (MTC) - from -10.0 to +120.0 °C / 14.0 to 248.0 °F BNC (pH and redox electrode) 2 mm banana plug (reference electrode)	
Connectors	Probe inputs Temperature sensor input	Jack (Pt1000 temperature probe)	
	Communication interface	Micro-USB type B (also used for power supply) Analogue output (2 x 4 mm banana plugs)	Micro-USB type B (also used for power supply) and 2 analogue outputs for conductivity/TDS/salinity/resistivity and temperature (3 x 4 mm banana plugs)
Data recording		Time stamp - Memory > 100,000 measurements - Manual and automatic recording	
Data transfer		Yes, to PC via USB	
Batteries		4 x 1.5 V AA or LR06 alkaline batteries - Mains adapter supplied	
Battery life		Approx. 200 hours	
Auto power off		Auto power off after 3, 10 or 15 minutes of non-use (adjustable)	
Dimensions/weight		211 x 127 x 54 mm / 600 g	



+ The extra

A mains adapter is supplied with the instruments to facilitate organisation in laboratories.

The CA 10141E has 2 analogue outputs (3 x 4 mm banana sockets, one red, one black and one yellow) which continuously supply a voltage proportional to the measurement value and a voltage proportional to the temperature.

The CA 10101E has one analogue output (two 4 mm banana sockets, one red and one black) which provides a continuous voltage proportional to the pH value or ORP value.

Configure the analogue outputs using the SetAnalogOutput_pH/ORP/Conduc/T.txt files. To access them, connect the device to the PC via the USB/micro-USB cable.

CA 10101E and CA 10141E delivered with:

- 4 AA or LR06 alkaline batteries
- 1 protective cover fitted to the device
- 1 USB-µUSB cable
- 1 mains adapter
- 1 quick start guide
- 1 verification certificate

To order

pH meter CA 10101E

Reference: P01710011

Conductivity meter CA 10141E

Reference: P01710021

Electrodes

For general laboratory use



Standard pH, redox and conductivity probes

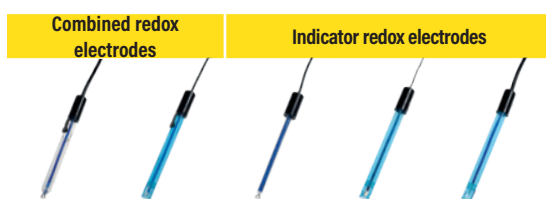
Most Chauvin-Arnoux electrodes are manufactured in France. They are reliable, robust and designed for laboratories and teaching. These electrodes are suitable for most Chauvin Arnoux devices.

pH measurement involves two electrodes: the indicator electrode, consisting of a glass membrane sensitive to hydronium ions, and the reference electrode, which delivers a constant potential. These electrodes can be housed in the same body, in which case they are referred to as 'combined' electrodes, or they can be mounted separately.

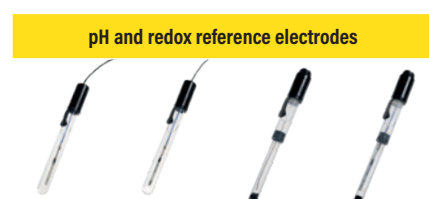
Redox measurement involves the same type of electrode assembly. The difference lies in the nature of the indicator electrode, which in this case is made of an inert metal capable of gaining or losing electrons (such as platinum or gold).

Conductivity probes are made of platinum or graphite and consist of either two or four electrodes combined in the same body. Conductivity probes are more stable over time.

	Combined pH electrodes					Indicator pH electrodes	
Electrode	BRV1H	XRV1H	LRV7	BRV4H	BRV4H-S7-130	BV41H	XV41
Measurement range	0-12	0-12	0-14	0-12	0-12	0-12	0-12
Tip	Spherical	Spherical	A tip	Micro	Micro	Spherical	Spherical
Reference system	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	-	-
Reference electrolyte	Refillable KCl 1 mol/L	Refillable KCl 1 mol/L	Gel	Refillable KCl 1 mol/L	Refillable KCl 1 mol/L	-	-
Junction	Ceramic	Ceramic	Ceramic and open Ceramic	Ceramic	Ceramic	-	-
Body material	Glass	PVC	PVC	Glass	Glass	Glass	PVC
Operating temperature	0 to 80 °C	0 to 60 °C	0 to 60 °C	0 to 80 °C	0 to 80 °C	0 to 80 °C	0 to 60 °C
Diameter Ø and length under cover (mm)	12 x 120	12 x 120	6 (end) x 123	6,5 (end) x 120	6,5 (end) x 185	12 x 110	12 x 120
Cable length	1 m	1 m	1 m	1 m	1 m	1 m	1 m
Recommended use	General use	General use	Dairy products (milk, cheese, yoghurt), semi-solid foods (cheese, yoghurt)	Low volumes	Low volumes Long body 130 mm	General use	General use. To be used in conjunction with a reference electrode of type BR41, BR42 or XR41, XR42.
References							
Connectors BNC	BRV1H-BNC	XRV1H-BNC	P01715019	BRV4H-BNC	-	BV41H-BNC	XV41-BNC
S7 connectors (screw-on)	BRV1H-S7	XRV1H-S7	-	BRV4H-S7	BRV4H-S7-130	BV41H-S7	XV41-S7
DIN connectors	-	XRV1H-DIN	-	-	-	-	-
DIN connectors 8-point waterproof	-	-	P01715020	-	-	-	-
TV connectors	BRV1H-TV	XRV1H-TV	-	-	-	-	-



Electrode	BRPT1	XRPT1	BPT1	XPT1	XPT2
Redox measurement range	+/- 2,000 mV				
Metal	Platinum wire				Platinum rod
Reference system	Ag/AgCl	Ag/AgCl	-	-	-
Reference electrolyte	Refillable KCl 1 mol/L	Refillable KCl 1 mol/L	-	-	-
Junction	Ceramics	Ceramics	-	-	-
Body material	Glass	PVC	Glass	PVC	PVC
Operating temperature	0 to 80 °C	0 to 60 °C	0 to 80 °C	0 to 60 °C	0 to 60 °C
Diameter Ø and length under cover (mm)	12 x 115	12 x 120	8 x 115	12 x 120	12 x 120
Cable length	1 m	1 m	1 m	1 m	1 m
Recommended use	General use	General use	General use To be used with a reference electrode of type BR41 or BR42 or XR41, XR42		
References					
Connectors BNC	BRPT1-BNC	XRPT1-BNC	BPT1-BNC	XPT1-BNC	XPT2-BNC
S7 connectors (screw-on)	BRPT1-S7	XRPT1-S7	BPT1-S7	XPT1-S7	XPT2-S7
BA4 connectors	-	-	-	XPT1-BA4	XPT2-BA4



Electrode	BR41	BR42	XR41	XR42
pH/redox measurement range	0-14 / ± 2,000 mV			
Reference system	Ag/AgCl	Calomel	Ag/AgCl	Calomel
Electrolyte de référence	Refillable KCl 1 mol/L	Refillable KCl 3 mol/L	Refillable KCl 1 mol/L	Refillable KCl 3 mol/L
Junction	Ceramics	Ceramics	Ceramics	Ceramics
Body material	Glass	Glass	PVC	PVC
Operating temperature	0 to 80 °C	0 to 80 °C	0 to 60 °C	0 to 60 °C
Diameter Ø and length under cover (mm)	12 x 115	12 x 115	8 (end) x 110	8 (end) x 110
Cable length	1 m	1 m	1 m	1 m
Recommended use	General use To be used with a pH or redox indicator electrode			
References				
S7 connectors (screw-on)	BR41-S7	BR42-S7	XR41-S7	XR42-S7
BA2 connectors	BR41-BA2	BR42-BA2	XR41-BA2	XR42-BA2
BA4 connectors	BR41-BA4	BR42-BA4	XR41-BA4	XR42-BA4



Electrodes for silver measurement

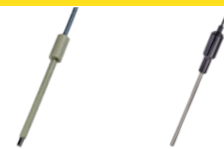
Combined electrode		Indicator electrodes		Reference electrodes		
		 				
BRAG1	BAG1	XAG1	BR43	XR43	BR44	
+/- 2,000 mV						
Silver rod			-	-	-	
Mercurous sulphate			Mercurous sulphate	Mercurous sulphate	Ag/AgCl	
Refillable saturated K ₂ SO ₄			Refillable saturated K ₂ SO ₄	Refillable saturated K ₂ SO ₄	Refillable KCl 1 mol/L KNO ₃ 1 mol/L	
Ceramics			Ceramics	Ceramics	Ceramics	
Glass	Glass	PVC	Glass	PVC	Glass	
0 to 80 °C	0 to 80 °C	0 to 60 °C	0 to 80 °C	0 to 60 °C	0 to 80 °C	
12 x 125	12 x 125	12 x 120	12 x 115	8 (end) x 110	12 x 120	
1 m	1 m	1 m	1 m	1 m	1 m	
General use	General use To be used with a BR43, XR43 or BR44 reference electrode		General use To be used with a BAG1 or XAG1 indicator electrode		Double junction for clogging products	
BRAG1-BNC	BAG1-BNC	XAG1-BNC	-	-	-	
BRAG1-S7	BAG1-S7	XAG1-S7	BR43-S7	XR43-S7	BR44-S7	
-	-	-	BR43-BA2	XR43-BA2	BR44-BA2	
-	-	XAG1-BA4	BR43-BA4	XR43-BA4	BR44-BA4	

Conductivity probes



Probes	XCPST4	BCP4	XCP4
Conductivity range	0.1 µS to 200 mS		
Probe type	2 platinum poles		
Cell constant (cm-1)	1	1	1
Temperature sensor	Yes	No	No
Body material	PVC	Glass	PVC
Operating temperature	0 to 60 °C	0 to 80 °C	0 to 60 °C
Diameter Ø and length under cover (mm)	12 x 115	11 (end) x 100	12 x 115
Cable length	1 m	1 m	1 m
Recommended use	General use		
References			
5-pole connector	XCPST4	-	-
BNC connectors	-	BCP4-BNC	XCP4-BNC
S7 connectors (screw-on)	-	BCP4-S7	XCP4-S7
BA4 connectors	-	-	XCP4-BA4
RAD connectors	-	-	XCP4-RAD

Temperature sensors



Sensors	BT5	BT6
Temperature range	0 to +90 °C	-10 to +110 °C
Body material	Polypropylene	Stainless steel
Temperature sensor	Pt100	Pt1000
Operating temperature	0 to +90 °C	-10 to +110 °C
Diameter Ø and length under cover (mm)	6 (end) x 116	5 x 97
Cable length	1 m	1 m
Recommended use	General use	
References		
Jack connectors	BT5-JACK	P01710070
DIN connectors	BT5-DIN	-

Electrodes

Specially designed for CA 10101 & CA 10141



pH and redox electrodes and conductivity probe for the waterproof portable range

The CA 10101 pH meter and CA 10141 conductivity meter are portable measuring devices specially designed by Chauvin Arnoux for mobile applications: in the field, in the laboratory or in production.

To facilitate field work, these devices are supplied with probes that incorporate a Pt1000 temperature sensor. They are also designed with robust materials, making them particularly resistant. The pH and redox electrodes are combined and incorporate a gel electrolyte, which enhances their durability.

The probes have a waterproof 8-point DIN connector.



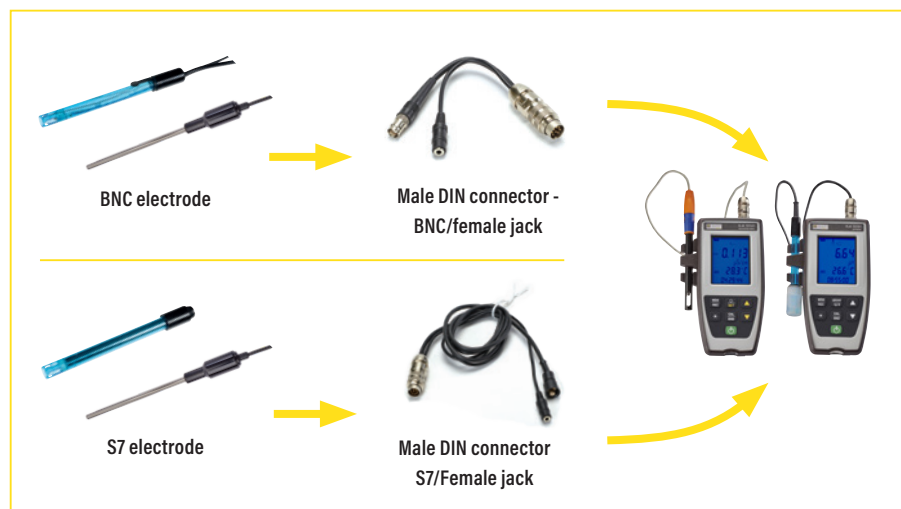
Electrode	XRGST1	XRGST1 - 3 mètres	LRV7	XRPTST1	XCP4ST1
pH measurement range	1-12	1-12	0-14		
Redox measurement range	-	-	-	± 1,999 mV	-
Conductivity measurement range	-	-	-	-	0.1 µS/cm 500 mS/cm
Tip	Spherical	Spherical	Pointed	-	-
Reference system	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	-
Reference Electrolyte	Gel	Gel	Gel	Gel	-
Junction	Ceramic and non-woven fabric	Ceramic and non-woven fabric	Ceramic and open	Ceramic	-
Cell constant (cm-1)	-	-	-	-	0,55 ± 0,05 cm-1
Temperature sensor	Yes	Yes	No	Yes	Yes
Temperature measurement range	0 to 60°C	0 to 60°C	0 to 60°C	0 to 60°C	0 to 100°C
Dimensions	150 x Ø 16 mm	150 x Ø 16 mm	132 x Ø 16mm	190 x Ø 18 mm	190 x Ø 18 mm
Body material	Polycarbonate	Polycarbonate	PVC	Polycarbonate	Epoxy
Cable length	1 m	3 m	1 m	1 m	1 m
Connector	DIN 8 points waterproof	DIN 8 points waterproof	DIN 8 points waterproof	DIN 8 points waterproof	DIN 8 points waterproof
Recommended use	Applications in the field and general use and in laboratories	Applications in the field and general use and in laboratories	Dairy products (milk, cheese, yoghurt), semi-solid foods	Applications in the field and general use and in laboratories	Applications in the field and general use and in laboratories
Reference	P01710051	P01710057	P01715020	P01710052	P01710053

Specific connectors

DIN adapter cables are available for use with electrodes with BNC connectors or S7 screw connectors with a temperature sensor (Jack connector).

Please note: the adapter part numbers are different depending on the model (pH meter CA 10101 or conductivity meter CA 10141).

With the P01295501 adapter, you can use the LRV7 food industry electrode with BNC connectors (P01715019) and the BT6 temperature sensor with Jack connectors (P01710070) on the CA 10101 pH meter.



To order

Male DIN connector – BNC/female jack for CA 10101

Reference: P01295501

Male DIN connector – BNC/female jack for CA 10141

Reference: P01710054

Male DIN connector – S7/female jack for CA 10101

Reference: P01295502

Male DIN connector – S7/female jack for CA 10141

Reference: P01710055



Teaching equipment

pH meters, conductivity meters and benchtop multiparameter meters

Chauvin-Arnoux offers a range of benchtop instruments specially designed for teaching purposes

The analogue range consists of the PSD1, PSD21 and PPD26 pH meters, the CSD22 conductivity meter and the MPC25 multiparameter meter.

The potentiometers provide a simplified, educational approach to electrochemical measurement. These devices also feature an analogue output for compatibility with ExAO software.

The P310 pH meter and C320 conductivity meter are part of the digital range. They have an RS232 output and 0–5 V analogue outputs.

Thanks to standard BNC connectors, these devices are compatible with a wide range of electrodes suitable for every need.

pH meters are delivered with:

- concentrated standard solutions (125 mL) pH4 and pH7
- a 9 V mains adapter (except for the PPD26, which runs on batteries)
- operating instructions.
- The P310 pH meter** comes with a 2 mm banana plug reference cable and a 2 mm male/4 mm female banana plug adapter (for reference electrode)

All conductivity meters are delivered with:

- 1M KCl solution (125 mL)
- 9 V mains adapter
- operating instructions



The MPC25 multiparameter meter is delivered with:

- concentrated standard solutions (125 mL) pH4 and pH7
- 1M KCl solution (125 mL)
- a Michaelis solution
- a 2 mm male/4 mm female banana plug adapter (for reference electrode)
- a 9 V mains adapter
- operating instructions

	PSD1	PSD21	D26	P310	CSD22	C320	C25
pH	■	■	■	■	-	-	■
mV	-	■	■	■	-	-	■
Conductivity	-	-	-	-	■	■	■
Temperature	-	-	■	■	-	■	-
Temperature compensation	Manual	Manual	Manual	Automatic/Manual	-	Automatic/Manual	Manual
Calibration	Manual	Manual	Manual	Automatic or manual (2 pH points and 1 mV point)	Manual	Manual	Manual
Connectors	BNC for pH electrode	BNC for pH or redox electrode (combined or measurement) 2 mm banana plug for separate reference electrode	BNC for electrode pH or redox 3.5 mm jack for temperature probe (Pt100)	BNC (x2) for pH and redox electrode (combined or measurement) 2 mm banana plug (x2) for reference electrode 5-pin plug for temperature sensor 1/4" jack plug for microphone	BNC for conductivity cell BNC	BNC for conductivity cell 5-pin connector for conductivity cell with integrated temperature sensor or temperature sensor alone	BNC (x2) for pH electrode or redox (combined or measurement) and conductivity probe 2 mm banana plug for reference electrode
Outputs	Terminals 4 mm for output recorder	Terminals 4 mm insulated for recorder output recorder	Jack 2.54 mm for recorder output recorder	Sub-D connector 9-pin male for outputs analogue recorders (x3) Sub-D connector 9-pin female for RS232 output	4 mm terminals insulated for recorder output	2 x 4 mm terminals insulated for output analogue recorder Sub-D connector 9 female channels for RS232 output	4 mm terminals insulated for output recorder conductivity 4 mm terminals insulated for output pH/mV recorder

Solutions

For electrode calibration and maintenance

Buffer solutions for pH, redox and conductivity and maintenance solutions and servicing

The calibration frequency depends on the level of accuracy required, but also on the frequency of use of the electrode.

It is up to the user to define the frequency best suited to their protocol and needs.

It is recommended to calibrate the electrode with at least two points, as the electrode is characterised by both its slope and its zero point. A three-point calibration is recommended when measurements cover a wider range.

Calibrate under temperature conditions identical to those of the sample measurements.

Care and maintenance of electrodes



MAINTENANCE SOLUTIONS

1 mol/L KCl solution	P01700120
3 mol/L KCl solution	P01700121
Pepsin/HCL solution with 1% pepsin	P01700122

The maintenance of pH and redox electrodes is very important for their lifespan and accuracy.

It is essential to store the electrodes in aqueous solutions rich in ions in order to keep the glass membrane moist and prevent the reference electrolyte from losing its conductivity. Electrodes with a liquid electrolyte require regular recharging of the electrolyte to prevent the level from falling below that of the sample solution.

Regular cleaning of the diaphragm and glass bulb is essential for optimal response time. The frequency of cleaning and the type of solution used depend on the nature of the sample. For example, contamination by proteins can be cleaned using a solution of acidic pepsin.

Solutions pH buffers



BUFFERS pH NIST/DIN

NIST buffer pH 1.68	P01700105
NIST buffer pH 4.01	P01700106
NIST pH 7.00 buffer	P01700107
NIST pH 9.18 buffer	P01700108
NIST pH 10.01 buffer	P01700109

The formulation of these buffer solutions complies with the specifications of NIST (National Institute of Standards and Technology, United States) and DIN 19266. The solutions are supplied with a quality certificate (upon customer request).



CONCENTRATED pH BUFFERS (125 mL)

Concentrated pH 4.00 buffer	P01700111
Concentrated pH 7.00 buffer	P01700112
Concentrated pH 9.00 buffer	P01700113

Concentrated buffer solutions with pH values of 7.00 and 9.00 are supplied in 125 mL bottles and must be diluted 10 times before use. The pH 4.00 buffer must be diluted 5 times before use.



COFRAC-CERTIFIED pH BUFFERS (25 mL BOTTLE)

COFRAC pH buffer pH 4.005 (x10)	P01700101
COFRAC pH buffer pH 6.865 (x10)	P01700102
COFRAC pH buffer pH 9.180 (x10)	P01700103
Set of 3x5 COFRAC pH buffers 4.005; 6.865; 9.180	P01700104

25 mL single-dose bottle.

Accuracy: guaranteed pH and contamination eliminated for a period of 1 to 2 years until opening.

Convenience: time savings, more efficient calibration, waste and spills avoided.

Traceability: bottle labelled with batch number, expiry date and COFRAC logo of reference material producer.

Certificate supplied with each box of COFRAC pH buffer.



Solutions redox buffers



REDOX BUFFERS

Michaelis solution 146 mV	P01700110
Redox buffer 220 mV	P01700114
Redox buffer 468 mV	P01700115

Manumasure offers two ready-to-use standard solutions (220 mV and 468 mV) and one concentrated solution (Michaelis Solution 146 mV).

Solutions standards conductivity



CONDUCTIVITY STANDARDS

KCl conductivity standard 1 mol/L	P01700116
NIST conductivity standard 147 µS/cm	P01700117
NIST conductivity standard 1408 µS/cm	P01700118
OIML conductivity standard 12.85 mS/cm	P01700119

Conductivity standards are checked and standardised using a calibrated conductivity meter with:

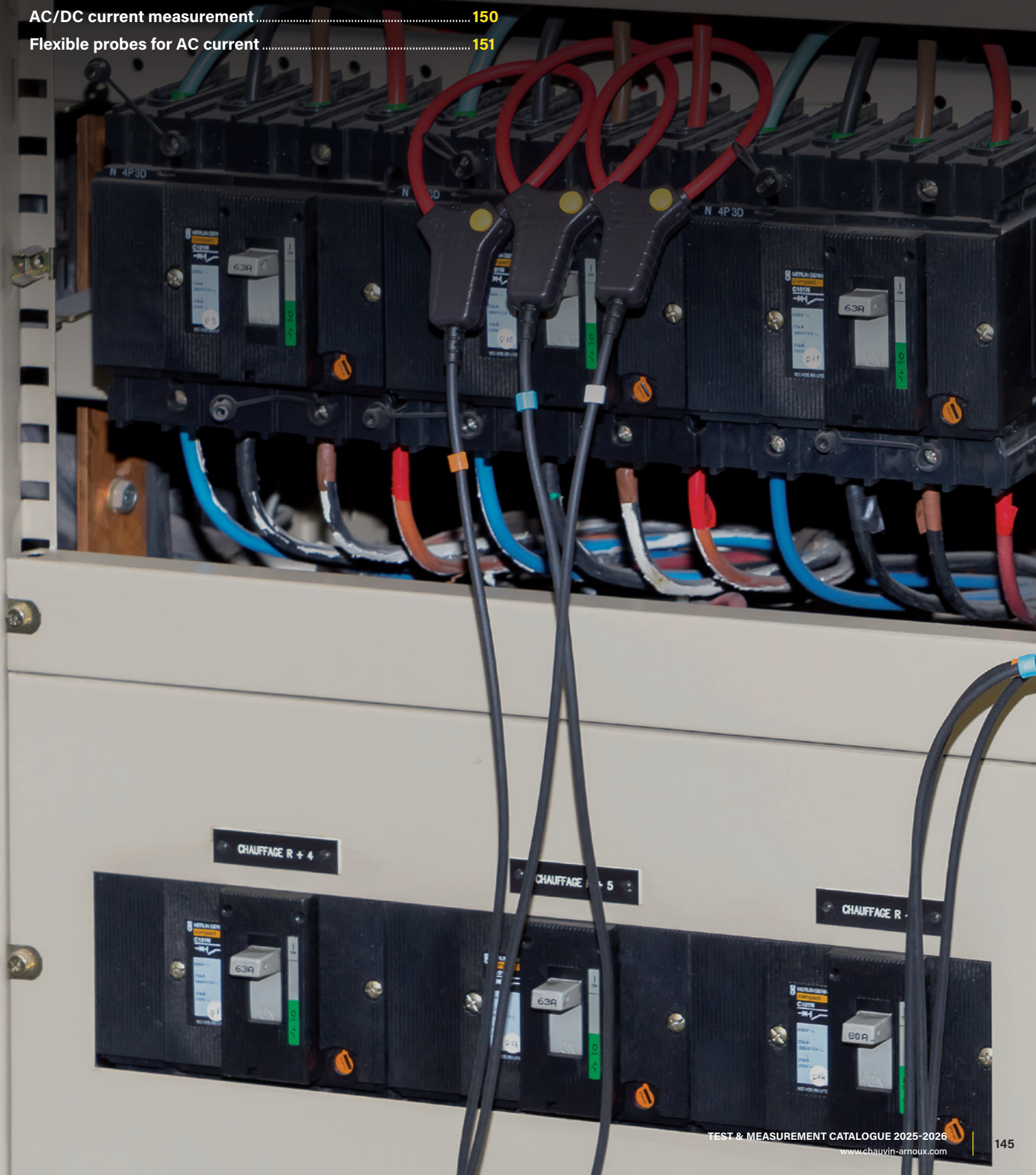
- A certified solution traceable to NIST reference materials
- A standard developed in accordance with OIML (International Organisation of Legal Metrology).

The concentrated 1 mol/L KCl solution must be diluted to obtain different conductivity values.



Current measurement

MA400D, MA4000D flexible sensor ammeters	146
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Flexible sensor ammeters

MA400D - MA4000D

600 V
CAT IV

TRMS



Equipped with a 4,000-point digital display for direct reading of the intensity, Digiflex provides the solution to the difficulties of accessing many electrical conductors.

- Compact, autonomous and easy to use
- Direct reading of the intensity
- Measurement from a few tens of mA
- MAX HOLD maximum value memory

	MA400D-170 / 250 / 1000		
Display range	4 A _{AC}	40 A _{AC}	400 A _{AC}
Measuring range	0.020 A ... 3.999 A	4.00 A ... 39.99 A	40.0 A ... 399.9 A
Resolution	1 mA	10 mA	100 mA
Accuracy	± (2% + 10 cts)	± (1.5% + 2 cts)	± (1.5% + 2 cts)
Clamping diameter / Sensor length	MA400D-170 : Ø 45 mm / 170 mm MA400D-250 : Ø 70 mm / 250 mm MA400D-1000 : Ø 318 mm / 1,000 mm		
Bandwidth	10 Hz ... 3 kHz		
Power supply	2 Batteries 1,5 V AAA / LR03		
Safety	IEC 61010 CAT IV 600 V		
Operating temperature	0°C to +50°C		
Device weight approx.	130 g		
Case dimensions	100 x 60 x 20 mm		
Cable length	0,8 m		

	MA4000D-350 / 1000		
Display range	40 A _{AC}	400 A _{AC}	4,000 A _{AC}
Measuring range	0,2 A ... 39.99 A	40,0 A ... 399.9 A	400 A ... 3,999 A
Resolution	10 mA	100 mA	1 A
Accuracy	± (2% + 10 cts)	± (1,5% + 2 cts)	± (1,5% + 2 cts)
Clamping diameter / Sensor length	MA4000D-350 : Ø 100 mm / 350 mm MA4000D-1000 : Ø 318 mm / 1,000 mm		
Bandwidth	10 Hz ... 3 kHz		
Power supply	2 x 1.5 V AAA / LR03 batteries		
Safety	IEC 61010 CAT IV 600 V		
Operating temperature	0°C to +50°C		
Device weight approx.	130 g		
Case dimensions	100 x 60 x 20 mm		
Cable length	0.8 m		



Energy efficiency



Transport



Tertiary & residential



Industries



Production, transport & distribution



+ The extra

MA400D: Measurement from 20 mA AC

MA400D-170 / 250, MA4000D-350 delivered with:

- 2 Batteries 1,5 V AAA/LR03
- 1 sangle de fixation Velcro

MA400D-1000 and MA4000D-1000 also come with:

- 1 carrying case

To order

1 MA400D-170 ammeter

Reference: P01120575Z

1 MA400D-250 ammeter

Reference: P01120576Z

1 MA400D-1000 ammeter

Reference: P01120578

1 MA4000D-350 ammeter

Reference: P01120577Z

1 MA4000D-1000 ammeter

Reference: P01120579

Recommended accessories



P01298074

Bag 120 x 200 x 60



P01102100Z

MULTIFIX accessories

AC current clamps

Selection guide

Choosing your current clamp

There is a wide range of criteria for choosing a current clamp. The approach below is designed to help define your requirements and guide you naturally towards the model which best suits your application. The criteria selected are classified from 1 to 6. To choose your clamp, we advise you to follow this logic:

- **Measurement of direct or alternating current?**
 - > AC/DC clamps table or AC clamps table
- **High or low currents?**
 - > see the "Input" column to define the appropriate families of clamps
- **On small wires or large cables?**
 - > see the diagrams at the bottom of the next page and only choose families with the shapes and dimensions required
- **What instrument will it be connected to?**
 - > see "Output / Connection" column to choose to clamp with compatible signal and connection possibilities
- **What are your other criteria?**
 - > see "Specific features" column to check that the clamp chosen fulfils your requirements perfectly

The widest range of IEC 61010-2-032 clamps

Our innovation, technical expertise and determination to manufacture top-quality products that comply with standards have made Chauvin Arnoux the worldwide specialist in current clamps.

On the next few pages, you will find a table presenting the clamps for measuring AC/DC current, followed by a diagram giving the clamp form with dimensions and then another table grouping a large number of models for AC current.

As a result of their specifications, certain clamps are specialized for specific applications:

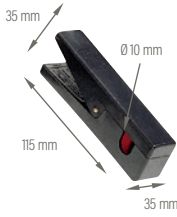
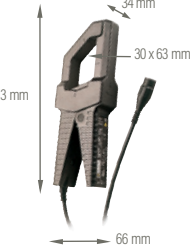
- Clamps for oscilloscopes (BNC output): E27, PAC17, PAC27, MN60, Y7N, C160, D38N and MA200
- Clamps for leakage currents: MN73, C173 and B102
- Clamp for measurements on the secondary windings of current transformers: MN71



	MINI 0x	MINI 10x	MN	YN	C1xx	DN	Bxx	MiniFlex Série MA110	MiniFlex Série MA130	MiniFlex Série MA200	AmpFlex Série A110	AmpFlex Série A130	E2X	MH60	PAC 1x	PAC 2x
For currents																
Clamping Ø (mm)	10	16	20	30	52	64	112	45 70 100	70	45 70 100	140 250 380	250	11.8	26	30	39
AC	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
DC																
Min	5 mA	5 mA	10 mA	1 A	1 mA	100 mA	500 µA	80 mA	500 mA	500 mA	80 mA	500 mA	5 mA	1 mA	500 mA	500 mA
MAX	150 A	200 A	240 A	600 A	1,200 A	3,600 A	400 A	3,000 A	3,000 A	3,000 A	30,000 A	3,000 A	150 A	140 A	600 A	1,400 A
Output																
in mAac	■	■	■	■	■	■										
in mVac	■	■	■	■	■	■	■	■	■	■	■	■				
in mVoc	■		■	■												
in mVac+dc													■	■	■	■
Connection																
Insulated Ø 4 mm sockets			■		■	■										
Cable with Ø 4 mm insulated elbowed male plugs	■	■	■	■	■	■	■	■			■		■		■	■
Coaxial cable with insulated male BNC connector			■	■	■	■			■	■		■	■	■	■	■
Single-calibre	■	■	■	■	■	■				■				■	■	■
Multi-calibre	■		■		■		■	■	■	■	■	■	■		■	■
For multimeters	■	■	■	■	■	■	■	■	■		■	■	■		■	■
For oscilloscopes			■	■	■	■				■			■	■	■	■
For detecting leakage and insulation faults			■		■		■									
For measuring power, harmonics, etc.	■	■	■		■	■		■	■		■	■	■		■	■
For the process and the 4-20/0- 20 mA measurement loop																
Power supply																
Stand-alone	■	■	■	■	■	■	■							■*		
Batteries								■	■	■	■	■	■	■	■	■
Mains adapter								■	■	■	■	■	■	■	■	■

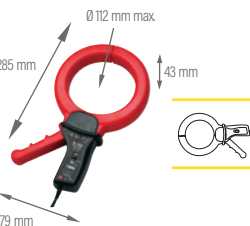
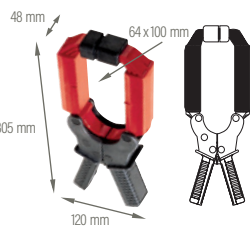
* for multimeters

AC current measurement

	Series	Model	Input						Output - Connection					Specific Features						Reference
			Measurement range ⁽¹⁾						Current	Voltage	Cable + ø 4 mm safety plugs	Female ø 4 mm sockets	BNC connector (coaxial)	Transformation ratio (input/output)	Output protected against overvoltages	Automatic DC zero	Power measurement (low phase shift)	Bandwidth (frequency in Hz)	Typical accuracy ⁽³⁾	
			Very low current	Low current	Medium current	High current	Alternating current	Direct current												
		MINI 01		2 to 150 A			■		0.15 A _{AC}		■			1,000/1	■			48 Hz to 500 Hz	≤ 2.5 %	P01105101Z
		MINI 02	50 mA to 100 A				■		0.1 A _{AC}		■			1,000/1	■		■	48 Hz to 10 kHz	≤ 1 %	P01105102Z
		MINI 03		1 to 100 A			■		0.1 V _{AC}		■			1 A / 1 mV					≤ 2 %	P01105103Z
		MINI 05	5 mA to 10 A 1 to 100 A				■		10 V _{AC} 0.1 V _{AC}		■			1 mA / 1 mV 1 A / 1 mV				48 Hz to 500 Hz	≤ 3 % ≤ 2 %	P01105105Z
		MINI 09		1 to 150 A			■		15 V _{DC} ⁽²⁾		■			1 A / 100 mV					≤ 4 %	P01105109Z
		MINI102	0.05 A to 200 A				■		0.2 A _{AC}		■			1,000/1	■		■	48 Hz . 10 kHz	≤ 1 %	P01106102
		MINI103	0.1 A to 200 A				■		0.2 V _{AC}		■			1 A / 1 mV	■		■	48 Hz . 10 kHz	≤ 1.5 %	P01106103
		MN08		0.5 to 240 A			■		0.2 A _{AC}		■			1,000/1					≤ 1 %	P01120401
		MN09		0.5 to 240 A			■		0.2 A _{AC}		■			1,000/1					≤ 1 %	P01120402
		MN10		0.5 to 240 A			■		0.2 A _{AC}		■			1,000/1					≤ 2 %	P01120403
		MN11		0.5 to 240 A			■		0.2 A _{AC}		■			1,000/1					≤ 2 %	P01120404
		MN12		0.5 to 240 A			■		2 V _{AC}		■			1 A / 10 mV					≤ 1 %	P01120405
		MN13		0.5 to 240 A			■		2 V _{AC}		■			1 A / 10 mV					≤ 1 %	P01120406
		MN14		0.5 to 240 A			■		0.2 V _{AC}		■			1 A / 1 mV				40 Hz to 10 kHz	≤ 1 %	P01120416
		MN15		0.5 to 240 A			■		0.2 V _{AC}		■			1 A / 1 mV					≤ 1 %	P01120417
		MN21		0.1 to 240 A			■		0.2 A _{AC}		■			1,000/1					≤ 2 %	P01120418
		MN23		0.1 to 240 A			■		2 V _{AC}		■			1 A / 10 mV					≤ 1.5 %	P01120419
		MN38		0.1 to 24 A 0.5 to 240 A			■		2 V _{AC} 2 V _{AC}		■			1 A / 100 mV 1 A / 10 mV					≤ 1 %	P01120407
		MN39		0.1 to 24 A 0.5 to 240 A			■		2 V _{AC} 2 V _{AC}		■			1 A / 100 mV 1 A / 10 mV					≤ 1 %	P01120408
		MN60		0.1 A to 60 A _{PEAK} 0.5 A to 600 A _{PEAK}			■		6 V _{PEAK} 6 V _{PEAK}		■			1 A / 100 mV 1 A / 10 mV				40 Hz to 40 kHz	≤ 2 % ≤ 1.5 %	P01120409
		MN71	10 mA to 12 A				■		1 V _{AC}		■			1 A / 100 mV					≤ 1 %	P01120420
		MN73	10 mA to 2.4 A 100 mA to 240 A				■		2 V _{AC} 2 V _{AC}		■			1 mA / 1 mV 1 A / 10 mV				40 Hz to 10 kHz	≤ 1 % ≤ 2 %	P01120421
		MN88		0.5 to 240 A			■		20 V _{DC} ⁽²⁾		■			1 A / 100 mV					≤ 2 %	P01120410
		MN89		0.5 to 240 A			■		20 V _{DC} ⁽²⁾		■			1 A / 100 mV					≤ 2 %	P01120415
		Y1N		4 A to 500 A			■		0.5 A _{AC}		■			1,000/1					≤ 3 %	P01120001A
		Y2N		4 A to 500 A			■		0.5 A _{AC}		■			1,000/1					≤ 1 %	P01120028A
		Y3N		4 A to 500 A			■		5 A _{AC}		■			100/1				48 Hz to 1 kHz	≤ 3 %	P01120029A
		Y4N		4 A to 500 A			■		0.5 V _{DC} ⁽²⁾		■			500 A / 0.5 V					≤ 1 %	P01120005A
		Y7N		1 A to 1,200 A _{PEAK}			■		1.2 V _{PEAK}		■			1 A / 1 mV				5 Hz to 10 kHz	≤ 2 %	P01120075

(1) The upper value corresponds to 120 % of the max. rated value. (2) Reshaping of AC signal by diodes. (3) Based on reference conditions.

AC current measurement

		Input					Output - Connection					Specific Features						
		Measurement range ⁽¹⁾					Current	Voltage	Cable + ø 4 mm safety plugs	Female ø 4 mm sockets	BNC connector (coaxial)	Transformation ratio (input/output)	Output protected against overvoltages	Automatic DC zero	Power measurement (low phase shift)	Bandwidth (frequency in Hz)	Typical accuracy ⁽³⁾	
Series	Model	Very low current	Low current	Medium current	High current	Alternating current												Direct current
	C100	0.1 A to 1,200 A				■	1 A AC		■		1,000/1				30 Hz to 10 kHz	≤ 0.5 %	P01120301	
	C102	0.1 A to 1,200 A				■	1 A AC		■		1,000/1	■				≤ 0.5 %	P01120302	
	C103	0.1 A to 1,200 A				■	1 A AC		■		1,000/1	■				≤ 0.5 %	P01120303	
	C106	0.1 A to 1,200 A				■		1 V AC	■		1 A / 1 mV					≤ 0.5 %	P01120304	
	C107	0.1 A to 1,200 A				■		1 V AC	■		1 A / 1 mV					≤ 0.5 %	P01120305	
	C112	1 mA to 1,200 A				■	1 A AC		■		1,000/1	■	■			≤ 0.3 %	P01120314	
	C113	1 mA to 1,200 A				■	1 A AC		■		1,000/1	■	■			≤ 0.3 %	P01120315	
	C116	1 mA to 1,200 A				■		1 V AC	■		1 A / 1 mV		■			≤ 0.3 %	P01120316	
	C117	1 mA to 1,200 A				■		1 V AC	■		1 A / 1 mV		■			≤ 0.3 %	P01120317	
	C122	1 A to 1,200 A				■	5 A AC		■		1,000/5	■				≤ 1 %	P01120306	
	C148		1 A to 300 A 1 A to 600 A 1 A to 1,200 A			■	5 A AC		■		250/5 500/5 1000/5	■			48 Hz to 1 kHz	≤ 2 % ≤ 1 % ≤ 1 %	P01120307	
	C160		0.1 A to 30 A _{PEAK} 0.1 A to 300 A _{PEAK} 1 A to 2,000 A _{PEAK}			■		3 V _{PEAK} 3 V _{PEAK} 2 V _{PEAK}		■	10 A / 1 V 100 A / 1 V 1,000 A / 1 V				10 Hz to 100 kHz	≤ 3 % ≤ 2 % ≤ 1 %	P01120308	
	C173		1 mA to 12 A 0.01 A to 12 A 0.1 A to 120 A 1 A to 1,200 A			■		1 V AC	■		1 A / 1 V 10 A / 1 V 100 A / 1 V 1,000 A / 1 V				10 Hz to 3 kHz	≤ 0.7 % ≤ 0.5 % ≤ 0.3 % ≤ 0.2 %	P01120309	
	B102		500 µA to 4 A 0.5 A to 400 A			■		4 V AC 0.4 V AC	■		1 mA / 1 mV 1 A / 1 mV				10 Hz to 1 kHz	≤ 0.5 % ≤ 0.35 %	P01120083	
	D30N			1 A to 3,600 A			■	1 A AC		■		3,000/1	■	■	30 Hz to 5 kHz	≤ 0.5 %	P01120049A	
	D30CN			1 A to 3,600 A			■	1 A AC		■		3,000/1	■	■		≤ 0.5 %	P01120064	
	D31N			1 A to 600 A 1 A to 1,200 A 1 A to 1,800 A			■	1 A AC		■		500/1 1,000/1 1,500/1			30 Hz to 1.5 kHz	≤ 3 % ≤ 1 % ≤ 0.5 %	P01120050A	
	D32N			1 A to 1,200 A 1 A to 2,400 A 1 A to 3,600 A			■	1 A AC		■		1,000/1 2,000/1 3,000/1		■	30 Hz to 1 kHz	≤ 1 % ≤ 0.5 % ≤ 0.5 %	P01120051A	
	D33N			1 A to 3,600 A			■	5 A AC		■		3,000/5			30 Hz to 5 kHz	≤ 1 %	P01120052A	
	D34N			1 A to 600 A 1 A to 1,200 A 1 A to 1,800 A			■	5 A AC		■		500/5 1,000/5 1,500/5			30 Hz to 1.5 kHz	≤ 3 % ≤ 1 % ≤ 0.5 %	P01120053A	
	D35N			1 A to 1,200 A 1 A to 2,400 A 1 A to 3,600 A			■	5 A AC		■		1,000/5 2,000/5 3,000/5		■		≤ 1 % ≤ 0.5 % ≤ 0.5 %	P01120054A	
	D36N			1 A to 3,600 A			■	3 A AC		■		3,000/3	■	■	30 Hz to 5 kHz	≤ 0.5 %	P01120055A	
	D37N			0.1 A to 36 A 1 A to 360 A 1 A to 3,600 A			■		3 V AC	■		30 A/3 V 300 A/3 V 3,000 A/3 V				≤ 2 %	P01120056A	
	D38N			1 A to 90 A _{PEAK} 1 A to 900 A _{PEAK} 1 A to 9,000 A _{PEAK}			■		0.9 V _{PEAK}	■	1 A / 10 mV 1 A / 1 mV 1 A / 0.1 mV			30 Hz to 50 kHz	≤ 2 %	P01120057A		

(1) The upper value corresponds to 120 % of the max. rated value. (2) Based on reference conditions.

AC/DC current measurement

	Series	Model	Input						Output - Connection				Specific Features						Reference	
			Measurement range						Current	Voltage	Cable + ø 4 mm safety plugs	Female ø 4 mm sockets	BNC connector (coaxial)	Transformation ratio (input/output)	Output protected against overvoltages	Automatic DC zero	Power measurement (low phase shift)	Bandwidth (frequency in Hz)		Typical accuracy ^{a)}
			Very low current	Low current	Medium current	High current	Alternating current	Direct current												
		E25		5 mA to 2 A _{DC} 5 mA to 1.5 A _{AC} 50 mA to 80 A _{DC} 50 mA to 60 A _{AC}			■	■		2 V _{DC} 1.5 V _{AC} 600 mV _{DC} 800 mV _{DC}	■			1 A / 1 V 1 A / 10 mV	■			DC to 20 kHz	≤ 2 % ≤ 4 %	P01120025
		E27		100 mA to 10 A _{PEAK} 500 mA to 100 A _{PEAK}			■	■		1V _{PEAK} 1V _{PEAK}		■		1 A / 100 mV 1 A / 10 mV	■			DC to 100 kHz	≤ 3 % ≤ 4 %	P01120027
		MH60		0.01 A to 140 A _{PEAK}			■	■		1.4 V _{PEAK}		■		10 mV/A	■			DC to 1 MHz	≤ 1.5 %	P01120612
		PAC15		0.5 A to 400 A _{AC} 0.5 A to 600 A _{DC}			■	■		600 mV _{AC/DC}	■			1 A / 1 mV	■			DC to 30 kHz	≤ 2 %	P01120115
		PAC16		0.5 A to 40 A _{AC} 0.5 A to 60 A _{DC} 0.5 A to 400 A _{AC} 0.5 A to 600 A _{DC}			■	■		600 mV _{AC/DC} 600 mV _{AC/DC}	■			1 A / 10 mV 1 A / 1 mV	■			DC to 30 kHz	≤ 1.5 % ≤ 2 %	P01120116
		PAC17		0.5 A to 60 A _{PEAK} 0.5 A to 60 A _{DC} 0.5 A to 600 A _{PEAK} 0.5 A to 600 A _{DC}			■	■		600 mV _{PEAK} 600 mV _{PEAK}		■		1 A / 10 mV 1 A / 1 mV	■			DC to 30 kHz	≤ 1.5 % ≤ 2 %	P01120117
		PAC25		0.5 A to 1,000 A _{AC} 0.5 A to 1,400 A _{DC}			■	■		1.4 V _{AC/DC}	■			1 A / 1 mV	■			DC to 30 kHz	≤ 4 %	P01120125
		PAC26		0.5 A to 100 A _{AC} 0.5 A to 150 A _{DC} 0.5 A to 1,000 A _{AC} 0.5 A to 1,400 A _{DC}			■	■		1.5 V _{AC/DC} 1.4 V _{AC/DC}	■			1 A / 10 mV 1 A / 1 mV	■			DC to 30 kHz	≤ 1.5 % ≤ 4 %	P01120126
		PAC27		0.5 A to 150 A _{PEAK} 0.5 A to 150 A _{DC} 0.5 A to 1,400 A _{PEAK} 0.5 A to 1,400 A _{DC}			■	■		1.5 V _{PEAK} 1.4 V _{PEAK}		■		1 A / 10 mV 1 A / 1 mV	■			DC to 30 kHz	≤ 1.5 % ≤ 4 %	P01120127

(1) Based on reference conditions.

Ampflex® flexible ac current sensors

MA110 - MA130 | MA200 | A110 - A130

600 V
CAT IV1 000 V
CAT III600 V
CAT IV1 000 V
CAT IV

80 mA

80 mA

3 kA_{AC}1 000 V
CAT III30 kA_{AC}

4 calibres

4 calibres

IP 67

1 MHz

IP 67



For multimeters, recorders, oscilloscopes, etc.

- No magnetic saturation constraints: excellent linearity, low phase shift, high measurement dynamics
- Flexible sensors for easy clamping of conductors to be measured
- Compact, they can be easily installed in domestic or industrial electrical cabinets
- Snap-on device for opening and closing the torus for handling with protective gloves
- Snap-on device for opening and closing the torus for handling with protective gloves



+ The extra

Model MA110 & model A110

- Measures from 80 mA
- Connects to the AC voltage input (mV_{AC} / V_{AC}) of any multimeter or measuring device equipped with Ø 4 mm female banana plugs
- Can be powered by batteries or through a standard external power supply
- Feature an automatic standby system that can be deactivated during start-up to perform long-term measurement campaigns
- Have 3 LEDs (green, yellow and red) indicating the power supply status, the status of the automatic standby function and when the measurement capacity has been exceeded

Model MA130 triphasé & Model A130 triphasé

- Connect to the AC voltage inputs (mV_{AC} / V_{AC}) of any power analyser, recorder or measuring device equipped with BNC or Ø 4 mm banana plugs (adapters included)

MA200 model

- Features a BNC output and connects to all types of oscilloscopes
- Offers high bandwidth
- Particularly suitable for viewing transient signals, control signals, thyristor trigger current or viewing the output signal of an electronic power supply

MA110 or A110 supplied with:

- 2 x 1.5 V LR06/AAA alkaline batteries, 1 safety sheet,
- 1 verification certificate

MA130 or A130 supplied with:

- 2 x 1.5 V LR06/AAA alkaline batteries, 1 safety sheet,
- 1 verification certificate, 1 set of coloured rings for cable identification/markings, 3 female BNC adapters/male plugs Ø 4 mm

MA200 supplied with:

- 1 9 V battery, 1 verification certificate

		Input						Output - Connection				Specific Features						Reference	
		Measurement range																	
		Very low current	Low current	Medium current	High current	Alternating current	Direct current												
Serie	Model							Current	Voltage	Cable + ø 4 mm safety plugs	Female ø 4 mm sockets	BNC connector (coaxial)	Transformation ratio (input/output)	Output protected against overvoltages	Automatic DC zero	Power measurement (low phase shift)	Bandwidth (frequency in Hz)	Typical accuracy ⁽¹⁾	
	MA110 3-30-300-3,000/3 (17 cm / Ø 4.5 cm)	0.08 A to 3 A 0.5 A to 30 A 0.5 A to 300 A 0.5 A to 3,000 A				■			3 V _{AC}	■			1 V/A 100 mV/A 10 mV/A 1 mV/A			■	10 Hz to 10 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz	≤ 1%	P01120660
	MA110 3-30-300-3,000/3 (25 cm / Ø 7 cm)	0.08 A to 3 A 0.5 A to 30 A 0.5 A to 300 A 0.5 A to 3,000 A				■			3 V _{AC}	■			1 V/A 100 mV/A 10 mV/A 1 mV/A			■	10 Hz to 10 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz	≤ 1%	P01120661
	MA110 3-30-300-3,000/3 (35 cm / Ø 10 cm)	0.08 A to 3 A 0.5 A to 30 A 0.5 A to 300 A 0.5 A to 3,000 A				■			3 V _{AC}	■			1 V/A 100 mV/A 10 mV/A 1 mV/A			■	10 Hz to 10 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz	≤ 1%	P01120662
	MA130 30-300-3,000/3 (25 cm / Ø 7 cm)	0.5 A to 30 A 0.5 A to 300 A 0.5 A to 3,000 A				■			3 V _{AC}			■	100 mV/A 10 mV/A 1 mV/A			■	10 Hz to 20 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz	≤ 1%	P01120663
	MA200 30-300/3 (17 cm / Ø 4.5 cm)		0.5 A to 45 A _{PEAK} 0.5 A to 450 A _{PEAK}			■			4.5 V _{PEAK}			■	100 mV/A 10 mV/A				5 Hz to 1 MHz	≤ 1% + 0.3 A	P01120570
	MA200 30-300/3 (25 cm / Ø 7 cm)		0.5 A to 45 A _{PEAK} 0.5 A to 450 A _{PEAK}			■			4.5 V _{PEAK}			■	100 mV/A 10 mV/A					≤ 1% + 0.3 A	P01120571
	MA200 3,000 / 3 (35 cm / Ø 10 cm)		0.5 A to 4,500 A _{PEAK}			■			4.5 V _{PEAK}			■	1 mV/A					≤ 1% + 0.3 A	P01120572
	A110 3-30-300-3,000/3 (45 cm / Ø 14 cm)	0.08 A to 3 A 0.5 A to 30 A 0.5 A to 300 A 0.5 A to 3,000 A				■			3 V _{AC}	■			1 V/A 100 mV/A 10 mV/A 1 mV/A			■	10 Hz to 10 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz	≤ 1%	P01120630
	A110 3-30-300-3,000/3 (80 cm / Ø 25 cm)	0.08 A to 3 A 0.5 A to 30 A 0.5 A to 300 A 0.5 A to 3,000 A				■			3 V _{AC}	■			1 V/A 100 mV/A 10 mV/A 1 mV/A			■	10 Hz to 10 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz	≤ 1%	P01120631
	A110 30-300-3,000-30,000/3 (120 cm / Ø 38 cm)	0.5 A to 30 A 0.5 A to 300 A 0.5 A to 3,000 A 0.5 A to 30,000 A				■			3 V _{AC}	■			100 mV/A 10 mV/A 1 mV/A 0.1 mV/A			■	10 Hz to 5 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz	≤ 1%	P01120632
	A130 30-300-3,000/3 (80 cm / Ø 25 cm)	0.5 A to 30 A 0.5 A to 300 A 0.5 A to 3,000 A				■			3 V _{AC}			■	100 mV/A 10 mV/A 1 mV/A			■	10 Hz to 20 kHz 10 Hz to 20 kHz 10 Hz to 20 kHz	≤ 1%	P01120633

(1) Based on reference conditions.

Accessories / replacement parts for current sensors

- MiniFlex MA110 / MA130
AmpFlex® A110 / A130
E25 / E27
MH60
PAC15/16/17 & PAC25/26/27
- Mains adapter / µUSB-B cable P01651023

- 110 V-240 V 50/60 Hz mains power pack, USB type A female 5V 1A

- Charging and connection cable, USB type A male - USB type Micro-B male 1.80 m

- MH60
- Spare rechargeable battery P01296049Z
- E1N / E3N / E6N
- Mains adapter P01101965
- PAC10/11/12/20/21/22
- Mains adapter P01101967
- AmpFlex® A100
- Mains adapter P01101968

- MiniFlex MA200
- Mains adapter P01102087

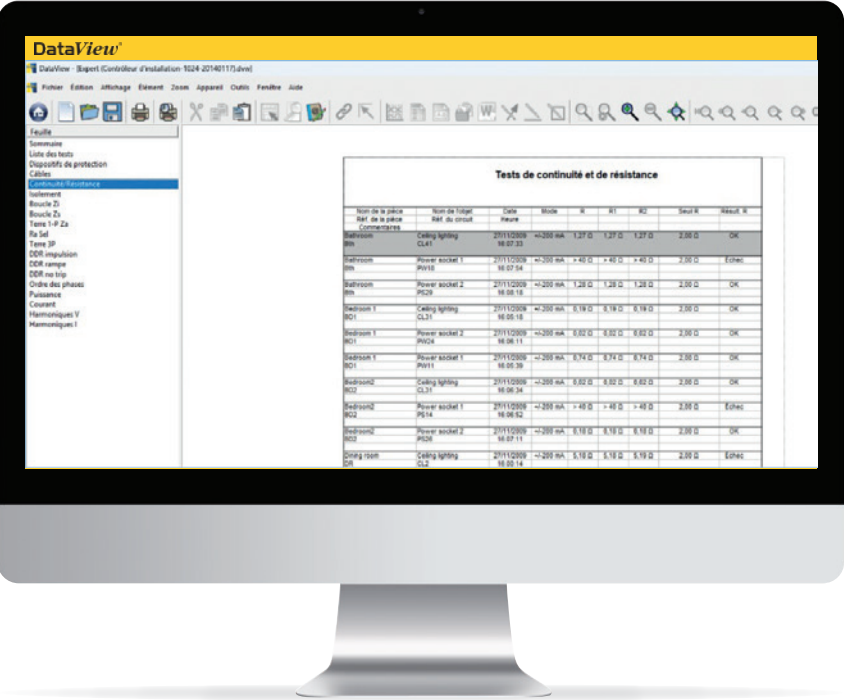
Software

Data processing software DATAVIEW®	154
ICT, MEG, GTT, GTC, MOT, DTR, MTT	155
PAT, PAT 2, PAT 3, PEL TRANSFER.....	156
DATA LOGGER TRANSFER.....	157
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Software for SX-DMM multimeter SX-DMM	159
Software for SCOPIX IV - ScopeNet IV, SX METRO oscilloscopes.....	160



Data processing software

DataView®



One of the main functions of DataView® is the analysis and display of reports based on measurement data. This platform is common to many Chauvin-Arnoux product ranges.

- Software suite **integrating all software modules** from the various Chauvin Arnoux device ranges
 - DDL TRANSFER, module for environmental and electrochemical measurement devices
 - PAT, module for power analysers
 - PEL Transfer, for power and energy recorders
 - GTT, for earth testers
 - ICT, for installation testers
 - MEG, for insulation testers
 - GTC, for earth clamps
 - MOT, for micro-ohmmeters
 - DTR, for ratiometers
 - MTT, for machine testers
- Report generation in accordance **with current standards** such as EN 50160

- **Customised** report editing
 - To view and work on captured data. DataView has multiple predefined report templates for quick editing in full compliance with current standards. Users can create their own templates according to their needs.
 - Documents can be exported in PDF format for printing or sending via email.

Features

- Retrieval of measurement data stored in the device
- Saving of measurement files
- Opening of saved files
- Processing and report creation
- Export to .pdf format
- Database management

Supported operating systems:

- Windows 10 (32 & 64 Bit)
- Windows 11

+ The extra

Register your licence in the **Support** section of **our website** to be notified of free updates and to receive the best technical support.

DataView software:

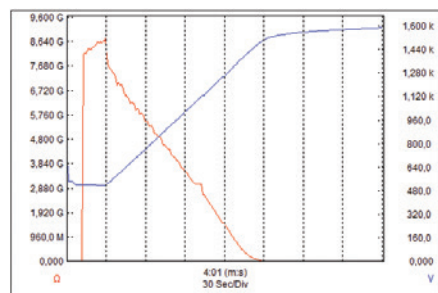
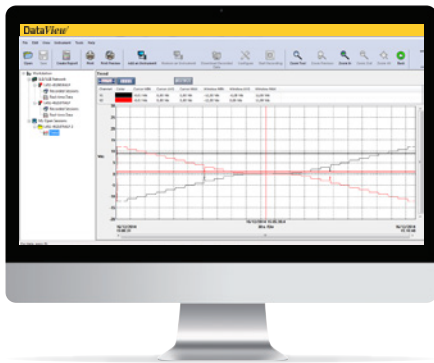
- 1 USB key
- 1 licence code



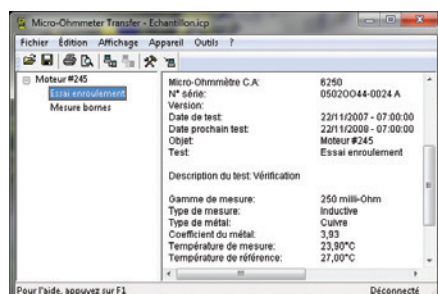
To order

DataView
Reference: P01102095

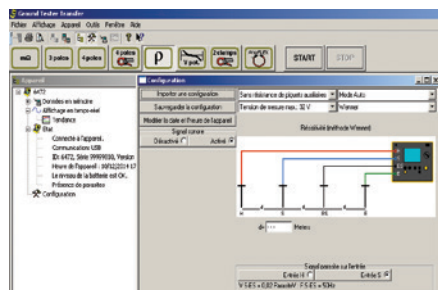
Data exploitation software modules



MEG Module Graphical trace of V(t) and R(t) tests on non-linear insulation resistance (surge arrester)



MOT module Results of motor winding test



GTT Module Configuration example

ICT	MEG	GTT	GTC
MOT	DTR	MTT	

Features

- Configuration of all device functions connected to a PC
- Retrieval of recorded measurement data
- Saving of measurement files
- Opening of saved files
- Export to Excel spreadsheet
- Export to .pdf format
- Database management
- Remote test launch at the touch of a button
- Real-time data capture and display
- Display of DAR, PI and DD ratios
- Graphical plotting of programmed duration tests and real-time voltage ramp tests
- Option to create a library of configurations tailored to specific applications

Modules	Related products
ICT	CA 6116N CA 6117
MEG	CA 6543 CA 6547 CA 6549 CA 6550 CA 6555 CA 6526 CA 6532 CA 6534
GTT	CA 6470N CA 6471 CA 6472 CA 6474
GTC	CA 6417
MOT	CA 6240 CA 6255 CA 6292
DTR	DTR 8510
MTT	CA 6161 CA 6163

+ The extra

These modules are individually functional.

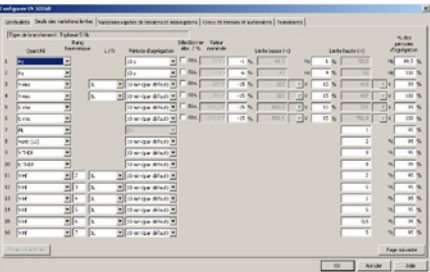
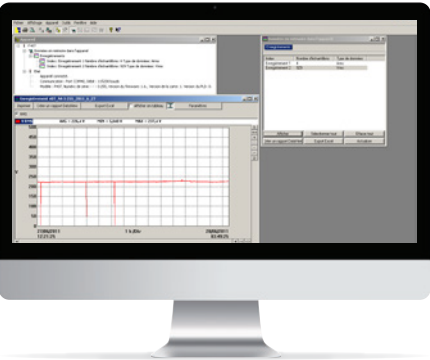
They can be downloaded free of charge from our website.



Data processing software modules



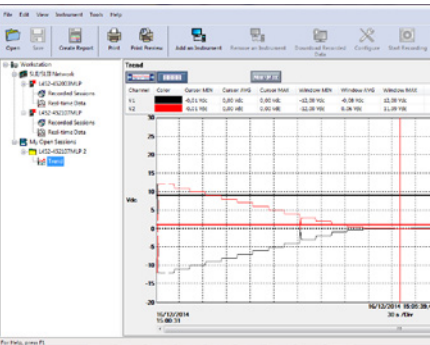
- PAT
- PAT 2
- PAT 3
- PEL TRANSFER



PAT 2 Module Configuration of EN 50160 parameters



PEL TRANSFER Module Remote visualisation of a vector representation



DATA LOGGER Module Trend recording

Features

- Configuration of all device functions connected to a PC
- Retrieval of recorded measurement data
- Saving of measurement files
- Opening of saved files
- Export to an Excel spreadsheet

Modules	Related products
PAT	F407 F607 CA 8220
PAT 2	CA 8331 CA 8333 CA 8336 CA 8436
PAT 3	CA 8345
PEL TRANSFER	PEL 112 PEL 113 PEL 115 PEL 51 PEL 52

+ The extra

These modules are individually functional.
They can be downloaded free of charge from our website.

PEL Transfer for PEL 100 and PEL 110

- With additional functions:
- Energy breakdown for loss detection
 - Trend curve display
 - Current sensor reversal in case of installation error
 - Communication mode configuration

Power Analyser Transfer 3 for CA 8345

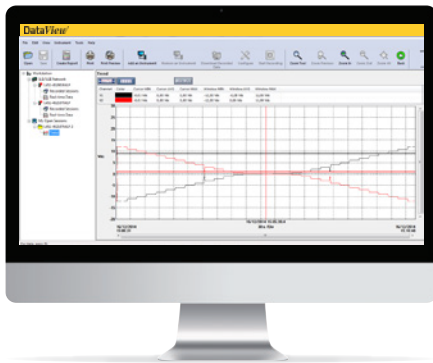
- With additional functions:
- Event representation (transients, inrush, shock waves, etc.)
 - Monitoring mode configuration (EN50160)
 - Configuration for communication with IRD server

Power Analyser Transfer 2 for CA 8331, CA 8336, CA 8333 and CA 8436

- The DataView® PAT 2 module offers additional features:
- Alarm configuration
 - Transient configuration
 - Trend configuration
 - Real-time display
 - Data retrieval, backup and export
 - Launch of measurement campaign after automatic configuration of associated device
 - Data export to Excel

Data analysis software

Data Logger Transfer



**DATA
LOGGER
TRANSFER**

**DATA
LOGGER
TRANSFER**
downloadable
free of charge
from the web pages
of the products
concerned

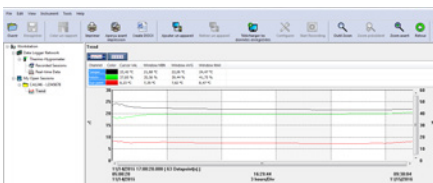
+ The extra

These modules are individually functional.

They can be downloaded free of charge from our website.

Features

- Configuration of all device functions connected to a PC
- Data visualisation in tables and graphs
- Export to Excel spreadsheet or JPEG image
- Recording programming (date and frequency)
- Automatic report export in Word format



General **Recording** **Thermo-hygrometer** **Alarms**

Session name:

Session type:
☐ Record now
☐ Schedule recording
☐ Alarm triggered recording

Start date: 16/11/2016 Start time: 11:22:00
 End date: 16/11/2016 End time: 11:37:00

Storage duration: 000 : 00 : 15 : 00 (D : H : M : S) [Reset date/time](#)

Sampling period: 1.5
 Demand period: 1.5

Estimated battery autonomy:
 Not recording: Not
 When recording: Not
 The battery autonomy is only indicative. It takes into account the voltage level of batteries, which is dependent of temperature and battery quality. This indication assumes that your batteries were fully charged when replaced.

Disk space:
 20.23% of the memory has been used.
 7.15 Mbytes of available memory. 3.56 Mbytes total memory capacity.
 0.08% of the memory is needed by the current recording settings.
 You should modify the settings of your recording or make space in the memory.

☐ Keyboard locked during recording
 Select the option to disable any keyboard action during recording. Once the recording starts with the option, keyboard is locked until the end of recording (end of session reached or with the "Stop recording" command of PhysICA Control Panel)

[Read](#) [Save](#) [Load](#)

File Edit View Instrument Tools Help

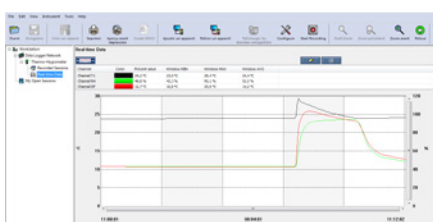
Quickstart Color calibration Recorder Alarm event description Create DOCX Animate an report Restore an account Technical documents

By Visualization

Thermo-hygrometer
 Recorded Sessions
 Real-time Data
 My Open Sessions
 CAL361 - 1219078
 Log Panel

Trend

Date	Time	Temperature	Relative Humidity	Dev. diff.
16/11/2016	17:04:06	23.12 °C	36.96 %	2.27 °C
16/11/2016	17:04:07	23.12 °C	36.96 %	2.27 °C
16/11/2016	17:04:08	23.12 °C	36.96 %	2.27 °C
16/11/2016	17:04:09	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:10	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:11	23.12 °C	36.96 %	2.25 °C
16/11/2016	17:04:12	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:13	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:14	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:15	23.12 °C	36.96 %	2.27 °C
16/11/2016	17:04:16	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:17	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:18	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:19	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:20	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:21	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:22	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:23	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:24	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:25	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:26	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:27	23.11 °C	36.96 %	2.25 °C
16/11/2016	17:04:28	23.11 °C	36.91 %	2.27 °C
16/11/2016	17:04:29	23.11 °C	36.91 %	2.27 °C
16/11/2016	17:04:30	23.11 °C	36.91 %	2.27 °C
16/11/2016	17:04:31	23.11 °C	36.91 %	2.27 °C
16/11/2016	17:04:32	23.11 °C	36.91 %	2.27 °C
16/11/2016	17:04:33	23.10 °C	36.91 %	2.25 °C



Data Logger Transfer

DataView® Modules

Related products

CA 1821
 CA 1822
 CA 1823
 CA 1550
 CA 1246
 CA 1227
 CA 1110
 CA 1510
 CA 10101
 CA 10141
 L411
 L412
 L461

Thermogram analysis software

CAMReport



CA 1954

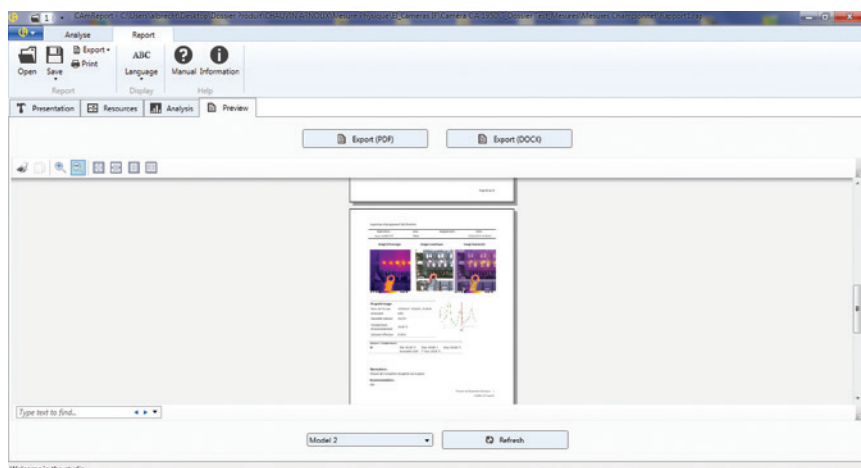
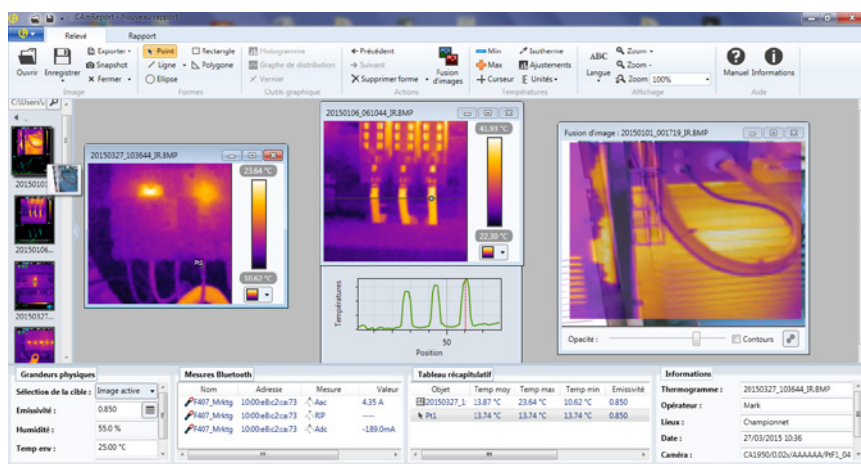


Precise analysis tools

- Cursors (automatic display of the temperature at the selected point)
- Thermal profile (automatic display of the Min/Max/Avg temperatures of the line)
- A square or circle for zone analysis
- Polygons and polylines for more precise analysis of certain areas of the thermogram
- Results tables automatically and quickly display all information
- Retrieval of voice comments or connected measurements
- Automatic merging of thermal and real images recorded simultaneously
- Automatic creation of reports for export in .pdf or .docx format

+ The extra

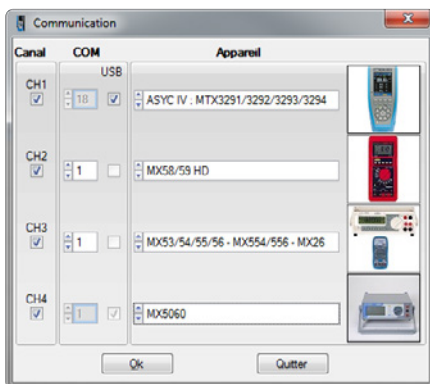
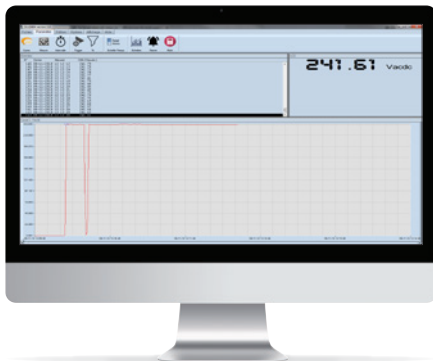
- Dedicated to the CA 1954 model
- Supplied as standard at no extra cost
- Complete, with all the features needed for reliable analysis of measurement results
- Automatic creation of analysis reports exportable in Word or PDF format



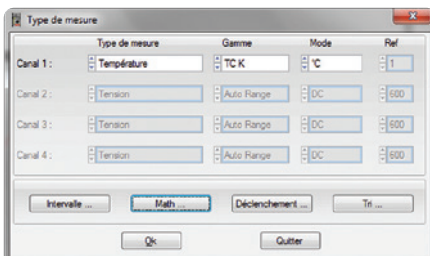
- Reports are generated automatically using a variety of available templates.
- They can be exported in Word or PDF format, simplifying editing and archiving.

Multimeter software

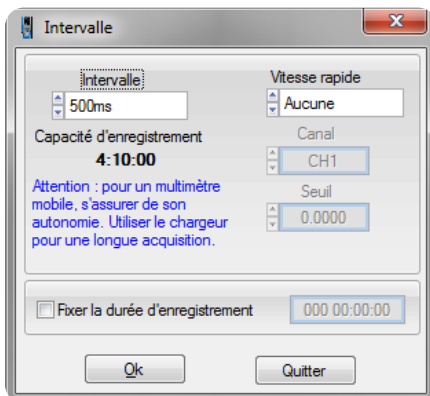
SX-DMM



Choosing the type of DMM



Measurement type



Acquisition, minimum step size 0.2 s on MTX 3292B / MTX 3293B

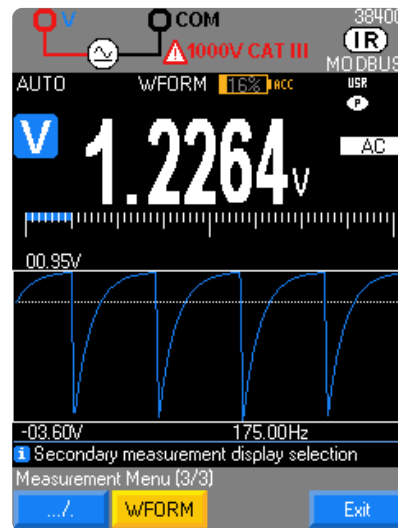
This data acquisition software allows you to connect up to 4 controllable multimeters, whether they are field multimeters or bench multimeters.

Data display

- **Graphical plot**
Each channel must be assigned a COM or USB serial port number to connect. It is possible to open multiple SX-DMM sessions on a PC. Trigger mode and acquisition intervals can be configured from 100 ms and automatic clock management depending on the model.
- **Post-acquisition processing:**
sorting, simple or complex mathematical functions on the channel, zoom, adding cursors, XY functions, addition, subtraction, multiplication and division

It transforms your multimeter(s) into a measurement centre with up to 4 channels for your tests or spot check

- XY mathematical functions, derivative, integral, curve smoothing
- Data export to EXCEL for use in spreadsheets
- Screen copies



+ The extra

List of controllable multimeters

- MX 26, M 53, MX 54, MX 56, MX 57, MX 58, MX 59
- MX 554, MX 556, MX 5060
- MTX 3250
- MTX 3281, MTX 3282, MTX 3283
- MTX 3291, MTX 3292B, MTX 3293B
- MTX 3297Ex (safe zone, outside ATEX zone)
- OX5022, OX5042 (multimeter mode)
- CA 5292, CA 5293
- CA 922, CA 942 (multimeter mode)

To order

Software for multimeters

Reference: SX-DMM2

Integrated application in SCOPIX IV

ScopeNet IV

ScopeNet IV is a JAVA application for PCs that uses Ethernet communication (RJ45 wired and WiFi)

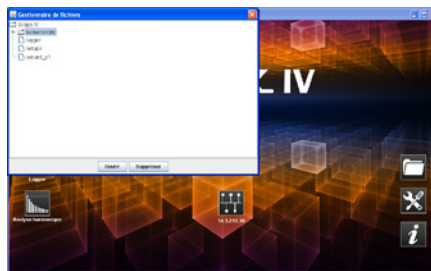
ScopeNet IV for SCOPIX IV allows you to:

- remotely control the oscilloscope
- display acquisitions as curves in all modes
- recall or save device configurations
- recall and make a screenshot in .png file format.

It also allows you to:

- copy the screenshot to the clipboard.

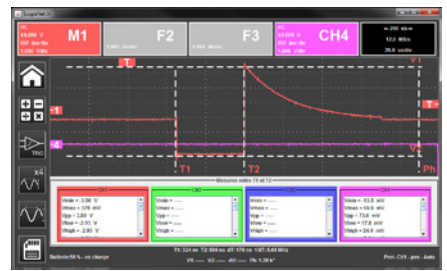
File manager



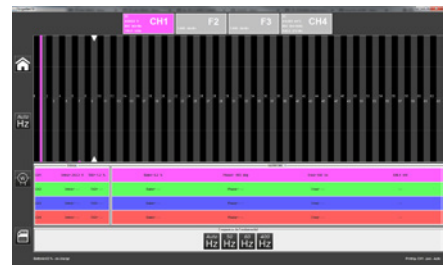
Multimeter



Oscilloscope

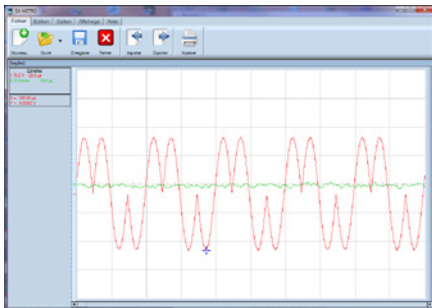


Harmonics



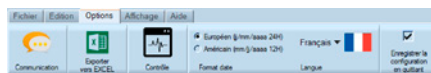
Application for SCOPIX IV

SX METRO

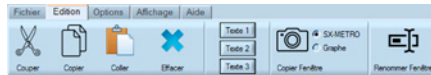


The 5 tabs accessible in SX METRO

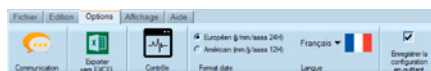
- 'File' includes file creation, data saving or window closing, importing the file from the oscilloscope memory or exporting to the trace memory or configuration.



- Edit' offers window processing, text addition or screen capture.



- 'Options' manages the type of communication according to the output port or cable used, the setting of communication parameters, export to Excel, and the choice of one of five languages. Options/control allows you to view the front panel of the connected device in real time and adjust the parameters.



- 'Display' of the reticle, deviation cursors, different screen sizes to optimise viewing.



With the colour function, you can change the colours of the different objects in the SX-METRO window and thus print your curves in the format you want to optimise printing according to your printer.

- 'Help' calls up a .pdf file of the SX METRO user manual, adds a link to our support site to an update file and displays the current version of SX METRO.



To order

SX-METRO PC software for Scopix (OX90xxx, OX 7xxx, OX6xxx) and HandScope (OX50xx, CA 9x2)

Reference: SX-METRO/P

USB-RS232 or Ethernet connection

Data processing software for all Metrix oscilloscopes for:

- Viewing waveforms: Up to 5 max per screen
- Displaying waveforms on the PC in real time with oscilloscopes
- Remote control of the oscilloscope via the PC
- Loading a configuration to the oscilloscope
- Import curves stored in the oscilloscope's memory and image files
- Store curves on the PC in text format
- Perform mathematical processing such as FFT of the displayed signal
- Transfer data (curves or FTT) to MS Excel

Accessories

4 mm banana connectors.....	162
Product-specific accessories.....	164
Other accessories.....	165
Protection, storage, transport.....	166
Fuses.....	168



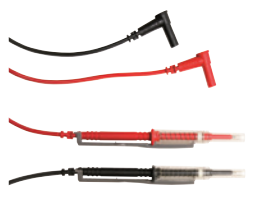
Accessories

4 mm banana connectors

CORDONS DE MESURE

Model	Description
OVERMOULDED	
	Set of 2 red/black overmoulded PVC cables P01295450Z Insulated straight male plug Ø 4 mm – Insulated straight male plug Ø 4 mm • 15 A • 1.5 m • 1,000 V CAT IV / 1,500 V CAT III / UL
	Set of 2 red/black silicone overmoulded leads P01295452Z Insulated straight male plug Ø 4 mm – Insulated straight male plug Ø 4 mm • 15 A • 1.5 m • 1,000 V CAT IV / 1,500 V CAT III / UL
	Set of 2 red/black PVC overmoulded cords P01295451Z Straight male plug Ø 4 mm insulated – Angled male plug Ø 4 mm insulated • 15 A • 1.5 m • 1,000 V CAT IV / 1,500 V CAT III / UL
	Set of 2 red/black silicone overmoulded cords P01295453Z Straight male plug Ø 4 mm insulated – Angled male plug Ø 4 mm insulated • 15 A • 1.5 m • 1,000 V CAT IV / 1,500 V CAT III / UL
STANDARDS	
	Set of 2 red/black PVC cords P01295288Z Straight male plug Ø 4 mm insulated – Straight male plug Ø 4 mm insulated • 15 A • 1.5 m • 1,000 V CAT IV / 1,500 V CAT III / UL
	Set of 2 red/black PVC cords P01295289Z Straight male plug Ø 4 mm insulated – Angled male plug Ø 4 mm insulated • 15 A • 1.5 m • 1,000 V CAT IV / 1,500 V CAT III / UL
	Set of 2 red/black PVC cords P01295290Z Straight male plug Ø 4 mm insulated with rear connection Straight male plug Ø 4 mm insulated with rear connection • 20 A • 2 m • 600 V CAT III

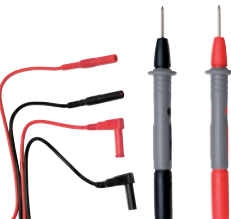
LEADS WITH TEST PROBES

Model	Description
FOR CAT IV & CAT III INSTALLATIONS	
	Set of 2 red/black PVC leads with test probes P01295455Z Straight male plug Ø 4 mm insulated • 15 A • 1.5 m • 1,000 V CAT IV / 1,500 V CAT III / UL
	Set of 2 PVC cords with red/black test probes P01295456Z Insulated angled male plug Ø 4 mm • 15 A • 1.5 m • 1,000 V CAT IV / 1,500 V CAT III / UL
	Set of 2 PVC IP2X leads for multimeter P01295461Z Compliant with IEC 61010-031 • IP2X test lead tip • Insulated angled male plug Ø 4 mm • 15 A • 1.5 m • 600 V CAT IV / 1000 V CAT III

Accessories

4 mm banana plugs

CORD WITH TEST PROBES

Model	Description
FOR CAT II & LOWER INSTALLATIONS	
	Test lead kit + test probes P01295475Z Comprising: Set of 2 red/black PVC leads Insulated straight male plug Ø 4 mm – Insulated angled male plug Ø 4 mm • 15 A • 1.5 m • 1,000 V CAT IV / 1,500 V CAT III / UL + Set of 2 moulded Ø 4 mm test probes • Female plug Ø 4 mm • CAT II 300 V
	Test lead kit + test probes P01295474Z Comprising: Set of 2 red/black PVC leads Insulated straight Ø 4 mm male plug – Insulated angled Ø 4 mm male plug • 15 A • 1.5 m • 1,000 V CAT IV / 1,500 V CAT III / UL + Set of 2 moulded Ø 2 mm test probes • Female plug Ø 4 mm • CAT II 300 V

REMOVABLE TEST PROBES

Model	Description
FOR CAT IV & CAT III INSTALLATIONS	
	Set of 2 red/black moulded test probes P01295454Z • Female plug Ø 4 mm • 15 A • 1,000 V CAT IV / 1,500 V CAT III / UL
	Set of 2 moulded red/black test probes Ø 2 mm P01295491Z • Suitable for measuring modular systems on DIN rails • Female plug Ø 4 mm • 10 A • CAT IV 1000 V
FOR CAT II & LOWER INSTALLATIONS	
	Set of 2 moulded test probes Ø 4 mm P01295458Z • Female plug Ø 4 mm • 15 A • CAT II 300 V
	Set of 2 moulded Ø 2 mm test probes P01295460Z • Female plug Ø 4 mm • 15 A • CAT II 300 V

Accessoires

Accessoires spécifiques produits

Model	Description
FOR MULTIMETERS OR TESTERS WITH + TERMINAL ON TOP	
Red test probe Ø 4 mm	
	P01103060Z removable for tester or DMM Use as "hands-free" test probe • Male plug Ø 4 mm • 600 V CAT IV
FOR CA 745 TESTER OR REMOTE CONTROL PROBE	
Red test probe Ø 4 mm	
	P01103061Z removable with locking pin For tester or remote-control probe • Male plug Ø 4 mm • 600 V CAT IV
FOR CA 745N, CA 755 AND CA 757	
Set of red/black test probes	
	P01102152Z • CAT III/IV
Set of red/black test probes	
	P01102153Z • Ø 2 mm • CAT II
Set of red/black test probes	
	P01102154Z • Ø 4 mm • CAT II
FOR CA 704, CA 740 AND CA 760 VOLTAGE ABSENCE TESTERS	
	Removable red test probe 2 P01103059Z • Female plug Ø 4 mm • 600 V CAT IV
	Black test-probe lead P01295464Z Insulated elbowed female plug Ø 4 mm Length 0.85 m • 600 V CAT IV

Model	Description
FOR ALL VOLTAGE ABSENCE TESTERS, CA 74X/XN SERIES / CA 76X/XN SERIES	
Set of 2 PVC IP2X leads	
	P01295463Z for CA 760 and CA 704 VATs Complies with NF C 18-510 and IEC 61010-031+A1:2008 • IP2X test probe Ø 2 mm • Elbowed female plug Ø 4 mm • 15 A • 1.5 m • 600 V CAT IV
	Red removable test probe P01102008Z • Female plug Ø 4 mm • IEC 61243-3
	Black test-probe lead P01102009Z Insulated elbowed female plug Ø 4 mm • Length 0.85 m • IEC 61243-3
Set of 2 IP2X leads for CA 740N and CA 760N VATs	
	P01295462Z • IP2X test probe Ø 4 mm • Elbowed female plug Ø 4 mm • 15 A • NF C 18-510 / IEC 61243-3 1000 V • 1.5 m Also available: P01295285Z - 0.25 m lead (red) - 0.85 m lead (black)
Set of IP2X accessories for VAT	
	P01102121Z • 2 x IP2X Ø 4 mm test probes • 1 point-point cable, L = 1.10 m
CA 751 measurement adapter	
	P01101997Z • For 2P+E sockets

Model	Description
FOR CA 771 & CA 773 VOLTAGE ABSENCE TESTERS	
Set of 2 red/black IP2X test probes Ø 4 mm	
	P01102128Z Female plug Ø 4 mm IEC 61423-3 1000 V
Set of 2 red/black IP2X test probes	
	P01102127Z Female plug Ø 4 mm 1000 V CAT IV
Set of 2 red/black test probes	
	P01102123Z Fiche femelle Ø 4 mm 1000 V CAT IV
Set of 2 red/black test probes Ø 2 mm with crystal	
	P01102124Z Female plug Ø 4 mm IEC 61423-3 1000 V
Set of 2 red/black test probes Ø 4 mm	
	P01102125Z Female plug Ø 4 mm IEC 61423-3 1000 V
Protective cap for test probe	
	P01102126Z

Accessories

Other accessories

Model	Description
FOR CAT IV & CAT III INSTALLATIONS	
Set of 2 red/black crocodile clips	
	P01295457Z • 15 A • 1,000 V CAT IV / 1,500 V CAT III / UL
Set of leads and measuring accessories for electricians	
	P01295459Z • 2 x 1000 V CAT IV moulded test probes • 2 x 1.5 m 1000 V CAT IV red/black moulded leads with straight male plug – elbowed male plug • 2 x red/black 1000 V CAT IV crocodile clips • 2 x 300 V CAT II moulded test probes Ø 4 mm
Set of 2 red/black magnetized test probes	
	P01103058Z For voltage measurement only Ø test probe: 6.6 mm Elbowed female plug Ø 4 mm • 1000 V CAT III / 600 V CAT IV
Set of 2 red/black crocodile wire grips	
	P01102053Z • 20 A • 1,000 V CAT III
Set of 2 adapters	
	P01102101Z Insulated female BNC plug Red/black - insulated male plugs Ø 4 mm with 19 mm spacing • 600 V CAT III
Set of 2 adapters	
	HX0107 Insulated BNC male plug Insulated red/black female plugs Ø 4 mm spacing 19 mm • 600 V CAT III
BNC coaxial connection cable PVC lead	
	HX0106 Insulated BNC male plug Insulated BNC female plug Impedance 50 Ω 1 m • 600 V CAT III

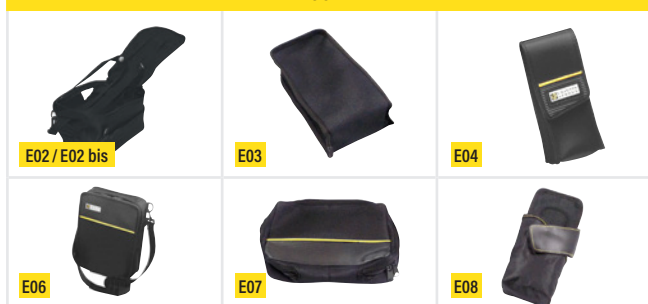
Model	Description
FOR CAT II & LOWER INSTALLATIONS	
Set of 3 measurement adapters for housing	
	P01102114Z 2 red/black insulated straight male plugs Ø 4 mm • E27 screw socket • B22 bayonet socket • 2-pole mains socket (P/N) • 250 V CAT II
CA 753: Measurement adapter for 2P+E socket	
	P01191748Z • Suitable for European and Schuko sockets • Can be used for measurements on the P (Phase), N (Neutral) and PE (Earth) conductors in total safety • Guarantees mechanical and electrical contact with all test probes (Ø2, Ø4, IP2x, etc.) • Shows the presence of a P-N voltage (> 200 V) and indicates the phase position • IEC 61010 230 V CAT II
Current lead equipped with a French 2P+E mains socket	
	P03295509 • For inserting an ammeter in series in total safety • For measuring the current with a current clamp without having to remove the outer sheath of the power supply cable
Measurement lead for French and German 2P+E mains sockets	
	P06239307 For direct measurement on a mains socket Quick implementation and reliable connections
Set of 2 red/black insulation-piercing clips	
	P01102055Z • 30 V AC, 60 V DC
CMS clamp	
	HX0064 Copper-gold-plated beryllium contacts Output via male plugs Ø 4 mm • 12 m • SELV
Set of 2 adapters	
	P01101847 Red/black insulated male BNC – female sockets Ø 4 mm with 19 mm spacing • 500 V CAT I, 150 V CAT III

Model	Description
EXTERNAL POWER SUPPLY & MAINS POWER PACK	
Set of 4 x 1.5 V LR06 rechargeable batteries	
	HX0051B
230 V / µUSB – B mains adapter	
	P01651023 • 110 – 240 V 50/60 Hz • Female USB type A, 5 V 1 A Charging and connection cable • Male USB type A – Male USB type µ-B • 1.8 m
ADAPTERS FOR TEMPERATURE MEASUREMENT SENSORS	
Set of 2 safety thermocouple adapters for multimeters	
	P01102106Z Female thermocouple plug – insulated red/black male plugs Ø 4 mm with 19 mm spacing
Safety adapter and K-sensor temperature probe	
	P01102107Z For multimeters and multimeter clamps equipped with a temperature measurement calibre with 19 mm-spaced banana inputs - Measurement range from -50 °C to +350 °C - Sensor length: approx. 100 cm
Pt100/Pt1000 sensor adapter for multimeters	
	HX0091 Female Pt100/Pt1000 plug – Red/black insulated male plugs Ø 4 mm

Accessories

Protection, storage + transport

POCKET



BAG



BAG



CASE



MOUNTING ACCESSORY



WATERPROOF CASE



STRAP



Storage accessory

Reeling Box cable reel..... Ref.: P01102149

For cords that never get tangled.
Can store up to 3 m of cable
(1 x 3 m / 2 x 1.5 m). Built-in magnet for
easy attachment to any metal surface.

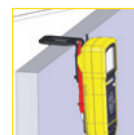
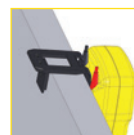
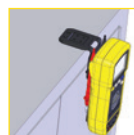


Photo	W x H x D	Reference	Additional information
MOUNTING ACCESSORY			
F01	110 x 220 x 45 mm	P01102100Z	MultiFix fixing system
POCKET			
E02	125 x 210 x120	P01298049	Specific to a device or a range of products.
E02 bis	125 x 210 x120	HX0105	
-	(82 + 51) x 156 x 45	AE0216	
E04	180 x 75 x 45	P01298012	
E06	190 x 250 x 60	P01298055	
E07	250 x 190 x 80	P01298051	
BAG			
S11	95 x 210 x 30	AE0236	Compatible with MultiFix system
E01	110 x 220 x 45	P01298065Z	
E01 bis	105 x 225 x 40	HX0105	
S01	120 x 200 x 60	P01298074	
S02	120 x 245 x 60	P01298075	
S02 bis	120 x 245 x 60	HX0052B	
S03	120 x 320 x 60	P01298076	
S03 bis	120 x 320 x 60	HX0052C	
S04	150 x 230 x (40+40)	P01298032	
S06	180 x 220 x 75	P01298036	
S07	225 x 270 x 70	P01298033	
-	240 x 230 x 45	AE0226	
S08	240 x 140 x 130	P01298006	
S09	355 x 255 x 235	P01298056	
S10	360 x 200 x 140 + 360 x 160 x 35	P01298061A	
BAG			
S20	330 x 240 x 240	P01298078	Waterproof all-terrain base. Two compartments and a document pocket. Supplied with shoulder strap.
S21	395 x 335 x 210	P01298066	
S21	395 x 335 x 210	HX0120	
S22	575 x 320 x (200 + x +x)	P01298067	
S23		P01298031	
CASE			
M01	270 x 195 x 65	P01298071	Equipped with a set of foam inserts. Supplied with strap and keys
M02	285 x 210 x 80	P01298037	Specific to a device or product range.
M02	285 x 210 x 80	P01298080	
M03	285 x 210 x 80	P01298037A	
M04	320 x 255 x 75	P01298004	Equipped with a set of foam inserts. Supplied with strap and keys
M05	320 x 255 x 75	P01298011	Specific to a device or a range of products
M07	440 x 310 x 135	P01298072	Equipped with a set of foam inserts. Supplied with strap and keys
M08	430 X 320 X (53+53)	HX0038	Specific to a device or a range of products.
WATERPROOF CASE			
B01	272 x 248 x 130 mm	P01298068	Equipped with a set of foam inserts
B02	272 x 248 x 182 mm	P01298069	Equipped with a set of foam inserts
STRAP			
S30		P01298057	Equipped with a set of foam inserts
-	272 x 248 x 182 mm	P01298005	Equipped with a set of foam inserts

Mounting accessory

MultiFix Ref.: P01102100Z

When used with compatible cases and bags, it allows for the transport and secure attachment of measuring devices for greater user comfort.



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Accessories

Fuses

Product	Dimensions	Amperage	Reference
AX 501	5 x 20	6,3 A	AT0087
AX 502	5 x 20	6,3 A	AT0087
AX 503	5 x 20	6,3 A	AT0087
CA 10	6 x 32	8 A	P01297013
CA 1621	5 x 20	0,125 A	P01297099
CA 1631	5 x 20	0,125 A	P01297099
CA 404	6 x 32	1,25 A	P01297015
CA 405	6 x 32	6,3 A	P01297016
CA 5001	6 x 32	0,5 A	P01297028
CA 5001	6 x 32	5 A	P01297035
CA 5003	10 x 38	16 A	P01297037
CA 5003	6 x 32	1,6 A	P01297036
CA 5005	6 x 32	1 A	P01297039
CA 5005	6 x 32	10 A	P01297038
CA 5011	6 x 32	1 A	P01297039
CA 5011	6 x 32	10 A	P01297038
CA 5210	10 x 38	12 A	P01297021
CA 5210	6 x 32	0,4 A	P01297020
CA 5210G	10 x 38	12 A	P01297021
CA 5210G	6 x 32	0,4 A	P01297020
CA 5220	10 x 38	12 A	P01297021
CA 5220	6 x 32	0,4 A	P01297020
CA 5220G	10 x 38	12 A	P01297021
CA 5220G	6 x 32	0,4 A	P01297020
CA 5230G	10 x 38	12 A	P01297021
CA 5230G	6 x 32	0,5 A	P01297028
CA 5233	6 x 32	10A	AT0070
CA 5240G	10 x 38	12 A	P01297021
CA 5240G	6 x 32	0,5 A	P01297028
CA 5260G	6 x 32	0,1 A	P01297012
CA 5271	10 x 38	10 A	P01297096
CA 5273	10 x 38	10 A	P01297096
CA 5275	10 x 38	10 A	P01297096
CA 5275	6 x 32	0,63 A	P01297098
CA 5277	10 x 38	10 A	P01297096
CA 5277	6 x 32	0,63 A	P01297098
CA 5287	10 x 38	0,44 A	P01297094
CA 5287	10 x 38	11 A	P01297092
CA 5289	10 x 38	0,44 A	P01297094
CA 5289	10 x 38	11 A	P01297092
CA 5292	10X38	11A	P01297092
CA 6114	6 x 32	3,15 A	P01297080
CA 6115N	5 x 20	2 A	P01297026
CA 6115N	6 x 32	3,15 A	P01297080
CA 6121	5 x 20	4 A	P01297032
CA 6121	6 x 32	0,2 A	P01297033
CA 6240	6 x 32	12,5 A	P01297091
CA 6250	5 x 20	2 A	P01297090
CA 6250	6 x 32	16 A	P01297089
CA 6421	6 x 32	0,1 A	P01297012
CA 6423	6 x 32	0,1 A	P01297012

Product	Dimensions	Amperage	Reference
CA 6425	6 x 32	0,1 A	P01297012
CA 6460	6 x 32	0,1 A	P01297012
CA 6462	6 x 32	0,1 A	P01297012
CA 6470	5 x 20	0,63 A	AT0094
CA 6471	5 x 20	0,63 A	AT0094
CA 6472	5 x 20	0,63 A	AT0094
CA 6501	6 x 32	0,2 A	P01297095
CA 6503	6 x 32	0,2 A	P01297095
CA 6511	6 x 32	1,6 A	P01297022
CA 65113	6 x 32	1,6 A	P01297022
CA 6521	6 x 32	0,63 A	P01297078
CA 6522	6 x 32	0,63 A	P01297078
CA 6523	6 x 32	0,63 A	P01297078
CA 6524	6 x 32	0,63 A	P01297078
CA 6525	6 x 32	0,63 A	P01297078
CA 6526	6 x 32	0,63 A	P01297078
CA 6528	6 x 32	0,200 A	P01297104
CA 6531	6 x 32	0,63 A	P01297078
CA 6532	6 x 32	0,63 A	P01297078
CA 6534	6 x 32	0,63 A	P01297078
CA 6536	6 x 32	0,63 A	P01297078
CA 6541	6 x 32	0,1 A	P01297072
CA 6541	8 x 50	2,5 A	P01297071
CA 6543	6 x 32	0,1 A	P01297072
CA 6543	8 x 50	2,5 A	P01297071
CA 6545	5 x 20	0,1 A	P03297514
CA 6547	5 x 20	0,1 A	P03297514
CA 6549	5 x 20	0,1 A	P03297514
CA5293	10X38	11A	P01297092
DMM 111	10 x 38	10 A	P01297096
DMM 111	6 x 32	0,630 A	P01297098
DMM 121	10 x 38	10 A	P01297096
DMM 121	6 x 32	0,630 A	P01297098
DMM 141	10 x 38	10 A	P01297096
DMM 141	6 x 32	0,630 A	P01297098
DMM 210	10 x 38	11 A	P01297092
DMM 210	6 x 32	0,8 A	P01297093
DMM 220	10 x 38	11 A	P01297092
DMM 220	6 x 32	0,8 A	P01297093
DMM 230	10 x 38	11 A	P01297092
DMM 230	6 x 32	0,8 A	P01297093
DMM 240	10 x 38	11 A	P01297092
DMM 240	6 x 32	0,5 A	P01297097
DMM 53	6 x 32	0,4 A	P01297020
DMM 53	6 x 32	10 A	AT0070
DMM 54	6 x 32	0,500 A	P01297097
DMM 54	6 x 32	10 A	AT0070
IMEG 500	5 x 20	0,2 A	P02297302
IMEG 500N	5 x 20	0,2 A	P02297302
MTX 203-Z	10X38	11A	P01297096
MTX 203-Z	6,3x32	0,63A	P01297098

Product	Dimensions	Amperage	Reference
MTX 204-Z	10X38	10A	P01297096
MTX 204-Z	6,3x32	0,63A	P01297098
MTX 3250	6 x 32	10 A	AT0095
MTX 3281	10 x 38	11 A	P01297092
MTX 3282	10 x 38	11 A	P01297092
MTX 3283	10 x 38	11 A	P01297092
MTX 3290	6,3X32	10A	P01297038
MTX 3291	10x38	11A	P01297092
MTX 3292B	10X38	11A	P01297092
MTX 3293B	10X38	11A	P01297092
MTX 3297Ex	10 x 38	10 A	HX0097
MX 1	6 x 32	1,6 A	AT0071
MX 1	6 x 32	10 A	AT0070
MX 20	5 x 20	0,63 A	AT0094
MX 20HD	5 x 20	0,63 A	AT0094
MX 20HD	6 x 32	10 A	AT0095
MX 22	6 x 32	0,63 A	AT0519
MX 22	6 x 32	10 A	AT0095
MX 23	6 x 32	10 A	AT0095
MX 24B	6 x 32	0,63 A	AT0519
MX 24B	6 x 32	10 A	AT0095
MX 26	6 x 32	0,63 A	AT0519
MX 26	6 x 32	10 A	AT0095
MX 407	6 x 32	0,5 A	P01297097
MX 409	6 x 32	0,200 A	P01297104
MX 44	5 x 20	0,63 A	AT0096
MX 44	6 x 32	10 A	AT0095
MX 44HD	5 x 20	0,630 A	AT0096
MX 44HD	6 x 32	10 A	AT0095
MX 44HDL	5 x 20	0,630 A	AT0096
MX 5006	6X32	10A	AT0095
MX 5060	6X32	10A	AT0095
MX 51	5 x 20	0,63 A	AT0094
MX 52	5 x 20	0,63 A	AT0094
MX 53	5 x 20	0,63 A	AT0096
MX 53	6 x 32	10 A	AT0095
MX 54C	5 x 20	0,63 A	AT0096
MX 54C	6 x 32	10 A	AT0095
MX 553	6 x 32	10 A	AT0095
MX 556	6 x 32	10 A	AT0095
MX 55C	5 x 20	0,63 A	AT0096
MX 55C	6 x 32	10 A	AT0095
MX 56C	5 x 20	0,630 A	AT0096
MX 56C	6 x 32	10 A	AT0095
MX 58HD	10 x 38	11 A	P01297092
MX 58HD	5 x 20	0,630 A	AT0096
MX 59HD	10 x 38	11 A	P01297092
MX 59HD	5 x 20	0,630 A	AT0096
MX 59HDL	5 x 20	0,630 A	AT0096
PX 110	10 x 38	10 A	HX0019
PX 120	10 x 38	10 A	HX0019

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