



Earth clamps and loop testers

Discover the CA 6418 oblong-headed earth clamp



IP 40



	CA 6416	CA 6417	CA 6418
Reference	P01122015	P01122016	P01122018
Specifications			
Loop ohmmeter	Measurement ranges (Ω) / Resolution (Ω) / Accuracy		
	Display on 1,500 counts		Display on 1,200 counts
	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
	0.10 to 0.99 / 0.01 / ±1.5 % ±2 r		0.10 to 0.99 / 0.01 / ±1.5 % R ±2 r
	1.0 to 49.9 / 0.1 / ±1.5 % ±r		1.0 to 49.9 / 0.1 / ±1.5 % R ±2r
	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 %			
Frequency	Measurement frequency 2,083 Hz / Translation frequency 50, 60, 128 or 2,083 Hz		Measurement frequency 2,083 Hz
Loop inductance measurement	Measurement ranges (μH) / Resolution / Accuracy		
	10 to 100 / 1 / ±5 % ±r		
Contact voltage (calculation)	Measurement ranges (V) / Resolution (V)		
	0.1 to 4.9 / 0.1		
	5.0 to 49.5 / 0.5		
Ammeter Measurement ranges (A) / Resolution (A) / Accuracy Display on 4,000 counts	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
	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
	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 and I
Buzzer	Active		
HOLD	Manual or automatic PRE-HOLD		
Auto power-off	Active / Inactive		
General specifications			
Display	152-segment OLED. Active area 48 x 39 mm		
Max. clamping diameter	Ø 35 mm		ø 32 mm - LxH : 30 x 40 mm / 20 x 55 mm
Data storage	300 date-stamped measurements	2,000 date-stamped measurements	300 date-stamped measurements
Communication	Bluetooth class 2		
Power supply	4 x 1.5 V, LR6 (AA) alkaline batteries or 4 x Ni-MH batteries		
Battery life	1,440 x 30-second measurements	2,440 x 30-second measurements	
Calibration	Automatic at startup		
Electrical safety	IEC 61010 600 V CAT IV		CEI 61010 100 V CAT IV, 150 V CAT III
Ingress protection	IP40		
Dimensions	55 x 95 x 262 mm		56 x 106 x 300 mm
Weight	Approx. 935 g with batteries		Approx. 1.2 kg with batteries

R = Reading, r = resolution

State at delivery

- **CA 6416** : 1 clamp delivered in a carrying case with 4 x 1.5 V batteries, 1 CD-Rom containing the User's Manual in 5 languages, 1 wrist strap
- **CA 6417** : 1 clamp delivered in a carrying case with 4 x 1.5 V batteries, 1 CD-Rom containing the User's Manual in 5 languages and the GTT software with simplified driver, 1 wrist strap
- **CA 6418** : 1 clamp delivered in a carrying case with 4 x 1.5 V batteries, 1 CD-Rom containing the User's Manual in 5 languages, 1 wrist strap, 1 quick startup guide, 1 multilingual safety datasheet, 1 inspection certificate

Accessories

- CL1 calibration loop P01122301
- DataView P01102095
- Hard case P01298080
- Two foam inserts for CA 6418 Please contact us



Locate hidden cables

Locate hidden circuits!

Comprising a transmitter and a receiver, the LOCAT-N provides digital, visual and audio indication of the presence of cables or ducts so that you can follow them intuitively.

**300 V
CAT III**

Transmitter



Receiver

CA 6681 LOCAT-N	
Reference	P01141626
CA 6681E transmitter	
Screen	LCD screen with display of functions and bargraph
Output signal frequency	125 kHz
External voltage measurement range	12 to 600 V _{ACDC}
Functions	Digital coding of signals for easy signal identification, selection of transmission signal code, torch function
Power supply	9 V battery
Dimensions	190 x 89 x 42.5 mm
Weight	420 g with battery
Electrical safety	300 V CAT III
CA 6681R receiver	
Screen	Backlit LCD with display of functions and bargraph, transmission code, receiver and transmitter battery-charge status
Detection Depth	
> Single-pole application	0 to 2 m
> Two-pole application	0 to 0.5 m
> Simple looping line	Up to 2.5 m
Identification of mains voltage	Approximately 0 to 0.4 m
Functions	Automatic shutdown, automatic or manual adjustment of reception sensitivity, torch function
Power supply	6 x 1.5 V AAA batteries
Dimensions	241.5 x 78 x 38.5 mm
Weight	360 g with batteries

State at delivery

- **CA 6681 LOCAT-N:** delivered in a hard case with 1 set of red/black 4 mm isolated banana leads (straight male / elbowed male), 1 set of 2 crocodile clips, 1 stake for earthing, 1 x 9 V battery, 6 x 1.5 V AAA batteries, 1 measurement adapter for B22 socket (bayonet), 1 adapter for E14 socket (screw-in), 1 mains socket adapter and 1 operating manual in 5 languages.





TESTING AND ELECTRICAL SAFETY

Micro-ohmmeters

- > 4-wire measurement method
- > Test current up to 10 A
- > Resolution 0.1 to 1 $\mu\Omega$



State at delivery

- **CA 6420** delivered with a bag, a set of 2 x 10 A Kelvin clamps with 3 m cable, 1 x 2P European mains power cable 1.8 m long, data export software, 1 optical / USB communication cable
- **CA 6255** delivered with a bag, a set of cables 3 m long terminated by Kelvin clamps, 2 m Euro mains power cable, CD-ROM containing the MOT (Micro-Ohmmeter Transfer) data transfer software, RS 232 communication cable, CD-ROM containing the user's manual in 9 languages.

	CA 6240	CA 6255
	<i>Low resistance measurement</i>	
Reference	P01143200	P01143221
Measurement method	4-wire measurement	
Resistance	5 $\mu\Omega$ to 400.0 Ω	1 $\mu\Omega$ to 2,500 Ω
Resolution	1 $\mu\Omega$	0.1 $\mu\Omega$
Accuracy	0.25 %	0.05 %
Current	10 mA to 10 A	1 mA to 10 A
Reversal of current direction	Yes	No but automatic compensation of stray currents
Measurement mode	Normal	Inductive, non-inductive, non-inductive with automatic tripping
Temperature compensation	No	Manual or with Pt 100 probe
Power supply	NiMH rechargeable battery	
Safety	IEC 61010-1 / Cat III 50 V	
Dimensions	270 x 250 x 180 mm	
Weight	4.5 kg	4.5 kg
Data storage	100 measurements	1,500 measurements

Accessories

Double 1 A test probes (x 2).....	P01102056
Mini Kelvin clamp (set of 2).....	P01101783



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



	CA 6292		
Reference	P01143300		
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 to 1 Ω)
Output voltage	10 VAC: 4.2 V @ 200 A / 220 VAC: 8.6 V @ 200 A		
Maximum load resistance	100 VAC: 20 m Ω @ 200 A / 220 VAC: 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 VAC – 50/60 Hz		
Dimensions	502 x 394 x 190 mm		
Weight	Approx. 13 kg		
Storage temperature	-10 °C to +70 °C		
Humidity	95% RH		
Protection	Protected against overvoltages, short-circuits and voltage surges on output terminals		
Ingress protection	IP54		
Electrical safety	IEC 61010-1		

Current measurement with the MR6292 clamp available as an option

	MR6292
Reference	P01120470
Measurement range	1.0 - 50.0 Aac
Resolution	0.1 mA
Intrinsic uncertainty	\pm (1.5% + 2 cts)
Output signal	10 mV / Adc
Load impedance	>100 k Ω // 100 pF
Influence of conductor position in jaws	0.50%

State at delivery

CA 6292 delivered with:
 a case containing 1 set of 2 x 6 m Kelvin leads (red / black) with adjustable-clamp connections, 1 green earth cable 3m long with crocodile clip, 1 USB cable 1.5m long, 1 fuse T 15 A 250V mounted in the instrument, 1 European mains power cable, 1 user's manual in 5 languages on CD-ROM, 1 CD-ROM containing the DataView software.

Accessories / Replacement Parts

1 set of 2 x 15 m Kelvin leads (red / black) adjustable-clamp connections.....	P01295487
1 MR 6292 current clamp for CA 6292.....	P01120470
1 set of 2 x 6 m Kelvin leads (red / black) adjustable-clamp connections.....	P01295486
1 green earth cable with crocodile clip.....	P01295488
1 set of 5 fuses T 15A 250V 5x20mm.....	P01297101
1 USB-A USB-B cable 1.5m long.....	P01295293



Ratiometer

- > Transformation ratio measurement on power, voltage and current transformers
- > Storage of up to 10,000 measurement results

50V
CAT IV

IP
53



DTR 8510

Digital ratiometer for transformers

Reference	P01143200	
Range of ratios (VT)	Automatic: 0.8000 to 8,000:1	
Accuracy (VT)	Range of ratios	Accuracy (% of reading)
	0.8000 to 9.9999	± 0.2 %
	10.000 to 999.99	± 0.1 %
	1000.0 to 4999.9	± 0.2 %
	5000.0 to 8000.0	± 0.25 %
Range of ratios (TC)	Autoranging: 0.8000 to 1000.0	
Accuracy (TC)	± 0.5 % of reading	
Excitation signal	VT mode: 32 Vrms max CT mode: Auto level 0 to 1 A, 0.1 to 4.5 Vrms	
Excitation current display	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 contrast and backlighting. Easy to read in both daytime and nighttime conditions	
Available languages	French, English, Spanish, Italian, German, Portuguese	
Measurement method	According to IEEE Std C57, 12.90™ standard	
Power supply	Two rechargeable batteries: 12 V, NiMH, 1650 mAh	
Battery life	Up to 10 hrs in continuous operation, low-battery warning	
Battery charger	Universal input (90 to 264 Vrms), smart charger	
Charging time	< 4 hours for full charge	
Storage	10,000 tests	
Date / time	Power supplied by dedicated battery, real-time clock	
Communication	USB 2.0, optical isolation, 115.2 kB	
Software	Delivered with DataView® analytical software	
Dimensions / Weight	272 x 248 x 130 mm / 3.7 kg	
Connection	XLR connectors	
Leads	Screened H and X leads, 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)	
Protection rating	IP 40 with cover open as per EN 60529 IP 53 with cover closed as per EN 60529	
Safety	EN 61010-1, 50 V CAT IV; pollution degree 2	

State at delivery

DTR 8510 delivered with:

Delivered with a carrying bag containing 1 set of 4.6 m leads with crocodile clips, 1 external battery charger with mains power cable, 1 USB cable, 1 NiMH battery datasheet, 1 operating manual and DataView software on CD-Rom



POWER, ENERGY, DISTURBANCES

Power analysers for three-phase networks

QUALI STAR+

- > 5 voltage inputs & 4 current inputs
- > Inrush mode over 10 minutes
- > Calculation of distorting power



1000 V
CAT III

600 V
CAT IV

3U
4I

4U
4I

IP
53

CEI
61000-4-30

EN
50160

IP
67



	CA 8331 P01160511	CA 8333 P01160541	CA 8336 P01160591	CA 8436 P01160595
Reference	P01160511	P01160541	P01160591	P01160595
Number of channels		3U / 4I		4U / 4I
Number of inputs		4V / 3I		5V / 4I
IEC 61000-4-30				EN50160 reports
Voltage (TRMS AC+DC)			2 V to 1,000 V	
Voltage ratio			Up to 500 kV	
Current (TRMS AC+DC)				
MN clamps		MN93: 500 mA to 200 AAC ; MN93A: 0.005 AAC to 100 AAC		
C193 clamps		1 A to 1,000 AAC		
AmpFlex® or MA clamps		100 mA to 10,000 AAC		
PAC93 clamp		1 A to 1,300 AAC/DC		
E3N clamp		50 mA to 100 AAC/DC		
J93				50 A to 3,500 AAC / 5,000 ADC
Current ratio		Up to 60 kA		
Frequency		40 Hz to 69 Hz		
Power		W (P), VA (S), var (N, Q ₁ , D), VAD, PF, DPF, cos φ, tan φ		W (P), VA (S), var (N, Q ₁ , D), PF, DPF, cos φ, tan φ
Energy		Wh, varh (Nh, Q ₁ h, Dh), VAh		
Harmonics		Yes		
THD		Yes, from 0 to 50th order, phase		
Expert mode		Yes		
Transients		50		210
Flicker (Pst and Plt)		Pst		Pst and Plt
Inrush mode		Yes on 4 periods		Yes > 10 minutes
Unbalance			Yes	
Recording		Yes		
Min/Max of a selection of parameters at max. sampling rate	4 hrs to 2 weeks	A few days to several weeks		2 weeks to several years
Alarms		4,000 of 10 different types		10,000 of 40 different types
Peak		Yes		
Vectorial representation		Automatic		
Display		Colour ¼ VGA TFT screen, 320 x 240, diagonal 148 mm		
Capture of screens and curves	12			50
Electrical safety		IEC 61010 1 000 V CAT III / 600 V CAT IV		
Ingress protection		IP53 / IK08		IP67
Languages		More than 27		
Battery life		Up to 13 hours		
Communication interface		USB		
Power supply		9.6 V NiMH rechargeable battery or mains power supply		
EN50160 report		Yes, with DataView® software		
Dimensions - Weight		240 x 180 x 55 mm - 1.9 kg		270 x 250 x 180 mm / 3.7 kg
Warranty		3 years		

State at delivery

• **CA 8336 • CA 8333 - CA 8331 - Models without sensors:** Qualistar+ analyser delivered with a bag for accessories, 5 voltage cables 3 m long with 4 mm banana connections, 5 crocodile clips, a set of 12 coloured elements for identifying cables and inputs, an anti-scratch film to protect the screen (mounted), a USB cable, a mains power pack, a safety datasheet, a CD containing a multilingual user's manual and a CD containing the PC data retrieval software (Power Analyser Transfer).

• **CA 8436** - 1 bag No. 22, 1 IP67 mains cable, 1 USB cable, 5 x 4 mm banana voltage cables 3 m long, 5 crocodile clips, 1 set of colour-coded rings/inserts for identifying the cables and inputs, 1 anti-scratch screen-protection film (mounted), 1 safety datasheet, 1 CD-ROM containing the Power Analyser Transfer PC data recovery software.



Software

The measurements performed with the Qualistar models can be processed using two software products:

Power Analyzer Transfer (standard)
and **DataView**® (option).



Power Analyzer Transfer

For transferring data onto a PC and communicating in real time via USB.

Supplied with the Qualistar+ models



DataView®

Powerful configuration, transfer and measurement data processing software, with generation of reports according to the voltage quality standards as well as **EN5010** reports (CA 8333/8230)

DataView® is compatible with other Chauvin Arnoux® products:

- CA 8220 & CA 8230 power analysers
- F407 and F607 multimeter clamps
- and other measuring instruments

Minimum required operating system: Windows® 7, 8 and 10.

Reference	P01102095
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Complementary accessories

E3N adapter	P01102081
E3N mains power pack	P01120047
Battery pack	P01296024
Qualistar screen film	P01102059
Set of inserts and rings	P01102080
Set of 5 IP67 banana leads 3 m long (BB196)	P01295479
Bag no. 21	P01298055
Bag no. 22	P01298056
USB-A USB-B lead 1.5 m long	P01295293
5 A casing	P01101959
Lockable crocodile clips (x 5)	P01102099
Kit comprising banana leads (x 5), crocodile clips (x 5) and a set of coloured rings	P01295483
Kit comprising banana leads (x 4), crocodile clips (x 4) and a set of coloured rings	P01295476
Set of plugs (CA 8436)	P01102147
Mains power pack (CA 8436)	P01102057

Accessories for all Qualistar+ models

Mains adapter

PA31ER adapter for 1,000 V power supply via the phase



Reference	P01102150
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Storage tool

Reeling Box winder for stowing measurement cables



Reference	P01102149
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Clamps for Qualistar+



	MA193 -250	MA193 -350	MA196 -350	A193 -450	A193 -800	A196 -450
Reference	P01120580	P01120567	P01120568	P01120526B	P01120531B	P01120554
Indice IP67	-	-	yes	-	-	yes
Measurement range	100 mA to 10 kA _{AC}					
Clamping Ø / length	Ø 70 mm / 250 mm	Ø 100 mm / 350 mm	Ø 100 mm / 350 mm	Ø 140 mm / 450 mm	Ø 250 mm / 800 mm	Ø 190 mm / 610 mm
IEC 61010	1,000 V CAT III / 600 V CAT IV					1,000 V CAT IV



	MN93	MN 93A	PAC93	C193	E3N	J93
Reference	P01120425B	P01120434B	P01120079B	P01120323B	P01120043A	P01120110
Measurement range	500 mA to 200 A _{AC}	0,005 A _{AC} to 100 A _{AC}	1 A to 1,000 A _{AC} 1 A to 1,300 A _{DC}	1 A to 1,000 A _{AC}	50 mA to 100 mA to 100 A _{AC/DC}	50 to 3,500 A _{AC} 50 to 5,000 A _{DC}
Clamping Ø	20 mm		1 x Ø 39 mm 2 x Ø 25 mm	52 mm	11.8 mm	72 mm
IEC 61010	600 V CAT III / 300 V CAT IV		600 V CAT III / 300 V CAT IV	600 V CAT IV	600 V CAT III / 300 V CAT IV	600 V CAT IV / 1,000 V CAT III



POWER, ENERGY, DISTURBANCES

Power and Energy Loggers

- > Single-phase, split-phase and three-phase installations
- > Installation without cutting off the mains power supply
- > Bluetooth, Ethernet and USB Communication
- > Automatic recognition of the sensors connected
- > Recording on SD card



	PEL102 P01157152	PEL103 P01157153
Standard reference	P01157152	P01157153
Reference with 3 MA 193 current sensors	P01157150	P01157151
Display	Without	With triple digital display
Installation types	Single-phase, split-phase, three-phase with or without neutral, and many other specific configurations	
Number of channels	3 Voltage inputs / 3 Current inputs (neutral current calculated)	
Measurements		
Network frequency	DC, 50 Hz, 60 Hz & 400 Hz	
Voltage (Measurement ranges/ Best accuracy)	10.00 to 1000 V _{AC/DC} / +/- 0.2 % + 0.5 V	
Current (depending on sensors) (measurement ranges / best accuracy)	from 5 mA _{AC} to 10 kA _{AC} / 50 mA _{DC} to 1,4 kA _{DC} / ±0.5 %	
Calculated measurements		
Ratios	Up to 650,000 V / up to 25,000 A	
Power	10 W to 10 GW / 10 var to 10 Gvar / 10 VA to 10 GVA	
Energy	Up to 4 EWh / 4 EVAh / 4 Evarh (E = 1018)	
Phase	cos φ, tan φ, PF	
Harmonics	Up to 50th order	
Additional functions		
Phase order	Yes	
Min / Max	Yes	
Mounting	Magnet, hook	
Recording		
Sampling / Acquisition rate / Aggregation	128 samples/period - 1 measurement/s – from 1 min to 60 min	
Storage	SD Card, 8 GB (SD-HC Card up to 32 GB)	
Communication	Ethernet & Bluetooth	
Power supply	110 V - 250 V (+10 %, -15 %) @ 50-60 Hz & 400 Hz	
Safety	IEC 61010 600 V CAT IV – 1,000 V CAT III	
Mechanical specifications		
Dimensions	256 x 125 x 37 mm without sensor	
Weight	900 g	950 g
Casing	IP54, ETL	

Accessories

DataVIEW® software	P01102095
Bag No 23	P01298078
Leads/clamps kit	P01295476
Set of id. rings/inserts	P01102080
5 A box	P01101959
PEL100 mains adapter	P01102134
Mains power cable	P01295174
Reeling Box	P01102149

State at delivery

- **PEL102** and **PEL103**: 4 measurement leads (straight banana / straight banana – 3 m long – black), 4 crocodile clips (black), 1 SD card (8 GB), 1 set of rings and inserts (for ends of leads and current sensors), 1 mains cable, 1 USB cable (Type A / Type B), 1 operating manual (on CD), 1 bag, 1 safety datasheet, PEL Transfer PC software, 1 quick start-up guide, 1 SD MN adapter (depending on model).



PEL100 mains adapter
To self-power the PEL via the voltage measurement channel

Clamps for PEL



	MA193 -250	MA193 -350	MA196 -350	A193 -450	A193 -800	A196 -450
Reference	P01120580	P01120567	P01120568	P01120526B	P01120531B	P01120554
Indice IP67	-	-	yes	-	-	yes
Measurement range	200 mA to 10 kA _{AC}					
Clamping Ø / length	Ø 70 mm / 250 mm	Ø 100 mm / 350 mm	Ø 100 mm / 350 mm	Ø 140 mm / 450 mm	Ø 250 mm / 800 mm	Ø 190 mm / 610 mm
IEC 61010	1,000 V CAT III / 600 V CAT IV					1,000 V CAT IV



	MN93	MN 93A	PAC93	C193	E3N	J93
Reference	P01120425B	P01120434B	P01120079B	P01120323B	P01120043A	P01120110
Measurement range	500 mA to 200 A _{AC}	0,005 A _{AC} to 100 A _{AC}	1 A to 1,000 A _{AC} 1 A to 1,300 A _{DC}	1 A to 1,000 A _{AC}	50 mA to 10 A _{AC/DC} 100 mA to 100 A _{AC/DC}	50 to 3,500 A _{AC} 50 to 5,000 A _{DC}
Clamping Ø	20 mm		1 x Ø 39 mm 2 x Ø 25 mm	52 mm	11.8 mm	72 mm
IEC 61010	600 V CAT III / 300 V CAT IV		600 V CAT III / 300 V CAT IV	600 V CAT IV	600 V CAT III / 300 V CAT IV	600 V CAT IV / 1,000 V CAT III

Power and energy logger

- > Ideal for mounting on electricity poles
- > All-terrain shockproof casing resistant to UV light and high temperatures
- > Self-powered by its voltage inputs up to 1,000 V
- > Continuous recording at 200 ms intervals
- > Measurements in compliance with IEEE 1459



	PEL 105 P01157155
Reference	P01157155
Display	With backlit triple digital display
Type of installation	Single-phase, split-phase, three-phase with or without neutral and many other specific configurations
Number of inputs	5 voltage inputs, 4 current inputs
Number of channels	4 voltage channels, 4 current channels
Measurements	
Network frequency	DC, 50 Hz, 60 Hz and 400 Hz
Voltage (measurement ranges / best accuracy)	10.00 V to 1,000 VAC @ 50/60 Hz, or 600 VAC @ 400 Hz / 1,000 VDC
Current (depending on sensors) (measurement ranges / best accuracy)	5 mAAC to 10 kAAC / 50 mADC to 1.4 kADC
Calculated measurements	
Ratio	Up to 650,000 V / up to 25,000 A
Power	20 W to 10 GW / 20 var to 10 Gvar / 20 VA to 10 GVA
Energy	Up to 4 EWh / 4 EVAh / 4 Evarh (E = 1018)
Phase	cos ϕ , tan ϕ , PF
Phase sequence	Automatic selection of the phase sequence
Harmonics	Up to the 50th order
Additional functions	
Phase sequence	Indication of valid connection
Min / Max	On all quantities
Recording	
Sampling rate/ Acquisition rate / Aggregation	128 samples/period - 5 measurements/s - from 1 min to 1 hr
Storage	SD card, 8 GB (up to 32 GB with SD-HC card)
Communication	Ethernet, Bluetooth, Wifi and USB
Power supply	Self-powered internally from 94 to 1,000 V @ 50-60 Hz & 400 Hz / DC
Safety	IEC 61010 1,000 V CAT IV
Mechanical specifications	
Dimensions	245 x 270 x 180 mm
Weight	< 4 kg
Protection	IP 67

Clamps for PEL

see page 26

Reeling Box

for stowing the measurement leads of your PEL



Reference P01102149

State at delivery

PEL 105 delivered with:

- 5 x 3 m black silicone cables, straight banana / straight banana, 5 black 1,000 V CAT IV crocodile clips, 1 set of inserts/rings, 4 AmpFLEX® IP67 A196 3 m long, 1 set of waterproof plugs, 1 SD card, 1 USB cable, 1 bag, 1 safety datasheet, USB key containing 1 quick start-up guide and 1 user manual.

Accessories

Clamps for PEL - see page 24

Set of waterproof plugs	P01102147
Pole-mounting kit	P01102146
DataView® software	P01102095
Crocodile clips kit (x 5)	P01102099
Set of inserts/rings	P01102080
5 A adapter	P01101959
Leads kit (x 5) BB196	P01295479
Reeling Box	P01102149
E3N adapter	P01102081
PA30 mains power pack	P01102057

Portable oscilloscopes with isolated channels

600 V
CAT III

IP
54

HANDSCOPE

	OX 5022	OX 5042
Bandwidth	20 and 40 MHz	
Channels (number / type)	2 isolated	
IEC61010 safety	1 000V CAT II - 600V CAT III	
Analogue display or equivalent	No	
One-shot digital sampling rate	50 MS/s	
Repetitive mode	2 GS/s	
Vertical resolution	9 bits	
Transient detection (Glitch)	> 20ns	
Scaling / physical unit	•/•	
PC communication / Ethernet USB	•	
Mains power supply / Battery	•/•	
Integrated mode	Harmonics and multimeter	
"Oscilloscope" specifications		
Max. input sensitivity	5 mV/div	
Max. input amplitude	200 V/div	
Analogue filter	1.5 MHz, 5 kHz	
Time base (per division)	25 ns - 200 s	
Roll mode / XY mode	•/•	
Memory depth	2.5 k/channel	
Acquisition memory	2 MB memory	
No. of reference or math curves on screen	2	
Envelope / Averaging modes	•/•	
SPO (Smart Persistence Oscilloscope)	-	
Automatic measurements / cursors	19/•	
Calculation functions: + - / x / : / Advanced	•/•/•	
Autoset with channel selection	•	
Other functions		
TRMS multimeters	50 kHz	
Harmonic analysis	31 orders	
Threshold recorders (number of channels)	2	
Measurement of power / power harmonics	•	
General specifications		
Colour screen	3.5"	



State at delivery

Version C: 1 oscilloscope delivered with 1 probe (1/10, 1000 V), 1 BNC/Banana adapter, 1 set of banana leads, 1 mains adapter, 1 set of 6 AA NiMH batteries, 1 "hands-free" bag, 1 CD-Rom containing 1 operating manual and 1 programming manual

Version CK: same as version C plus 1 optical USB communication cable and 1 CD containing the SX-METRO/P software and USB cable drivers

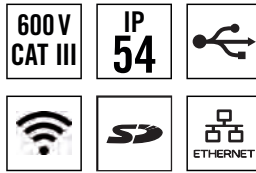
References

- OX5022-C:** 1 oscilloscope 2 x 20 MHz
- OX5022-CK:** 1 oscilloscope, 2 x 20 MHz + USB communication
- OX5042-C:** 1 oscilloscope 2 x 40 MHz
- OX5042-CK:** 1 oscilloscope 2 x 40 MHz + USB communication

On-site oscilloscopes with isolated channels

Scopix IV - 5 instruments in 1:

- > oscilloscope
- > FFT
- > multimeter
- > logger & harmonic analyser
- > wattmeter



Scan this code

To find out more about the Scopix® offering:



Scopix bus - OX9302-BUS:

- > 2 isolated channels, 300 MHz bandwidth
- > For physical integrity tests on field buses

	OX9302-BUS	OX9304	OX9104 / OX9102	OX9062
Family	Field buses	Electronics	Electricity	Industry
References	OX9302-BUS	OX9304	OX9104 / OX9102	OX9062
Bandwidth	300 MHz	300 MHz	100 MHz	60 MHz
Channels (number/type)	2 isolated	4 isolated	2 or 4 / isolated	2 / isolated
IEC61010 safety	CATII 1000V/CATIII 600V			
One-shot digital sampling	2.5 GS/s	2.5 GS/s	2.5 GS/s	2.5 GS/s
Max. sampling rate in repetitive mode	100 GS/s	100 GS/s	100 GS/s	100 GS/s
Vertical resolution	12 bits	12 bits	12 bits	12 bits
Scaling/physical unit	•/•	•/•	•/•	•/•
PC communication via Ethernet/Wifi	•/-	•/•	•/•	•/•
ScopeNet PC web server	•	•	•	•
Ni-MH/LI-ION battery	•/-	-/•	-/•	-/•
"Oscilloscope" specifications				
Min. input sensitivity	156 µV/div	156 µV/div	156 µV/div	156 µV/div
Max. input amplitude	200 V/div	200 V/div	200 V/div	200 V/div
Analogue filters	15 MHz, 1.5 MHz, 5 kHz	15 MHz, 1.5 MHz, 5 kHz	15 MHz, 1.5 MHz, 5 kHz	15 MHz, 1.5 MHz, 5 kHz
Time base (per division)	1 ns-200 s	1 ns-200 s	1 ns-200 s	1 ns-200 s
Roll mode / XY mode	•/•	•/•	•/•	•/•
Memory depth	100 k / channel	100 k / channel	100 k / channel	100 k / channel
Acquisition memory	> 2 GB on SD Card (all formats)	> 2 GB on SD Card (all formats)	> 2 GB on SD Card (all formats)	> 2 GB on SD Card (all formats)
No. of reference curves or math curves on screen	4	4	4	4
Automatic measurements/Cursors	20/•			
Pulse triggering width/number	•/•	•/•	•/•	•/•
Hold-Off / adjustable delay	•/•	•/•	•/•	•/•
+ - / x / : / advanced calculation functions	•/•/•/•	•/•/•/•	•/•/•/•	•/•/•/•
Autoset with channel selection	•	•	•	•
Other functions				
Spectral analysis, FFT Lin & Log	112 bits / 72 dB+ waveform	12 bits / 72 dB+ waveform	12 bits / 72 dB+ waveform	12 bits / 72 dB+ waveform
TRMS multimeters	200 kHz	200 kHz	200 kHz	200 kHz
Logger	Recording in MULTIMETER mode, file: 100 kpts			
Harmonic analysis	63 orders	63 orders	63 orders	63 orders
Threshold loggers (number of channels)	2	4	2 or 4	2
Power / Power Harmonics measurement	•/-	•/-	•/-	•/-
General specifications				
LCD colour screen 5.7/7/3.5"	7"	7"	7"	7"
Soft calibration with 100% "closed casing"	•	•	•	•

State at delivery SCOPIX IV

1 SCOPIX IV oscilloscope delivered in a carrying bag, 1 PA40W-2 power pack / charger and one 2P EURO mains cable, 1 Li-Ion battery pack, 1 stylus, 1 Ethernet cable, 1 USB cable, 2 safety cables (red, black), 2 x Ø 4 mm test probes (red, black), 2 or 4 voltage probes depending on models, 1 µSD card (8 GB), 1 USB/ µSD adapter, 1 hand strap, 1 PROBIX BANANA, 1 USB installation procedure for use of the ScopeNet data export software on CD-ROM, 1 pdf User's Manual on CD (>5 languages), 1 startup guide on paper and 1 safety datasheet in 20 languages.

State at delivery SCOPIX BUS

SCOPIX BUS delivered in a bag with 1 mains adapter/charger, 1 LI-ION battery pack, 1 stylus, 2 x 1/10 Probix HX0130 probes, 1 x Ø4 mm Probix banana adapter, 1 set of cables + Ø4 mm banana test probe, 1 Ethernet cable, 1 USB cable, 1 µSd card (8 GB) with SD Card adapter, HX0190 and HX0191 bus connection boards, 1 CD-Rom containing the User's Manual, Programming Manual and SX-BUS 2.0 software.



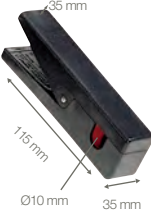


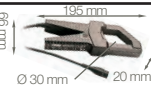




CURRENT MEASUREMENT

Scan this code for further information about the clamps:



AC and AC/DC current measurement





	Series	Model	Input ⁽¹⁾						Output / Connections			Specific features					To order		
			Very low current	Low current	Medium current	High current	~ AC	DC	Current	Voltage	Leads + safety plug ø 4 mm ⁽²⁾	Female sockets ø 4 mm	BNC connector (oscilloscope)	Transformation ratio (input/output)	Output protected against overvoltage	Automatic DC zero		Power measurement (low phase shift)	Bandwidth (frequency in Hz)
AC	 <p>35 mm 115 mm Ø10 mm 35 mm</p>	MINI 01		2 to 150 A					0.15 A AC				1,000/1				48 Hz... 500 Hz	≤ 2.5 %	P01051101Z
		MINI 02	50 mA to 100 A					0.1 A AC					1,000/1				48 Hz... 10 kHz	≤ 1 %	P01051102Z
		MINI 03		1 to 100 A					0.1 V AC				1 A / 1 mV				48 Hz... 500 Hz	≤ 2 %	P01051103Z
		MINI 05	5 mA to 10 A 1 to 100 A					10 V A AC 0.1 V AC				1 mA/1 mV 1 A/1 mV				≤ 3 %		P01051105Z	
		MINI 09		1 to 150 A					15 V DC				1 A/100 mV			≤ 2 %		P01051109Z	
	 <p>34 mm 130.4 mm 46 mm Ø16 mm</p>	MINI 102		0.05 A - 200 A					0.2 A ac				1,000/1				48 Hz... 10 kHz	≤ 1 %	P01106102
		MINI 103		0.1 A - 200 A					0.2 V AC				1 A / 1 mV				48 Hz... 10 kHz	≤ 1.5 %	P01106103
	 <p>18.5 mm Ø21 mm 136 mm 57 mm</p>	MN08		0.5 to 240 A					0.2 A AC				1,000/1				40 Hz... 10 kHz	≤ 1 %	P01120401
		MN09		0.5 to 240 A					0.2 A AC				1,000/1				40 Hz... 10 kHz	≤ 1 %	P01120402
		MN11		0.5 to 240 A					0.2 A AC				1,000/1				40 Hz... 10 kHz	≤ 2 %	P01120404
		MN12		0.5 to 240 A					2 V AC				1 A/10 mV				40 Hz... 10 kHz	≤ 1 %	P01120405
		MN13		0.5 to 240 A					2 V AC				1 A/10 mV				40 Hz... 10 kHz	≤ 1 %	P01120406
		MN14		0.5 to 240 A					0.2 V AC				1 A/1 mV				40 Hz... 10 kHz	≤ 1 %	P01120416
		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				40 Hz... 10 kHz	≤ 1 %	P01120408
		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... 10 kHz	≤ 1 % ≤ 2 %	P01120421
		MN89		0.5 to 240 A					20 V DC ⁽³⁾				1 A/100 mV				40 Hz... 10 kHz	≤ 2 %	P01120415
	 <p>135 mm Ø30 mm 20 mm</p>	Y1N		4 A to 600 A					0.5 A AC				1,000/1				48 Hz... 1 kHz	≤ 3 %	P01120001A
		 <p>Ø101 mm 216 mm 31 mm 99 mm</p>	C100		0.1 A to 1,200 A					1 A AC			1,000/1				30 Hz... 10 kHz	≤ 0.5 %	P01120301
C103				0.1 A to 1,200 A					1 A AC				1,000/1				30 Hz... 10 kHz	≤ 0.5 %	P01120303
C122				1 A to 1,200 A					5 A AC				1,000/5				30 Hz... 10 kHz	≤ 1 %	P01120306
C148				1 to 300 A 1 to 600 A 1 to 1,200 A					5 A AC				250/5 500/5 1,000/5				48 Hz... 1 kHz	≤ 2 % ≤ 1 % ≤ 1 %	P01120307
C173				1 mA to 1.2 A 0.01 to 12 A 0.1 to 120 A 1 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... 3 kHz	≤ 0.7 % ≤ 0.5 % ≤ 0.3 % ≤ 0.2 %	P01120309
 <p>49 mm Ø64 mm 310 mm 310 mm</p>	D30CN		1 to 3,600 A					1 A AC				3,000/1				30 Hz... 5 kHz	≤ 0.5 %	P01120064	
	D36N		1 to 3,600 A					3 A AC				3,000/3				30 Hz... 5 kHz	≤ 0.5 %	P01120055A	
AC/DC	 <p>11 mm 15 mm Ø3,9 mm 25 mm</p>	K1		1 mA to 4.5 A DC 1 mA to 3 A RMS 1 mA to 4.5 A peak					4.5 V DC 3 V RMS 4.5 V peak				1 mA/1 mV				DC... 2 kHz	≤ 1 %	P01120067A
		K2		100 µA to 450 mA DC 100 µA to 300 mA RMS 100 µA to 450 A peak					4.5 V DC 3 V RMS 4.5 V peak				1 mA/10 mV				DC... 1.5 kHz	≤ 1 %	P01120074A
	 <p>67 mm 231 mm Ø11,8 mm 20 mm</p>	E1N		0.05 to 2 A DC 0.05 to 1.5 A AC 0.5 to 150 A AC/DC					2 V DC 1.5 V AC 150 mV AC/DC				1 A/1 V 1 A/1 mV				DC... 2 kHz DC... 8 kHz	≤ 2 % ≤ 1.5 %	P01120030A
		E6N		5 mA to 2 A DC 5 mA to 1.5 A AC 20 mA to 80 A AC/DC					2 V AC 1.5 V AC 0.8 V AC/DC				1 A/1 V 1 A/10 mV				DC... 2 kHz DC... 8 kHz	≤ 2 % ≤ 4 %	P01120040A

(1) The higher value corresponds to 120% of the max. rated value (2) Reshaping of AC signal by diodes (3) Lead + electronic unit with Ø 4 mm safety plugs, 19 mm spacing, for K series

AC/DC current measurement



AC/DC

Series	Model	Input ⁽¹⁾						Output / Connections					Specific features					To order
		Very low current	Low current	Medium current	High current	~ AC	DC	Current	Voltage	Cables + ø 4 mm safety plug	ø 4 mm female sockets	BNC connector (oscilloscope)	Transformation ratio (input/output)	Output protected against overvoltages	Automatic zero DC	Power measurements (low phase shift)	Bandwidth (frequency in Hz)	
	PAC15	0.5 to 400 A AC 0.5 to 600 A DC						600 mV AC/DC				1 A/1 mV				DC... 30 kHz	≤ 2 %	P01120115
	PAC16	0.5 to 40 A AC 0.5 to 60 A DC 0.5 to 400 A AC 0.5 to 600 A DC						600 mV AC/DC 600 mV AC/DC				1 A/10 mV 1 A/1 mV				DC... 30 kHz	≤ 1.5 % ≤ 2 %	P01120116
	PAC17	0.5 to 40 A AC 0.5 to 60 A DC 0.5 to 400 A AC 0.5 to 600 A DC						600 mV peak 600 mV peak				1 A/10 mV 1 A/1 mV				DC... 30 kHz	≤ 1.5 % ≤ 2 %	P01120117
	PAC25	0.5 to 1000 A AC 0.5 to 1400 A DC						1.4 V AC/DC				1 A/10 mV				DC... 30 kHz	≤ 4 %	P01120125
	PAC26	0.5 to 100 A AC 0.5 to 150 A DC 0.5 to 1000 A AC 0.5 to 1400 A DC						1.5 V AC/DC 1.4 V AC/DC				1 A/10 mV 1 A/1 mV				DC... 30 kHz	≤ 1.5 % ≤ 4 %	P01120126
	PAC27	0.5 to 100 A AC 0.5 to 150 A DC 0.5 to 1000 A AC 0.5 to 1400 A DC						1.5 V peak 1.4 V peak				1 A/10 mV 1 A/1 mV				DC... 30 kHz	≤ 1.5 % ≤ 4 %	P01120127

Measurement on oscilloscope

Series	Model	Input						Output / Connections					Specific features					To order		
		Measurement range ⁽¹⁾						Current	Voltage	Leads + safety plug ø 4 mm ⁽²⁾	Female sockets ø 4 mm	BNC connector (oscilloscope)	Transformation ratio (input/output)	Output protected against overvoltage	Automatic DC zero	Power measurement (low phase shift)	Bandwidth (frequency in Hz)		Typical accuracy	
AC	MN60	0.1 A to 60 A peak 0.5 A to 600 A peak						6 V peak				1 A / 100 mV 1 A / 10 mV					40 Hz to 40 kHz	≤ 2 % ≤ 1.5 %	P01120409	
	Y7N	1 A to 1,200 A peak						1.2 V peak				1 mA / 1 mV					5 Hz to 10 kHz	≤ 2 %	P01120075	
	C160	0.1 A to 30 A peak 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 1000 A / 1 V					10 Hz to 100 kHz	≤ 3 % ≤ 2 % ≤ 1 %	P01120308	
	D38N	1 A to 90 A peak 1 A to 900 A peak 1 A to 9,000 A peak						10 V A AC 0.1 V AC				1 A / 10 V 1 A / 1 mV 1 A / 0.1 mV					30 Hz to 50 kHz	≤ 2 %	P01120057A	
	MA 200	MA200 30-300/3 (17 cm)	0.5 A ... 45 A peak 0.5 A ... 450 A peak						4.5 V peak				100 mV/A 10 mV/A					5 Hz to 1 MHz phase shift at 1 kHz ≤ 1.5°	≤ 1 % + 0.3 A	P01120570
		MA200 30-300/3 (25 cm)	0.5 A ... 45 A peak 0.5 A ... 450 A peak						4.5 V peak				100 mV/A 10 mV/A					5 Hz to 1 MHz phase shift at 1 kHz ≤ 1.5°	≤ 1 % + 0.3 A	P01120571
		MA200 30-300/3 (35 cm)	5 A ... 4,500 A peak						4.5 V peak				1 mV/A					5 Hz to 1 MHz phase shift at 1 kHz ≤ 1.5°	≤ 1 % + 0.3 A	P01120572
AC/DC	E3N	0.05 A to 10 A peak 1 A to 100 A peak						1 V peak				1 A / 10 mV 1 A / 1 mV					DC to 100 kHz	≤ 3 % ≤ 4 %	P01120043A	
	MH60	0.01 A - 140A peak						0.01 A - 140A peak				10 mV/A					DC to 1 MHz	≤ 1.5 %	P01120612	

(1) The higher value corresponds to 120 % of the max. rated value (2) Lead + electronic unit with Ø 4 mm safety plugs with 19 mm spacing for the AmpFLEX series

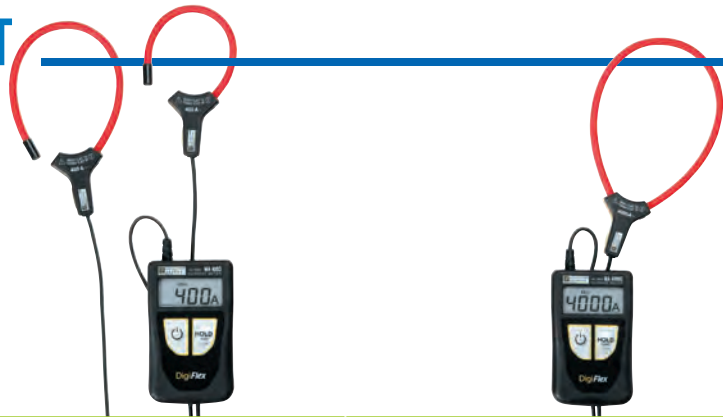


CURRENT MEASUREMENT

AC current measurement

MA400D, MA4000D

600 V CAT IV	TRMS	20 mA	MAX Hold
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	MA400D-170 / MA400D-250			MA4000D-350		
References	P01120575Z / P01120567Z			P01120577Z		
Display range	4 A AC	40 A AC	400 A AC	40 A AC	400 A AC	4,000 A AC
Measurement range	0.020 A... 3.999 A	4.00 A... 39.99 A	40.0 A... 399.9 A	0.01 A... 39.99 A	40.0 A... 399.9 A	400 A... 3,999 A
Resolution	1 mA	10 mA	100 mA	10 mA	100 mA	1 A
Accuracy	± (2 % + 10 cts)	± (1.5 % + 2 cts)	± (1.5 % + 2 cts)	± (2 % + 10 cts)	± (1.5 % + 2 cts)	± (1.5 % + 2 cts)
Sensor clamping diam. / length	MA400D-170: Ø 45 mm / 170 mm MA400D-250: Ø 70 mm / 250 mm			MA4000D-350: Ø 100 mm / 350 mm		
Bandwidth	10 Hz ... 3 kHz					
Power supply	2 x 1.5 V AAA/LR3 batteries					
Safety	IEC 61010 CAT IV 600V					
Operating temperature	0°C to +50°C					
Instrument weight	Approx. 130 g					
Casing dimensions	100 x 60 x 20 mm					
Length of connection cable	0.8 m					

State at Delivery

1 DigiFLEX sensor delivered in a blister pack with 2 x 1.5V AAA batteries,
1 elastic strap and an operating manual in 5 languages

Accessories & Replacement Parts

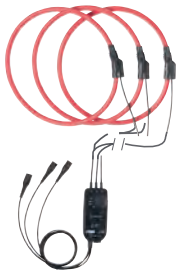
Bag 120 x 200 x 60	P01298074
MULTIFIX accessories	P01102100Z
Elastic strap	P01102113

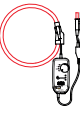
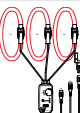
AmpFlex® flexible probes for AC current

1000 V CAT IV	80 mA	30000 A AC	IP 67	4 calibres
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Other dimensions:
contact us

A110,
A130



Series	Model	Input						Output - Connections				Specific features					Reference	
		Very low current	Low current	Medium current	High current	Alternating current	Direct current	Current	Voltage	Lead + safety sockets ø 4 mm	Female sockets ø 4 mm	BNC connector (coaxial)	Transformation ratio (input/output)	Output protected against overvoltages	Automatic DC zero	Power measurement (low phase shift)		Bandwidth (frequency in Hz)
	A110 3-30-300-3000/3 (45 cm / Ø 14 cm)	0.08 A - 3 A 0.5 A .. 30 A 0.5 A .. 300 A 0.5 A .. 3,000 A						3 V AC				1 V/A 100 mV/A 10 mV/A 1 mV/A				10 Hz .. 10 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz	≤ 1%	P01120630
	A110 3-30-300-3000/3 (80 cm / Ø 25 cm)	0.08 A - 3 A 0.5 A .. 30 A 0.5 A .. 300 A 0.5 A .. 3,000 A						3 V AC				1 V/A 100 mV/A 10 mV/A 1 mV/A				10 Hz .. 10 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz	≤ 1%	P01120631
	A110 30-300-3000-30000/3 (120 cm / Ø 38 cm)	0.05 A - 30 A 0.5 A .. 300 A 0.5 A .. 3000 A 0.5 A .. 30,000 A						3 V AC				100 mV/A 10 mV/A 1 mV/A 0,1 mV/A				10 Hz .. 5 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz	≤ 1%	P01120632
	A130 30-300-3000/3 (80 cm / Ø 25 cm)	0.5 A .. 30 A 0.5 A .. 300 A 0.5 A .. 3,000 A						3 V AC				100 mV/A 10 mV/A 1 mV/A				10 Hz .. 20 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz	≤ 1%	P01120633

MiniFlex® flexible probes for AC current

MA110, MA130

600 V CAT IV	1000 V CAT III	80 mA	3000 A _{AC}	4 calibres	IP 67
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MA200

600 V CAT IV	1000 V CAT III	1 MHz
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MA110 model

Measurement from 20 mA.
Can be connected to the AC voltage input (mVAC / VAC) of any multimeter or measuring instrument equipped with Ø 4 mm female banana plugs.

Three-phase MA130 model

Can be connected to the AC voltage inputs (mVAC / VAC) of any power analyser, logger or measuring instrument equipped with BNC plugs.

MA200 model

Equipped with a BNC output and can be connected to all types of oscilloscopes. Offers high bandwidth.

Series	Model	Input Measurement range				Output - Connections			Specific features					Reference				
		Very low current	Low current	Medium current	High current	Alternating current	Direct current	Current	Voltage	Lead + safety plugs ø 4 mm	Female sockets ø 4 mm	BNC connector (coaxial)	Transformation ratio (input/output)		Output protected against overvoltages	Automatic DC zero	Power measurement (low phase shift)	Bandwidth (frequency in Hz)
	MA110 3-30-300-3000/3 (17 cm / Ø 4.5 cm)		0.08 A - 3 A 0.5 A .. 30 A 0.5 A .. 300 A 0.5 A .. 3,000 A					3 VAC				1 V/A 100 mV/A 10 mV/A 1 mV/A				10 Hz .. 10 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz	≤ 1%	P01120660
	MA110 3-30-300-3000/3 (25 cm / Ø 7 cm)		0.08 A - 3 A 0.5 A .. 30 A 0.5 A .. 300 A 0.5 A .. 3,000 A					3 VAC				1 V/A 100 mV/A 10 mV/A 1 mV/A				10 Hz .. 10 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz	≤ 1%	P01120661
	MA110 3-30-300-3000/3 (35 cm / Ø 10 cm)		0.08 A - 3 A 0.5 A .. 30 A 0.5 A .. 300 A 0.5 A .. 3,000 A					3 VAC					1 V/A 100 mV/A 10 mV/A 1 mV/A				10 Hz .. 10 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz	≤ 1%
	MA130 30-300-3000/3 (25 cm / Ø 7 cm)		0.5 A .. 30 A 0.5 A .. 300 A 0.5 A .. 3,000 A					3 VAC				100 mV/A 10 mV/A 1 mV/A				10 Hz .. 20 kHz 10 Hz .. 20 kHz 10 Hz .. 20 kHz	≤ 1%	P01120663
	MA200 30-300/3 (17 cm / Ø 4.5 cm)		0.5 A...45 A _{PEAK} 0.5 A...450 A _{PEAK}					4,5 V _{PEAK}				100 mV/A 10 mV/A					≤ 1% + 0.3 A	P01120570
	MA200 30-300/3 (25 cm / Ø 7 cm)		0.5 A...45 A _{PEAK} 0.5 A...450 A _{PEAK}					4,5 V _{PEAK}				100 mV/A 10 mV/A				5 Hz...1 MHz	≤ 1% + 0.3 A	P01120571
	MA200 3000 /3 (35 cm / Ø 10 cm)		5 A...4,500 A _{PEAK}					4,5 V _{PEAK}				1 mV/A					≤ 1% + 0.3 A	P01120572

Power quality & installation supervision

Functions

- > Configuration of all the functions of instruments connected to a PC or via Bluetooth
- > Recovery of the recorded measurement data
- > Backup of measurement files
- > Opening of saved files
- > Processing and creation of reports (EN50160)
- > Export into an Excel spreadsheet
- > Export in .pdf format
- > Database management

Additional info

The DataView® software

- > Automatically recognizes the instrument connected when it is connected to the PC and opens the corresponding menu. Users then have direct access to the configuration and to the saved data
- > Includes a large number of predefined report templates for quick generation in compliance with the applicable standards. Users can create their own models to fit their needs and add their own comments directly



Scan this code to find out more about DataView's performance features



Reference	P01102095
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TEST AND MEASUREMENT ACCESSORIES

Selection of Chauvin Arnoux accessories

- > Ø 4 mm banana connection accessories
- > Temperature measurement
- > Electrical installation testing
- > Protection, storage and transport

Scan this code to find out more about the selection of Chauvin Arnoux accessories



... by function

A

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• protection (soft cases, hard cases, bags)	p.38
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AmpFlex® clamps	p.29
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ELECTRICAL TESTING AND SAFETY



CA 6528 digital insulation tester



CA 6011 installation tester

NEW



CA 6422 & CA 6424 2P & 3P earth/ground testers



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