

AmpFlex® A110, A130 & MiniFlex® MA110, MA130, MA200

Flexible single and three-phase current sensors



**Flexibility for all
your current
measurements**



600 V CAT IV
1000 V CAT IV

IP
67



- 4 measurement calibres for better resolution
- Measurements up to 30 kA_{AC}
- Excellent linearity and low phase shift
- Long battery life: 300 hours for single-phase models, 500 hours for three-phase models
- Deactivatable automatic standby function
- Power supply by batteries and standard external adapter

Measure up



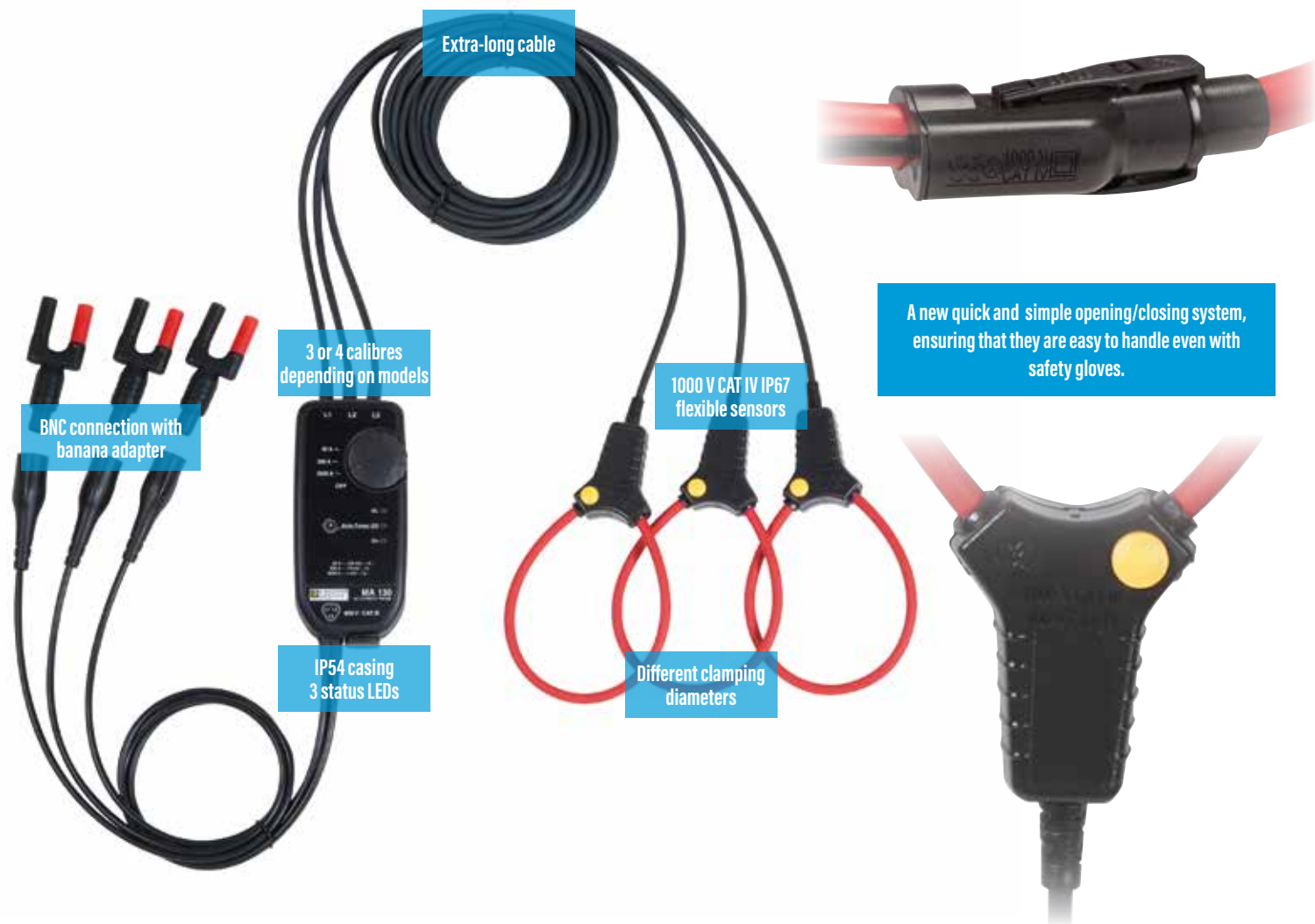
Compact and lightweight, with small or large diameters, the **MiniFlex®** and **AmpFlex®** models can encircle all types of conductors, whatever their dimensions or shapes (busbars, cable strands, etc.).

Their flexibility means they can be used comfortably wherever you are and whatever the space available. They are easy to set up in any residential or industrial electrical cabinets. They are also ideal for the needs of both the industrial and tertiary sectors and for measurements on single or three-phase installations.

The new MiniFlex® MA110 and MA130 sensors and AmpFlex® A110 and A130 sensors are

equipped with an automatic standby function which can be deactivated at start-up for long-term measuring campaigns.

They can now be powered in two ways: either by batteries or by an external power supply (standard µUSB socket). On the control unit, the 3 LEDs (green, yellow and red) indicate, respectively, the battery status, the status of the automatic standby function and any measurement capacity overshoots. The single-phase versions offer 4 measurement calibres, while the three-phase versions offer 3.

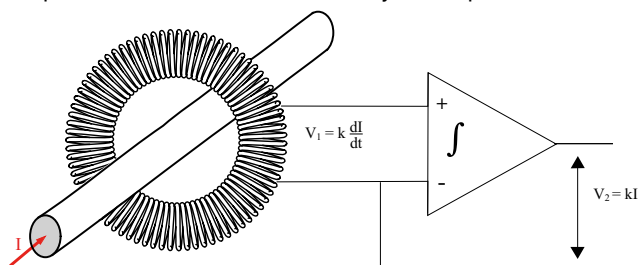


PRINCIPLE OF ROGOWSKI COILS

These AmpFlex® and MiniFlex® are based on the “Rogowski coil” backed by electronics in a control unit.

Because there are no magnetic circuits, these sensors are particularly lightweight and flexible. This also means there is no saturation effect or risk of overheating.

This specific feature ensures excellent linearity and low phase shift.



APPLICATIONS

AmpFlex® and MiniFlex® sensors are ideal for applications in a wide range of sectors:

- maintenance and repair teams in industry,
- energy distribution, transmission and production companies
- transport companies (rail, etc.)
- laboratories and test departments, R&D
- certification organizations

MiniFlex® models



The **MA 110** models perform measurements from 80 mA upwards after connection to the mV_{AC} / V_{AC} input of any multimeter or measuring instrument equipped with banana plugs. The **MA 130** is specially designed for use on three-phase networks. It can be hooked up to the mV_{AC} / V_{AC} inputs of any power analyser, logger or measuring instrument.

AmpFlex® models



The length of this series' sensors (up to 120 cm as standard) means you can encircle thick cables or several conductors simultaneously. The A110 models can be used for current measurements up to $30 kA_{AC}$.

	MA 110 - Single-phase	MA 130 - Three-phase	A 110 - Single-phase	A 130 - Three-phase	MA 200
Connections	 <p>Ø 4 mm female banana plugs</p>	 <p>BNC plugs with banana plug adapters</p>	 <p>Ø 4 mm female banana plugs</p>	 <p>BNC plugs with banana plug adapters</p>	 <p>BNC plugs</p>
Sensors					
Clamping Ø	170 / 250 / 350 mm	250 mm	140 / 250 / 380 mm	250 mm	45 / 70 / 100 mm
IP54 casing / calibres	 <p>4 calibres</p>	 <p>3 calibres</p>	 <p>4 calibres</p>	 <p>3 calibres</p>	 <p>single or bi-calibre</p>
Electrical safety	600 V CAT IV	600 V CAT IV	1000 V CAT IV	1000 V CAT IV	600 V CAT IV / 1 000 V CAT III

MiniFlex® MA 200



The MA200 Series is a family of "high-frequency" flexible sensors designed for viewing and measuring electrical or electrotechnical currents with significant variations and amplitudes.

These "isolated current probes for oscilloscopes" offer a bandwidth of 1 MHz and can be used to analyse complex-shaped currents and transients present in electronic power supplies, welding stations, etc.

TECHNICAL SPECIFICATIONS

	Measurement range	Sensor length	Clamping Ø	Calibres (A/V)	Bandwidth	Sensor-processing unit link	Output cable connection	Processing unit dimensions	Weight	References
MA110	0.08 A to 3,000 A	17 cm	4,5 cm	3-30-300-3,000/3	10 Hz ... 20 kHz	2 m cable	Cable 0.5 m long terminated by 2 x Ø 4 mm isolated male banana plugs	120 x 58 x 36 mm (overall)	300 g approx.	P01120660
		25 cm	7 cm							P01120661
		35 cm	10 cm							P01120662
MA130	0.5 A to 3,000 A	25 cm	7 cm	30-300-3,000/3		3 m cable	3 coaxial cables 0.5 m long terminated by 1 isolated male BNC plug		500 g approx.	P01120663
A110	0.08 A to 3,000 A	45 cm	14 cm	3-30-300-3,000/3	10 Hz ... 20 kHz	2 m cable	Cable 0.5 m long terminated by 2 x Ø 4 mm isolated male banana plugs	120 x 58 x 36 mm (overall)	360 g, 450 g or 500 g approx. depending on sensor length	P01120630
		80 cm	25 cm							P01120631
	0.5 A to 30,000 A	120 cm	38 cm	30-300-3,000-30,000/3	10 Hz ... 20 kHz ⁽¹⁾					P01120632
A130	0.5 A to 3,000 A	80 cm	25 cm	30-300-3,000/3 10	10 Hz ... 20 kHz	3 m cable	3 coaxial cables 0.5 m long terminated by 1 isolated male BNC plug		1 kg approx.	P01120633
MA200	0.5 A...450 Apeak	17 cm	4,5 cm	30-300/3	5 Hz ... 1 MHz	2 m cable	1 coaxial cable 0.4 m long terminated by 1 isolated male BNC plug	103 x 64 x 28 mm (overall)	200 g approx.	P01120570
		25 cm	7 cm							P01120571
	0.5 A...4,500 Apeak	35 cm	10 cm	3,000/3						P01120572

(1) 10 Hz ... 5 kHz with 30 A calibre

STATE AT DELIVERY

A110 / MA110 Series <i>Single-phase models</i>	A130 / MA130 Series <i>Three-phase models</i>	MA200 For oscilloscopes
1 flexible current sensor delivered with: - 2 x 1.5V AA / LR6 alkaline batteries - 1 user manual in 5 languages - 1 safety datasheet - 1 verification certificate	3 flexible current sensors delivered with: - 2 x 1.5V AA / LR6 alkaline batteries - 1 user manual in 5 languages - 1 safety datasheet - 1 verification certificate - 1 set of coloured rings for identifying/ foolproofing the cables - 3 female BNC / 4 mm male plug adapters	1 sensor delivered with: - 1 x 9 V battery - 1 user manual in 5 languages - 1 verification certificate

ACCESSORIES

REPLACEMENT PARTS

USB mains adapter	
P01651023	
1.5V LR6 alkaline battery	
P01296033	
VELCRO strap X5	
P01102113	

OUR EXPERTISE: TAILORED PRODUCTS

Our long experience enables us to design, develop and manufacture specific models to fit your requirements in terms of **sensitivity (mV/A)**, **connections**, **sensor lengths**, etc.

The AmpFlex® A101 and MiniFlex® MA101 Series are sensors designed for professionals and for measuring instrument manufacturers seeking to integrate this technology in their assemblies or sub-assemblies.

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