



MULTI-FLEX+ USER'S GUIDE

Novembre 2010
MADE-V1.00



MADE

S.A. au capital de 270 130 €
167, Impasse de la garrigue
F 83210 LA FARLEDE

Tél: + 33 (0) 494 083 198 – FAX : + 33 (0) 494 082 879
E-mail: contact@made-sa.com - Web : www.made-sa.com



SOMMAIRE

1	OVERVIEW	3
2	DESCRIPTION	3
2.1	Technical features	4
3	OPERATING PRINCIPLE	5
3.1	Starting the device	5
3.2	Stopping the device	6
3.3	MAX mode	6
3.4	Backlight	6
4	MAINTENANCE	7
4.1	Changing the batteries	7
4.2	Calibration	8

1 OVERVIEW



1 flexible coil for alternating current measurements

1 IP2X cord

1 multimeter type display

1 carrying case

2 DESCRIPTION

MULTI_Flex is a digital multimeter with a small flexible amperometric coil (**MADE-Flex**) used for amperage and voltage measurement. Combining these two inputs enables to measure the instantaneous active power and $\text{Cos } \emptyset$ of the phase on the electrical network.

MULTI-Flex can display:

The 1 second RMS value of the alternating current, of the voltage, of the power and the power factor.

Four automatic current calibration: 50-200-400-2000A

Two voltage calibration: 100-480V ~ AC

There is also a continuity mode.

The device has a switch on button used to select the displayed measurement, as well as a switch off button.

It is supplied by a standard PP3 type 9V battery (6 LR61).

When idle, the device automatically switches off after 5 minutes.

2.1 Technical features

Current input	MADE-Flex – Amp AC	Bandwidth 10Hz-10kHz
Voltage input	Screened banana connectors and 2 cords	IP2X
Current measurement range	4 ranges	50, 200, 400, 2000 AC RMS
Voltage measurement range	2 ranges	100-480V AC RMS
Power measurement range	1 range	0-1000kW
Cos f measurement range	1 range	0.0 to +1.00
Continuity	1 audible range from 200Ω	0 to 2KΩ
Crest factor	2.5 at nominal amperage	
Measuring channels	2 measuring channels (current and voltage)	
Resolution	Unit of the last displayed digit	
Calibration	RMS values: 1 second	
Precision	0.3% (max value in the range) < P < 5% (low value in the range)	
Influence of the sensor's shape	1% for an oblong form	
Influence of a nearby conductor	1% of stray current at 50Hz	
Influence of the conductor's location	1%	
Temperature	Operating temperature: -20°C to +50°C Storage temperature: -20°C to +70°C	
Power supply	9V E-BLOCK type 6 LR 61.PP3	
Battery life	8 hours of continuous use	
Display	4 digits display	
IP standard	IP55	

MADE-Flex coil Ø 5 mm L 30 for a cable Ø up to 9cm: MFX_STD_700

MADE-Flex coil Ø 10 mm L 50 for a cable Ø up to 15cm: MFX_STD_800

Standardization:

Harmonized standard:

MULTI-Flex has the CE marking

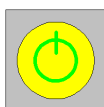
NF EN 61000-3-1: CEM

NF EN 61000-6-1: electrical safety

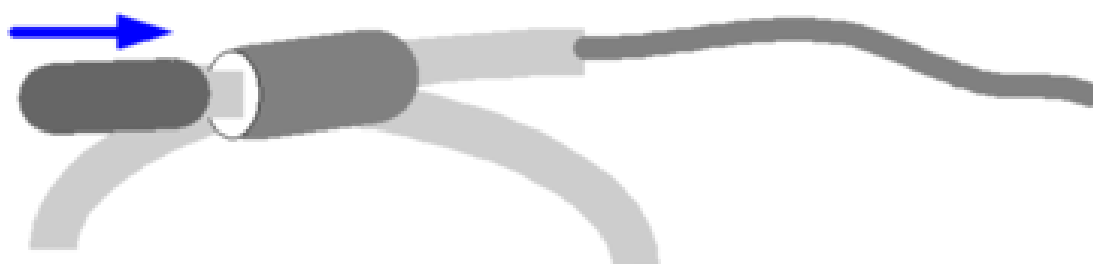
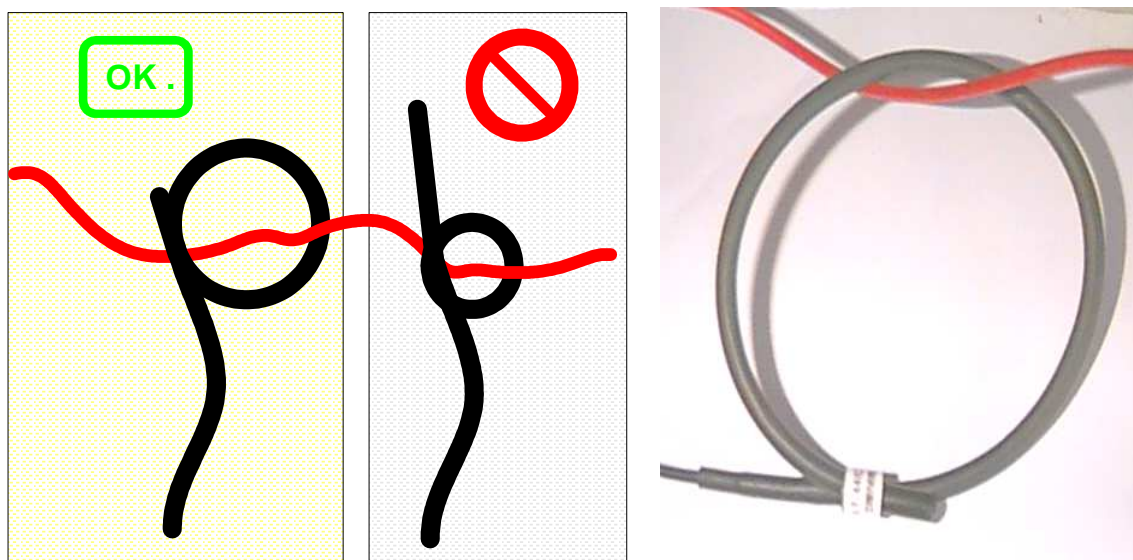
3 OPERATING PRINCIPLE

3.1 Starting the device

Press the start button



Place the coil around a single conductor that requires a measurement (1 cable phase or neutral)



3.2 Stopping the device

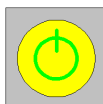
Press the stop button



When idle, the device automatically turns off in order to save the battery.

3.3 MAX mode

Keep the start button pressed to display the maximum measurement from the input in the U I P and COS mode.



3.4 Backlight

Press the button to toggle the backlight on or off



4 MAINTENANCE

4.1 Changing the batteries

When the display is blinking, the 9V type E-BLOCK 6 LR 61 battery needs to be changed.

Open the case at the back of the device to access the battery.

Battery life: 8h of continuous use



4.2 Calibration

The MULTI-Flex is delivered with a calibration certificate.

We recommend a visit to the manufacturer once every two years in order to ensure the quality of the measurements.

