

# PEL 51 & PEL 52

## Power and Energy Loggers



- ▶ Energy meters
- ▶ TRMS voltage and current measurement
- ▶ Power measurement  
W ( $P$ ,  $P_i$ ), VA and var ( $N$ ,  $Q_i$  and  $D$ )
- ▶ Measurement of PF, DPF/Cos  $\phi$
- ▶ Power supply via the phase



Measure up





## ENERGY EFFICIENCY & MEASUREMENT OF THE SAVINGS

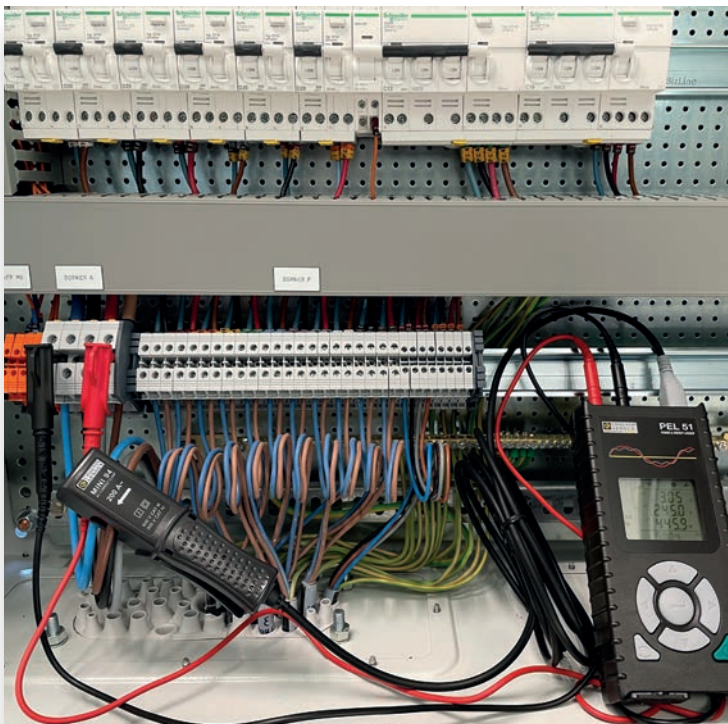
When a building or factory is the focus of a global energy survey, electricity consumption is often less than fuel oil or gas consumption, etc. All companies and electricity users have a main meter at the supplier's point of delivery (RTE in France), but they only very rarely have submetering and may suffer from the absence of a metering point at any time. The PEL loggers are placed on these points to perform the measurements.

The French RE2020 environmental regulations have tightened the constraints for checking and controlling energy spending. Mandatory audits of large companies impose these checks on them. As a result, a number of major groups have failed in their attempts to achieve ISO 50001 certification, which takes this obligation into account and goes even further in terms of seeking out energy savings.

## ERGONOMIC AND COMPACT



**PEL 51**



## MEASUREMENT OF THE SAVINGS

The recordings made with **PEL50** electrical measuring instruments are time/date-stamped. This means it is possible to measure the economic gains achieved simply by comparing the recordings made before and after modifications on an installation. The analysis of the recordings made with the **PEL50** before the modifications corresponds to a representative period of use. The various operations for maintenance and improvement of the electrical network and equipment, or other purposes, can then be carried out.

A correctly-positioned **PEL50** enables you to quickly locate the most crucial points without wasting time. A monitoring period will allow you to establish whether the solutions proposed are correct and sufficient, but above all to precisely measure the savings achieved.

## FUNCTIONS

The **PEL51** and **PEL52** are power loggers. These tools are designed to seek ways of improving electrical consumption.

To do this, they record the useful measurements (voltage, current, power values and energy values). They use Wifi to communicate via an access point or server.

The **PEL 50** is the first instrument in this range and format to include the possibility of connection via an IRD server.

This function was only available formerly on certain **PEL100** models (See our detailed IRD Case Study on the CA website).



## POWER MEASUREMENTS

- Active power P (W)
- Fundamental active power  $P_f$  (W)
- Fundamental reactive power  $Q_f$  (var)
- Non-active power N (var)
- Distortion power D (var)
- Apparent power S (VA).
- And all the related energy measurements.

## RECORDING

The aggregated measurements are recorded over periods from 1 min to 1 hour on an SD or SDHC card. The data can be read directly on a PC.



## COMPATIBLE CURRENT SENSORS

	MN93	MN93A	Mini94	MA194-250	MA194-350	MA194-1000	A193-450	A193-800	C193
<b>Range</b>	500 mA to 200 Aac	5 mA to 100 Aac	50 mA to 200 Aac	200 mA to 3 kAac	200 mA to 3 kAac	200 mA to 3 kAac	200 mA to 3 kAac	200 mA to 3 kAac	1 A to 1000 Aac
<b>Diam/ length</b>	20 mm		16 mm	70 / 250 mm	100/ 350 mm	300 / 1000 mm	140/ 450 mm	250/ 800 mm	52 mm
<b>IEC 61010</b>	600 V CAT III / 300 V CAT IV		600 V CAT III / 300 V CAT IV	1000V CAT III / 600V CAT IV			1000 V CAT III / 600 V CAT IV		600 V CAT IV

## MINI94 CURRENT CLAMP

The Mini94 clamp can be used to measure AC currents from 50 mA up to 200 A, without any intervention on the installation (no need to cut off the current to be measured). Its excellent accuracy (gain and phase/Accuracy Class 0.2) make it ideal for current measurements with power and energy loggers. In particular, it can be used to check energy meters.

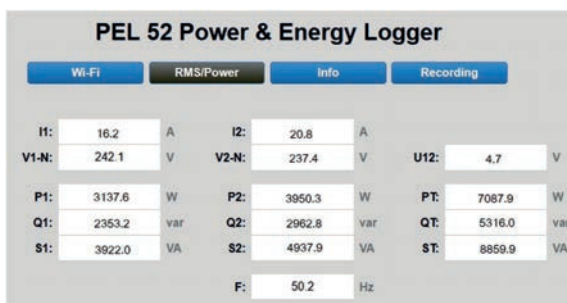


## MINI94 CLAMP

## WEB SERVER INTERFACE

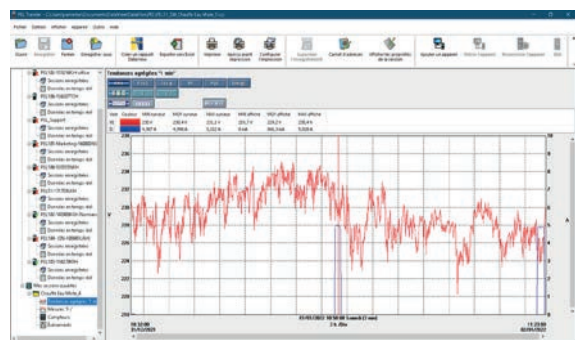
Both instruments include this VNC mode function. When you know the IP address of the PEL50, you can control your instrument from any web browser (Chrome, Firefox, etc., Windows, Android, etc., or iOS).

On the instrument's touch-sensitive screen, you can click on the required icon to access the various measurements and menus.



## PEL TRANSFER SOFTWARE

The PEL Transfer® software offers a practical tool for configuring and downloading the data recorded on the measuring instrument onto your computer. Using clear dialogue boxes which are easy to use with tabs, the curves can be displayed, saved and/or exported by the user.





Models	PEL51	PEL52
General functions		
Display	Multi-display backlit LCD	
Types of installations	Single-phase	Split-phase or 2 single-phase channels
Number of channels	1V/1I	2V/2I
Models	PEL51/52	
General functions		
Network frequency	50 and 60 Hz	
Voltage	10 V to 690 V	
Current range	See table on previous page	
Ratios	Yes	
Power/energy values	P, P <sub>r</sub> , N, S, Q <sub>r</sub> , D / Up to 4 Exa	
Min - Max	Yes	
THD	Yes	
Additional functions		
Acquisition rate	1 measurements / s	
Aggregation	1 min to 60 min	
Storage mode	SD / SD-HC card 8 GB (expandable to 32 GB)	
Ethernet	Yes (via simplified Wifi)	
Safety	IEC 61010 CAT III 600 V	
Power supply	Via the measurement phase (90 - 690 V)	
Battery	NiMH - Battery life 1 hour	
Dimensions	180 x 88 x 87 mm	
Weight	400 g	
Casing	IP54	

## ACCESSORIES & REPLACEMENT PARTS

DataVIEW® software.....	<b>P01102095</b>
S03 bag.....	<b>P01298076</b>
MN93 clamp.....	<b>P01120425B</b>
MN93A clamp.....	<b>P0112034B</b>
Mini94 clamp.....	<b>P01106194</b>
C193 clamp.....	<b>P01120323B</b>
AmpFlex A193-450.....	<b>P01120526B</b>
AmpFlex A193-800.....	<b>P01120531B</b>
MiniFLEX MA194-250.....	<b>P01120593</b>
MiniFLEX MA194-350.....	<b>P01120592</b>
MiniFLEX MA194-1000.....	<b>P01120594</b>
C8 adapter.....	<b>P01103077</b>
C7 mains lead.....	<b>P01295174</b>
SD card.....	<b>P01103078</b>
Crocodile clip x 2.....	<b>P01295457Z</b>
PVC lead with straight isolated male plug test probe Ø 4 mm x 2.....	<b>P01295455Z</b>

## STATE AT DELIVERY

	PEL 51 Power Logger with MA194	PEL 52 Power Logger (PEL52 alone)
Bag	▪	
Battery (mounted)	▪	
SD card	▪	▪
Red banana voltage lead	▪	▪
Black banana voltage lead	▪	▪
Blue banana voltage lead	▪	▪
MA194-250 flexible AC current sensor	1	0
Crocodile clips	2	3
Type-C7 power supply cable	▪	▪
C8 adapter	▪	▪
Safety datasheet	▪	▪
Test report	▪	▪
Multilingual Quick Start Guide	▪	▪
Multilingual User's Manual	Available for download from our website	
Data transfer and management software.	Available for download from our website	
Reference	P01 1571 66	P01 1571 67

## PEL51 STATE AT DELIVERY



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