

**XL421 - XL422 - XL423 - XL424****DATA LOGGERS FOR SINGLE-PHASE AND THREE-PHASE TRMS CURRENT AND VOLTAGE**

XL421, XL422, XL423 and XL424 are innovative portable Data Loggers, capable of measuring AC current and voltage in real efficient (TRMS) value up to 2500A and 600V respectively, in single-phase or three-phase electric systems. These instruments are very useful especially in the industrial sector (evaluations of electric load consumption, verification of nominal power of transformers, measurement of mains voltage, unbalanced loads, etc.) and are extremely versatile due to their small size, thanks to which they are easily installed also as panel units. These models are enclosed in a practical and safe plastic case, with a high mechanical protection index IP65 (protected both against dust and water sprays); they are, therefore, suitable for use in common industrial environments. These models are provided with appropriate in-built flexible clamps or cables with alligator clips respectively, which allow safely carrying out current and voltage measurements (also on cables and/or big bars). Thanks to a sophisticated internal memory algorithm, continuous recordings are possible also for prolonged time intervals and, therefore, it is possible to accurately monitor electric mains. Further to internal programming, the provided Windows software allows downloading and analyzing on the PC the results of the recordings, in order to produce useful print reports on measurements. Clear LED indications on the front panel allow a simple use, also by non-expert users.

FUNCTIONS	XL421	XL422
TRMS current measurement	Single phase	Three phase
Measurement range	1 ÷ 2500A AC	
Accuracy	±(1.0%rdg+1dgt)	
Resolution	1A	
Frequency range	50±6Hz, 60±6Hz	
Bandwidth	3200Hz	
Sample rate	64 points in 20ms	
Integration period	1s, 6s, 30s, 60s, 5min	
Memory size	1Mbyte	
PC serial interface	RS-232	
Integration period	Recording duration (days)	
1s	5	1,5
6s	34	8
30s	170	42
60s	364(*)	91
5min	1820(*)	455(*)

(\*) Depending on batteries life

FUNCTIONS	XL423	XL424
TRMS current measurement	Single phase	Three phase
Measurement range	0 ÷ 600V AC	
Accuracy	±(1.0%rdg+1dgt)	
Resolution	0.1V	
Frequency range	50±6Hz, 60±6Hz	
Bandwidth	3200Hz	
Sample rate	64 points in 20ms	
Integration period	1s, 6s, 30s, 60s, 5min	
Memory size	1Mbyte	
PC serial interface	RS-232	
Integration period	Recording duration (days)	
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GENERAL SPECIFICATIONS	
Front panel indication	LED
Front panel indication	2x1.5V batteries type AA LR6
Life batteries	>6months (fully charge batteries)
Safety	IEC/EN61010-1
Category of measurement	CAT IV 600V (to ground)
Insulation	double insulation
Pollution degree	2
Mechanical protection index	IP65
Max altitude	2000m
Max diameter of flexible clamps	174mm (only XL421 and XL422)
Size (LxWxH)	120x80x43mm
Weight (included batteries)	0.5kg

ACCESSORIES	Code
<b>Standard</b>	
Integrated flexible clamp 3000A (1 pcs for XL421, 3 pcs for XL422)	HTFLEX33DL
Set of 2 test leads with alligator clips (only XL423)	KITXL423C
Set of 4 test leads with alligator clips (only XL424)	KITXL424C
Adesive velcro 50x70mm	VELCRO
PC Windows software	DATALINK
RS-232 serial cable	C2004
Carrying bag	BORSA2000
Batteries	
User manual	





## 1. ELECTRICAL SPECIFICATIONS

Accuracy is indicated at 23°C ± 5°C as ±(%readings + number of digits), <60%HR

### CURRENT

Range	Resolution	Accuracy
2 ÷ 2500A	1A	±(2.0%rdg + 2dgt)

- Additional error due to not centering cable: 2%rdg
- Working frequency (Hz): 50±6%, 60±6%
- Type of measure: TRMS
- Bandwidth: 3200Hz
- Max crest factor: 3

## 2. GENERAL SPECIFICATIONS

### Sampling rate:

- 64 point in 20ms for each sampling period.

### Sampling period:

- 1s, 6s, 30s, 1min, 5min

### Memory capacity:

- 1Mbyte
- Autonomy in days (depending on batteries autonomy): 5(1s) ; 34(6s) ; 170(30s) ; 364(1min) ; 1820(5min)

### PC interface:

- RS-232

### Operating Temperature / Humidity:

- -20°C to 60 °C ; 0 - 100%RH (RS-232 connector closed)

### Storage Temperature / Humidity:

- -20°C to 60 °C ; 0 - 100%RH (RS-232 connector closed)

### General information:

- Insulation: class 2 (double insulation).
- Altitude max: 2000m
- Protection degree: IP65 (RS-232 connector closed)

### Power supply:

- 2x1.5V alkaline battery type LR6-AA-AM3-MN1500
- Battery autonomy: >6months

### Dimension:

- 120 (L) x 80(La) x 43(H) mm
- Maximum diameter conductor: 174mm

### Weight:

- about 500g (with internal batteries).

### Reference Standards:

- LVD: IEC / EN 61010-1 CAT III 1000V (to ground) CAT IV 600V (to ground)
- EMC: IEC / EN61326 (1997)+ A1 (1998) +A2 (2001)

**This instrument complies with the requirements of the European Low Voltage Directives 2006/23/EEC (LVD) and EMC 2005/108/EEC**



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### Sampling rate:

- 64 point in 20ms for each sampling period.

### Sampling period:

- 1s, 6s, 30s, 1min, 5min

### Memory capacity:

- 1Mbyte
- Autonomy in days (depending on batteries autonomy): 1.5(1s) ; 8(6s) ; 42(30s) ; 91(1min); 455(5min)

### PC interface:

- RS-232

### Operating Temperature / Humidity:

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### VOLTAGE

Range	Resolution	Accuracy
0 ÷ 600V	0.1V	±(1.0%rdg + 2dgt)

Note: meter consider null readings <2V

- Working frequency (Hz): 50±6%, 60±6%
- Type of measure: TRMS
- Bandwidth: 3200Hz
- Max crest factor: 3

## 2. GENERAL SPECIFICATIONS

### Sampling rate:

- 64 point in 20ms for each sampling period.

### Sampling period:

- 1s, 6s, 30s, 1min, 5min

### Memory capacity:

- 1Mbyte
- Autonomy in days (depending on batteries autonomy): 5(1s) ; 34(6s) ; 170(30s) ; 364(1min); 1820(5min)

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- RS-232

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- Protection degree: IP65 (RS-232 connector closed)

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- Battery autonomy: >6months

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- 120 (L) x 80(La) x 43(H) mm
- Length test leads: 2.6m

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### Reference Standards:

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### VOLTAGE

Range	Resolution	Accuracy
0 ÷ 600V	0.1V	±(1.0%rdg + 2dgt)

Note: meter consider null readings <2V

- Working frequency (Hz): 50±6%, 60±6%
- Type of measure: TRMS
- Bandwidth: 3200Hz
- Max crest factor: 2

## 2. GENERAL SPECIFICATIONS

### Sampling rate:

- 64 point in 20ms for each sampling period.

### Sampling period:

- 1s, 6s, 30s, 1min, 5min

### Memory capacity:

- 1Mbyte
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