

- **Direct or alternative network**  
Measure U, I, F, Cos, P, Q, S.
- **Balanced network:** single-phase or three phase  
With or without neutral, frequency 40 Hz to 400 Hz.
- **Duplex symmetrical analog output**
- **Universal power**
- **CPL48L:** low cost version
- **CPL48T:** fast version



CPL48 is a converter fully configurable intended to the electrical measure balanced network. Each output is free usefully for retransmit one of seven electrical magnitude mesured.

#### FUNCTIONALITY:

Measure functions:

- duplex voltage caliber, 500 Vac/700 Vdc and 125 Vac/175 Vdc,
- current caliber determined at the command 5 A or 1 A.
- direct or alternative network, single-phase or three-phase with or without neutral, CT and TP ratio,
- consumed / generated, inductive / capacitive network .
- direct or alternative current and voltage RMS,
- frequency 40 to 400 Hz,
- active power consumed and generated,
- reactive power inductive and capacitive,
- apparent power,
- cos phi (power factor),

Outputs:

2 symmetrical analog outputs with common ground, galvanic insulation on inputs and power supply, completely configurable:

- measure type,
- measure range,
- output type,
- output range,
- response time, limitation...

Possibility to use 2 outputs to realize a mounting which duplex the load, wiring into S1 and S2.

#### CONFIGURATION:

The device can interact via the RS232 link with any system emulating a terminal. Example: HyperTerminal in Windows.

Free supply of RS232 cable on single request .

Through the terminal, the user will be able to:

- visualize the measures,
- configurate device:            language,            output1,
- network,            output2,

#### GENERAL CHARACTERISTICS


- RS232 digital output, measure visualization on 2 lines or all measures on 8 lines, converter configuration,
- universal power,
- DIN rail (symmetrical) or wall fastening,
- box 49 x 70 x 113.
- galvanic insulation inputs / outputs / power supply,
- configuration parameters saving in EEPROM, holding safety >10 years,
- noise immunity programmable output filtering
- watchdog supervising the program process,
- regeneration of internal parameters at each measure,
- algorithm checking continuously the measures validity,
- stability towards ambient temperature variations.

#### Version and order code:

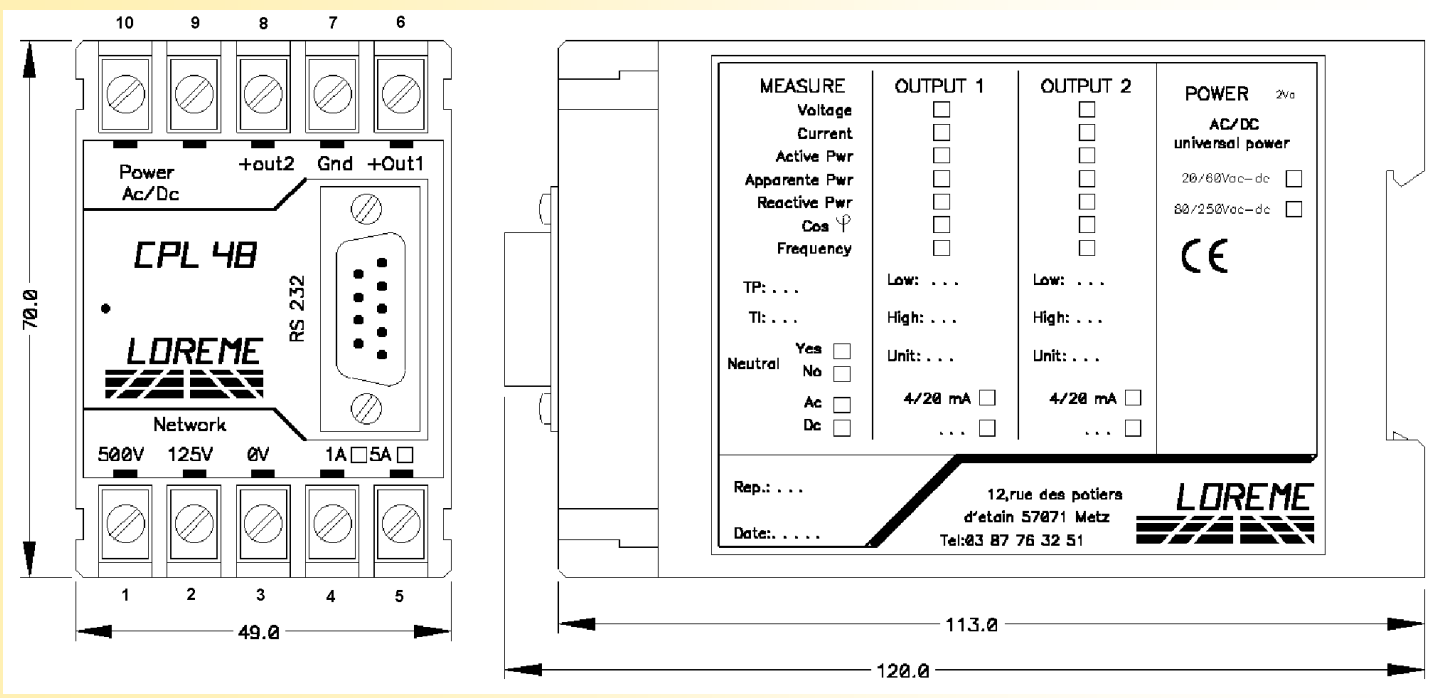
- CPL48:** standard version,  
2 analog outputs,  
2 voltage input caliber,  
Universal power.
- CPL48L:** low cost version,  
1 symmetrical analog output,  
2 voltage input caliber,  
Universal power.
- CPL48T:** Fast response time,  
1 unipolar analog output,  
1 voltage input caliber,  
Standard power supply 230/115Vac,

INPUT		
TYPE	RANGE	ACCURACY
Alternative voltage	500 V	+/- 1.5 V
Direct voltage	+/- 700 Vdc	+/- 1.5 V
and		
Alternative voltage	125 V	+/- 0.37 V
Direct voltage	+/- 175 V	+/- 0.37 V
Input impedance	2 MOhms / 500 kOhms	
Overload	3 x UN during 3 s	
Measure threshold	10 V / 2.5 V	
Absorbed power	0.12 W / 0.03 W	
Alternative current	5 A	+/- 15 mA
Direct current	+/- 5 A	+/- 15 mA
or		
Alternative current	1 A	+/- 3 mA
Direct current	+/- 1A	+/- 3 mA
Input impedance	0.05 Ohms / 0.25 Ohms	
Overload	6 x IN during 3 s	
Measure threshold	0.1 A / 0.02 A	
Absorbed power	1.25 W / 0.25 W	
<b>Note: use a transformer for upper range</b>		
Frequency	40 to 400 Hz	+/- 0.25 %
<b>METROLOGY</b>		
(the precisions are given in percentage of the full calibers)		
Active power	+/- 0.6 %	
Reactive power	+/- 1 % (in % of apparent P.)	
COS φ	+/- 0.6 %	
(conditions: freq. 45 / 65 Hz, cos φ > 0.7, peak factor 1.4, calibers U/I 10 to 90 %)		
Device response:		
Sampling rate:	3 / second,	
Response time:	10 % to 90 %	
CPL48	programmable , 350 ms to 60 s,	
CPL48T	70 ms / measure U, I, F	
	150 ms / measure P, Q, S, Cos	

OUTPUT		
TYPE	RANGE	ACCURACY
Current	-20 ... 0 ... 20 mA	+/- 10 μA
Load S1-Gnd	620 Ohms	
Load S2-Gnd	620 Ohms	
Load S1-S2	1240 Ohms	
One input mounting	Into S1 and S2	
Voltage	-10 ... 0 ... 10 V	+/- 5 mV
on external shunt	500 Ohms	
supply separately		
<b>POWER SUPPLY</b>		
20 to 300 Vdc - 40 to 265 Vac, 2 VA		
Protection against reverse polarity		
<b>RECOMMENDED OPERATING CONDITIONS</b>		
Temperature		
Operating		-10 to 60 °C
Storage		- 20 to 85 °C
Influence(% of full caliber)		< 0.03 % / °C
Relative humidity	85 % (not condensed)	
Weight	270 g	
Tightness	IP20	
Dielectric strength		
Input/Output/Pwr. Supply	1500 Veff continuous	
Output / Output	no insulated, common ground	

Electromagnetic compatibility			
Generic standards: <b>NFEN50081-2 / NFEN50082-2</b>			
			
<b>EN55011</b>	meet	group 1 / class A	
<b>EN61000-4-2</b>	no influence	B	<b>ENV50140</b> < +/- 5 % A
<b>EN61000-4-4</b>	< +/- 5 %	B	<b>ENV50141</b> < +/- 10 % A
<b>EN61000-4-5</b>	< +/- 5 %	B	<b>ENV50204</b> no influence A
<b>EN61000-4-8</b>	no influence	A	
<b>EN61000-4-11</b>	< +/- 5 %	B	DBT <b>73/23/CEE</b>

**WIRING AND OUTLINE DIMENSIONS:**



In order to secure their technical features, we recommend a spacing of at least 5 mm between each one of our devices.