

- **measures AC + DC:** Dc to 440Hz
PWM, phase angle variations,
wave train, high level harmonics signals
- **Multi-sensor input current:**
Shunt, transformer, Rogowski coil,
Hall effect sensor or direct input 1A and 5A
- **Programmable:**
voltmeter, ammeter, frequency meter
- **4 digits measure display**
U, I, Hz
- **2 isolated analog outputs**
simultaneous current and voltage transducer
- **3 relay outputs**
- **Ethernet link Modbus-TCP and SNMP**
- **Wide range ac/dc power supply**



The CPL35L is a programmable voltage and current transducer. The various output options allow a wide range of application: measurement, protection, control. The second analog output allows simultaneous measurement of voltage and current in total isolation.

Measurement:

- Direct input of AC or DC voltage and current or with transformer or shunt (configurable PT and CT ratios or shunt sensitivity).
- AC voltage up to 1200V or up to +/-1800V for DC.
- 3 current input ranges: 200mV (external shunt) ,1A - 5A internal shunt.
- Hall effect current sensor (+/- 4V rating signal, +/- 10V peak)
- Programmable integration time from 10 ms to 60 seconds for the measurement in slow waves train applications.
- Frequency range from 1Hz to 440 Hz.
- Peak value detection function on voltage measure with programmable hold time.

Front face:

- 4 digit alphanumeric LED matrix display for the measurement
- 3 red LEDs for relays status indication
- 2 push buttons for:
The fully configuration of device
Selection of displayed value (U, I, Hz)
Setting of alarm thresholds,

Relays (/R option):

- Up to 3 relays configurable in alarm with selection of monitored value (U, I, Hz). Threshold, direction, (and window alarms) hysteresis and delays are individually adjustable on each relay (activation and deactivation delay).
- Hold function (alarm memorization and Reset by front face)

Analog output (/S option):

- 1 or 2 isolated analog outputs. Fully configurable:
type and measure range to monitor (U, I, Hz),
type and range of output signal (0 .. 10 Volts, 0 ... 4 ... 20 mA),
+/-10V output by coupling the two outputs,
Response time (filter), limitation... for each outputs.

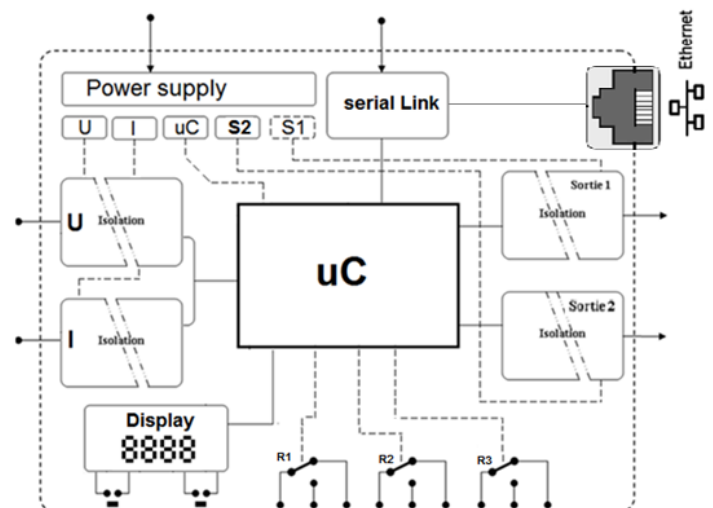
Configuration:

- The CPL35L can be configured via the front face or with the serial link (USB cable -> 3.5 jack plug available separately)
- Firmware update is possible via the USB-serial link.

Feature:

- DIN rail mounting (symmetrical), pluggable terminal blocks
- protection rating: IP20, conformal coating,
- Hinged front face (pushbuttons and serial access).

Synoptic



Version and order code:

CPL35L	1 analog output, 1A/5A/shunt and voltage inputs
CPL35L/R1	+ 1 electromechanical relay
CPL35L/R2	+ 2 electromechanical relays
CPL35L/R3	+ 3 electromechanical relays
CPL35L/S2	2 analog outputs
CPL35L/CMTCP	Ethernet link, Modbus TCP
CPL35L/CM	RS485 link, Modbus RTU
CPL35L/R1-NAV1	Specific version for NAVAL GROUP

CPL35L-Rogo Input for Rogowski coil sensor (40 ... 70Hz)
Type: Rogoflex LT (Up to 2000 Arms)

CPL35L-Hall + Input Hall effect sensor, +/-15V supply, 4V output
Note : all options are cumulative (except communication et analog output)

INPUT

2 ranges for ac voltage	150Vac / 600 Vac	+/- 0.3%
2 ranges for dc voltage	+/-225Vdc / +/-900Vdc	+/- 0.3%
High voltage	+/-1200Vac / +/-1800Vdc	+/- 0.5%
Input impedance	500Kohms - 4Mohms - 8Mohms	
Overload	2 x full range during 3 s	
Measure Threshold	0.5% of Full Range	
Power consumption	0.12 W	
Ac current on 4 ranges	200mV ; 1A ; 5 A	+/- 0.3% of F.R +/- 4V for Hall effect sensor (internal sensor supply +/-15V 50mA)
Dc current on 4 ranges	+/-250mV; +/-1A; +/-5 A	+/- 0.3% of F.R +/- 4V for Hall effect sensor (internal sensor supply +/-15V)
Input impedance	0.05 ohms: 5A / 0.25 ohms: 1A	
Overload	6 x full range during 3 s	
Measure Threshold	0.5% of F.R	
Power consumption	max 1.25 W	
Frequency	1Hz....440 Hz	+/- 0.2 %

Other input range on request.

- measures / response time:
sampling integrator programmable from 10ms to 60s.

COMMUNICATION

Ethernet (RJ45) 10 /100 Base T HTTP / Modbus-TCP / SNMP
- Embedded web server measures display

RELAYS

Change over contact, switching power:

dc: 220VDC, 0.24A, 60W ; 125VDC, 0.24A, 30W ; 30VDC, 2A, 60W

ac: 250VAC, 0.25A, 62.5VA ; 125VAC, 0.5A, 62.5VA

Dielectric strength 3 kV coil/contacts, 2.5 kV contacts/contacts.

Mechanical life: 10⁸ operations

Shock resistance: 300G functional

ANALOG OUTPUT

TYPE	RANGE	ACCURACY
Current S1 and S2	0 ... 4 ... 20 mA	+/- 20 µA
max Load:	0.....850 Ohms	
Voltage S1 and S2	0 ... 10 V	+/- 10 mV
Output impedance:	500 Ohms (internal 0.1% shunt)	
or 1 bipolar output	-10V ... +10V (by coupling of 2 outputs)	

POWER SUPPLY

Universal: (2 versions: not polarized standard or low voltage)
standard: 21Vdc, 55Vac.....to.....265Vac/dc, 3VA
low voltage: 12Vdc.....to.....30Vdc, 3VA

ENVIRONMENT

Operating temperature	-20 / 60 °C (75°C peak)
Storage temperature	-40 / 85 °C
Drift (% of full scale)	< 0.03 % / °C
Humidity	85 % not condensed

Weight	~ 250 g
Protection rating	IP20
Shock IEC 60068-2-27 (operating)	15 G / 11 ms
Bump IEC 60068-2-29 (transportation)	40 G / 6 ms
Vibration IEC 60068-2-6 (operating)	1 G / 10 - 150 Hz
Vibration CEI 60068-2-6 (transportation)	2 G / 10 - 150 Hz

Dielectric strength (Inputs/Power-Outputs-Relays) 2500 Vrms

MTBF (MIL HDBK 217F)	> 3 000 000 Hrs @ 25°C
Life time	> 200 000 Hrs @ 30°C

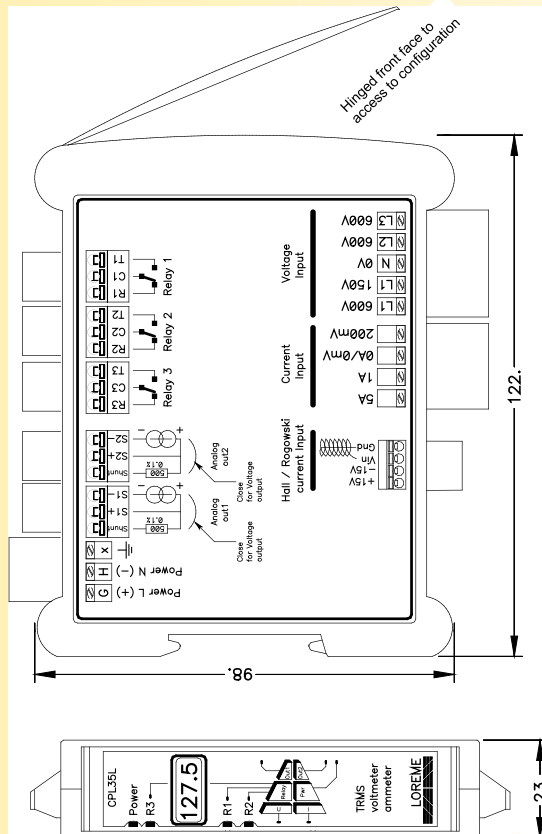
Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE

Immunity standard for industrial environments EN 61000-6-2		Emission standard for industrial environments EN 61000-6-4
EN 61000-4-2 ESD	EN 61000-4-8 AC MF	EN 55011 group 1 class A
EN 61000-4-3 RF	EN 61000-4-9 pulse MF	
EN 61000-4-4 EFT	EN 61000-4-11 AC dips	
EN 61000-4-5 CWG	EN 61000-4-12 ring wave	
EN 61000-4-6 RF	EN 61000-4-29 DC dips	



WIRING AND OUTLINE DIMENSIONS:

CPL35L: up to 2 analog outputs + 3 relays maxi



CPL35L/CMTCP: Ethernet link Modbus TCP + 3 relays maxi

