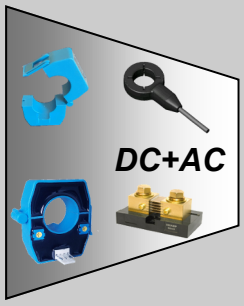
True RMS current and voltage transducer for alternating and direct signals — *Type CPL35L*

- ***RMS measures AC + DC:*** *Dc to 440Hz*
  PWM, Phase angle variation,
  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***
  double outputs
  simultaneous current and voltage transducer
- ***3 relay outputs***
- ***Universal ac/dc power supply***



The CPL35L is a programmable voltage and current converter. 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 AC or DC voltage and current or with transformer, shunt,... (configurable TP, CT ratio or shunt sensitivity).
- 2 voltage input ranges: 150V, 600V others on request up to 1000V.
- 3 current input ranges: 200mV (external shunt) ,1A and 5A internal shunt.
- Current measurement with Hall effect sensor (+/- 4V input)
- Configurable 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
- 2 push buttons for:
  * The fully configuration of device
  * Selection of displayed value (U, I, Hz)
  * Setting of alarm thresholds, ...

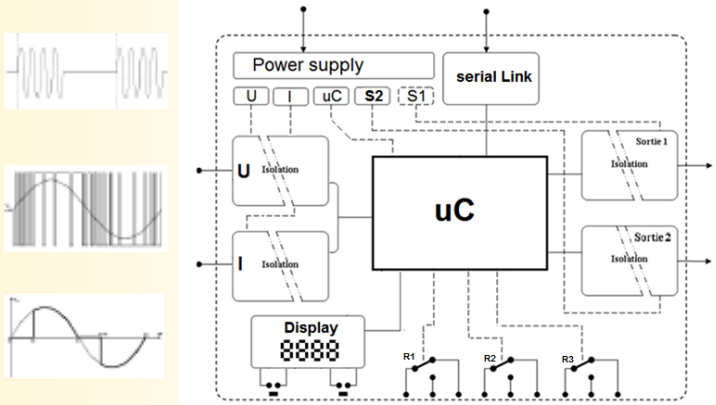
Relays (/R option):
Three relays configurable in alarm with selection of monitored value (U, I, Hz). Threshold, direction, hysteresis and delays are individually adjustable on each relay (on & off delay).
Hold function (alarm memorization and Reset in front face)

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 association of the two outputs,
Response time (filter), limitation... for each outputs.

Configuration:
- The CPL35L can be configured via the front face or via the RS232. (USB cable -> 3.5 jack available separately)
- Firmware update is possible via the USB-serial link.

Feature:
- 23 mm width case, DIN rail mounting (symmetrical),
- protection rating: IP20, conformal coating,
- connection on pluggable screw terminal blocks,
- Hinged front face (keyboard and serial access).

Synoptic



Associated current sensors

shunt | current transformer | Hall effect sensor | Rogowski coil

Version and order code:

CPL35L	1 analog output, 1A/5A / shunt and voltage
CPL35L/R1	+ 1 relay
CPL35L/R2	+ 2 relays
CPL35L/R3	+ 3 relays
CPL35L/S2	2 analog outputs
CPL35L-Rogo	Input for Rogowski coil sensor Type: Rogoflex LT (Up to 2000 Arms)
CPL35L-Hall	input for split-core Hall effect sensor (Hco type)
DPL35L/R1	1 relay without analog output
DPL35L/R2	2 relays without analog output
DPL35L/R3	3 relays without analog output

INPUT

TYPE	RANGE	ACCURACY
AC voltage, 2 ranges	150 ; 600 V	+/- 0.3% full range
DC voltage, 2 ranges	+/-200 ;+/- 900 V	+/- 0.3% full range
Input impedance	500Kohms - 2Mohms	
Overload	2 x full range during 3 s	
Measure Threshold	0.5% of full range	
Power consumption	0.12 W	
AC current, on 4 input ranges	200mV ; 1A ; 5 A +/-4Vac for Hall effect sensor (internal sensor power supply +/-15V)	+/- 0.3% full range
DC current on 4 input ranges	+/-250mV;+/-1A;+/-5 A +/- 4V for Hall effect sensor (internal sensor power supply +/-15V)	+/- 0.3% full range
Input impedance	0.05 ohms: 5A / 0.25 ohms: 1A	
Overload	6 x full range during 3 s	
Measure Threshold	0.5% of full range	
Power consumption	max 1.25 W	
Frequency	1Hz….440 Hz	+/- 0.2 %

Other input range on request.
Note: use transformer for greater range in AC.
- measures / response time:
sampling integrator programmable from 10ms to 60s.

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: 10^8 operations
Shock resistance: 300G functional

ANALOG OUTPUT

TYPE	RANGE	ACCURACY
Current S1 and S2	0 ... 4 ... 20 mA	+/- 20 µA
permissible Load:	0.....850 Ohms	
Voltage S1 and S2	0 ... 10 V	+/- 10 mV
Output impedance:	500 Ohms (internal shunt 0.1%)	

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
Storage temperature	-40 / 85 °C
Drift (% of full scale)	< 0.03 % / °C
Humidity	85 % not condensed
Weight	~ 250 g
Protection rating	IP20
Dielectric strength	2500 Vrms permanently Inputs/Power-Outputs-Relays
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*	CE
EN 61000-4-3 RF	*EN 61000-4-9 pulse MF*	*group 1 class A*	
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: