

# TRMS panel Voltmeter, Ammeter, frequency meter IPL36L



- **RMS measures AC + DC:**

Single phase or balanced three phase 0...440Hz  
PWM, wave train,  
Phase angle variation,  
high level harmonics signals.



- **Multi sensor for current measurement:**

Shunt, transformer, Rogowski coil,  
Hall effect sensor or direct input 1A and 5A.

- **Programmable:**

function: voltmeter, ammeter, frequency meter

- **6 digits measure display**

4 digits alphanumerical display for the unit  
Display: U, I, Hz

- **option:**

isolated analog output, 2 relay outputs  
RS485 Modbus RTU  
Ethernet Modbus TCP (6 concurrent connections) and SNMP

- **Universal ac/dc wide range power supply**

The IPL36L is a digital panel meter, transducer for measuring, monitoring and for the transmission of current, voltage and frequency of an AC or DC electrical network. Implementation is fast by simple configuration of input parameters. The various output options allow a wide range of application: measurement, protection, control, .....

**Measurement:**

- Direct current or alternative current, single phase or balanced three phases (configurable PT and CT ratio or shunt sensitivity).
- 2 voltage input ranges: 150V, 600V others on request up to 1000V.
- 2 current input range: 200mV (external shunt), 1A or 5A internal shunt.
- external Hall effect current sensor (+/- 4V rated, +/-10V peak)
- configurable integration time from 0.01s to 60 seconds for the measurement in slow waves train applications.
- frequency from 1Hz to 440 Hz.
- function : hold time of maximal value (voltage and current)

**Front face:**

- 6 digits LED display, 14,2 mm height for the measure
- 4 digits alphanumeric LED matrix display for the units
- 2 red LEDs for relay status indication
- 3 push buttons:
  - \* Full configuration of device
  - \* Select of displayed value (U, I, Hz)
  - \* Setting of alarm thresholds, .....

**Relays (/R option):**

1 or 2 relays, configurable in alarm with selection of the monitored measure (U, I, Hz). Threshold, direction, hysteresis and delay are individually adjustable on each relay (on & off delay).

**Analog output (/S option):**

1 galvanically isolated analog output, fully configurable:  
type and range for monitor measure: (U, I, Hz)  
type and range for analog output (0 .. 10 V, 0 ... 4 ... 20 mA)  
response time (filter), limitation....

**Communication (/C option):**

RS485 link                      Modbus RTU  
Ethernet (RJ45) link        Modbus TCP / SNMP , Web server

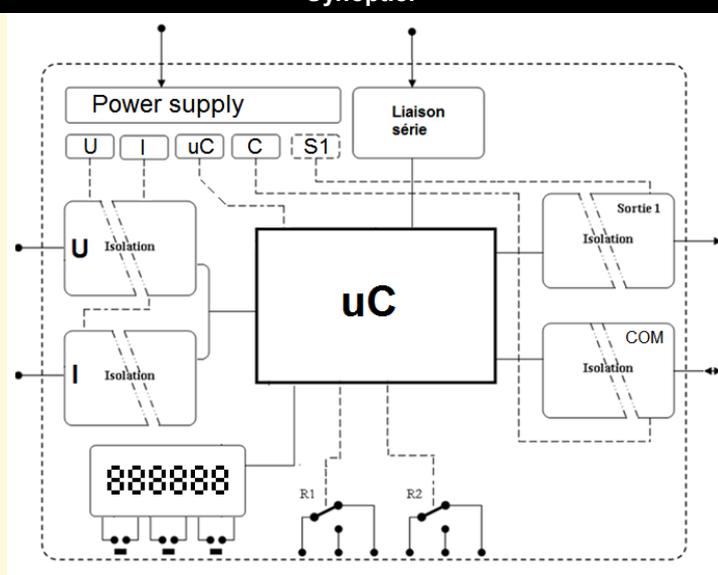
**Configuration:**

- The IPL36L can be configured via the front face or with the serial RS232. (USB cable -> 3.5 jack supplied separately)
- Firmware update is possible via this USB link.

**Feature:**

- DIN panel case : 96x48 mm, pluggable connectors,
- protection rating IP20 option IP65, conformal coating,

**Synoptic:**



Version and order code:

[Request a quote](#)

- IPL36L** Direct input 1A / 5A or mV with remote shunt
  - IPL36L-Hall** Input for Split-core Hall effect sensor HcO type (up to +/-1200 A dc+ac)
  - IPL36L-Rogo** Input for Rogowski coil Rogoflex LT type (up to 2000Arms)
  - IPL36L/R1** + 1 relay
  - IPL36L/R2** + 2 relays
  - IPL36L/S** + 1 isolated analog output
  - IPL36L/CM** + RS485 MODBUS RTU
  - IPL36L/CMTCP+** ETHERNET MODBUS TCP / SNMP
- options /S, /CM, /CMTCP are not combinable.*

**INPUT**

TYPE	RANGE	ACCURACY
AC Voltage	150V ; 600 V	+/- 0.3% full scale
DC Voltage	+/-200 ; +/- 1000 V	+/- 0.3% full scale
Input impedance	500Kohms - 2Mohms	
Overload	2 x Un during 3 s	
Measure threshold	0.5% of full scale	
Power consumption	0.12 W	
Current ac/dc	+/-250mV (200mVac) for shunt 50mV; 60mV; 100mV or "Tio" split-core current sensor	
	1Aac / 5Aac direct input or for current transformer	
	+/- 10Vmax for Hall effect sensor (sensor power supply: +/- 15V)	
Input impedance	0.05 ohms: 5A / 0.25 ohms: 1A	
Overload	6 x IN during 3 s	
Measure threshold	0.5% of input range	
Power consumption	max 1.25 W	
Frequency	0Hz / 1Hz....440 Hz	+/- 0.2 %

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

**Communication**

RS485	600...19200 bps	Modbus RTU
Ethernet (RJ45)	10/100 M	Modbus TCP/SNMP

**ANALOG OUTPUT**

TYPE	RANGE	ACCURACY
Current	0 ... 4 ... 20 mA	+/- 10 µA
Load	0 ... 750 Ohms	
Voltage	0 ... 5 ... 10 V	+/- 5 mV
on shunt	500 Ohms	

**RELAY**

Changeover 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  
surge voltage: 3Kv coil/contact ; 2.5Kv contact/contact  
mechanical endurance: 10<sup>8</sup> operations  
Shock resistance : 300g functional

**POWER SUPPLY**

Universal: (2 versions: non polarized standard or low voltage)  
standard: 21Vdc, 55Vac....to.....265Vac/dc, 3VA  
low voltage: 12Vdc....to.....30Vdc, 3VA

**ENVIRONMENT**

Operating temperature	-25 to 60 °C
Storage temperature	-25 to 85 °C
Thermal drift (% of full scale)	< 0.03 % / °C
Humidity	85 % not condensed
Weight	~ 250 g
Protection rating	IP20 (IP65 front face in option)
Dielectric strength	1500 Vrms continuous
MTBF (MIL HDBK 217F)	> 2 000 000 Hrs @ 25°C
Life time	> 200 000 Hrs @ 30°C
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

**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:**

**panel cutout : 92.5 x 42.5 mm**

