PROGRAMMABLE NETWORK CONVERTER ANALYSER IPL244, IPL144L



- High adaptability: direct, alternative, single-phased, three-phased balanced, unbalanced, with or without neutral,
- 8 output slots: analog, relay, RS485, ...
- Fully insulated 3U, 3I
- · High display capacity:

10 simultaneous values (IPL244) 3 simultaneous values (IPL144L)

Universal power supply



IPL144V is universal analyser of electrical network, it has 8 site intended to measure read (analog output, digital link, relay ...)

Applications:

- Measure, control, pilot, regulation, protection.

Measures:

Thanks to its integrated calculation functions, the IPL244/144L allows the measure of all electric measures:

- direct voltage and current (700 Vdc, 5 Adc),
- effective alternating voltage and current (500 Vac, 5 Aac),
- inverse current,
- active (P), reactive (Q), apparent (S), power (generated-consumed),
- cos φ (power factor) inductive-capacitive,
- frequency (35 to 400 Hz),
- active, reactive, generated, consumed energy, with independent addition by channel (saved), reset in configuration or with keyboard (lockable in the configuration),
- configurable transformation ratio (current and voltage).

Display:

IPL244:

- 10 values displayed simultaneously, selected by 3 press-buttons and/or RS232 configuration
- 8 values of 3 digits 1/2 and 2 values of 7 digits 1/2 (L1, L2, L3 / I1, I2, I3 / ...)

IPL144L:

- 3 values displayed simultaneously, selected by 1 press-button
- 3 values of 7 digits
- display of the type and the value
- Display with red leds 7.62 mm great luminosity
- Automatic change of the scale factor (V-kV, A-kA, kW-MW)
- Automatic positioning of the decimal point.

Outputs slots:

The IPL244/144L is equipped with 8 slots. Each slot can receive either:

- one insulated analog ouput, assigned to any chosen measure.
- one configurable relay in alarm or energy counting,
- one digital RS485 link with MODBUS/JBUS protocol. (data in integer 32 bits and floating 32 bits IEEE (optional))

GENERAL CHARACTERISTICS:

- Slot-in plastic box, U-link fastening
 - IPL244: 144 x 144 x 175, cut-off 139 x 136,
 - IPL144L: 144 x 72 x 175, cut-off 139 x 66,
- Plug-in connector, connection with screw-terminals
 (2.5 mm²) or with threaded rod for current input (optional),
- Tightness IP20 (option IP54, RS232 on back side).

CONFIGURATION:

Thanks to its front-side keyboard, the IPL244/144L allows to reset the energy meters, to change the pages of visualization, ...

The user can visualize and configure all the parameters of the IPL244/144L via the RS232 link.

The device can interact via the RS232 serial link (jack 3.5, or option: DB9 on back side), with any system emulating a terminal.

Example: Terminal program in Windows: ----> (Free supply of cable on single request).

Through the terminal, the user will be able to:

- visualize the measures, the actual configuration,
- make a new configuration of the IPL244/144L.

The configuration mode allows to choose:

- the wiring type (direct, alternative, single-phase, three-phase, balanced, unbalanced, with or without neutral, 3 independent wattmeters, ...),
- the PT and CT ratio,
- the working relays mode,
- the RS485 link parameters,
- the type and the scale of the analog ouputs,
- the display type.

INPUTS		
TYPE	RANGE	ACCURACY
Alternative voltage	500 V (direct)	+/- 1.5 V
Direct voltage	+/- 700 V (direct)	+/- 1.5 V
And		
Alternative voltage	125 V (direct)	+/- 0.37 V
Direct voltage	+/- 175 V (direct)	+/- 0.37 V
Input impedance	2 M / 500 kOhms	
Overload	3 x UN during 3 s	
Measure threshold	5 V / 1.5 V	
Absorbed power	0.12 W / 0.03 W	
Alternative current	5 A (direct)	+/- 15 mA
Direct current	+/- 5 A (direct)	+/- 15 mA
Input impedance	0.05 Ohms	

Overload 6 x IN during 3 s Measure threshold 0.1 A Absorbed power 1.25 W

Other calibers on request, 1A current, 100V voltage Note: use a transformer for an upper range

Frequency 35 to 400 Hz +/- 0.2 %

METROLOGY

(accuracy is given in percentage of the full calibrers)

Active power +/- 0.6 % Reactive power +/- 1 % (in % app. P)

+/- 0.6 % COS φ Active energy +/- 0.6 % +/- 1 % Reactive energy

(conditions: freq. 45/65 Hz, $\cos \varphi > 0.7$; peak factor 1.4; calibres U/I 10 to 90%)

Sampling rates / response time accordinging of the configura-

tion:

Sampling rate: 1 to 3 per second

Response time: from 300 to 900 ms **OUTPUTS**

TYPE RANGE ACCURACY Current 0 ... 4 ... 20 mA +/- 10 µA

500 Ohms Load:

Voltage 0 / 10 V +/- 5 mV External shunt 500 Ohms (supplied separately)

RELAYS

Switching power 5 A / 250 V Reverse contact Type RT Impulse rate in counting 2 / s max. Impulse width 200 ms

POWER SUPPLY

(to specify at the order) 20 to 70 Vac / Vdc, 7 VA 80 to 265 Vac / Vdc, 7 VA

RECOMMENDED OPERATING CONDITIONS

Temperature

Operating -10 to 60 °C -20 to 85 °C Storage < 0.03 % / °C Influence (of the full scale)

Relative humidity 85 % (not condensed)

Weight ~ 950 g

Tightness IP20 (option IP54, RS232 on back side)

1500 Veff continuous Dielectric strength (Input/Outputs/Pwr./Contacts)

Electromagnetic compatibility

Generic standards: NFEN50081-2 / NFEN50082-2

FN55011 meet group 1 / class A

EN61000-4-2 no influence В ENV50140 < +/- 5 % EN61000-4-4 < +/- 5 % В ENV50141 < +/- 10 % Α

Α

Α

no influence

EN61000-4-5 < +/- 5 % В ENV50204

EN61000-4-8 no influence Α

EN61000-4-11 < +/- 5 % В DBT 73/23/CEE

WIRING AND OUTLINE DIMENSIONS:

Identical wiring for IPL244 and IPL144L. Cut-off: 66 x 139 mm - IPL144L, 136 x 139 mm - IPL244 Insertion depth: 175





