

ELECTRICAL NETWORK ANALYSERS

Single or 3-phase balanced/unbalanced
3 or 4 wire networks.

PECA 11

Type


The **PECA analysers** are especially designed for the measurement, the control and the display of all the parameters of AC electrical networks: voltage, current, power, energy, frequency, etc...

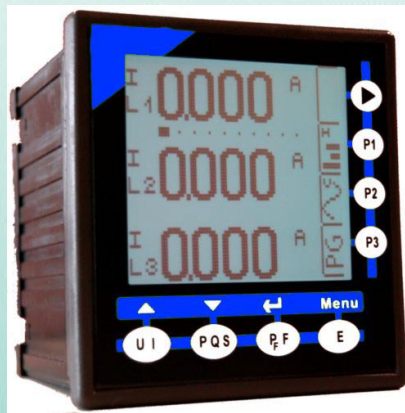
Simple programming, accessible on front face or by PC via the software *Supervision*.

Display

- Rear-lit graphical LCD.
- Reading of the energies on 8 digits with automatic switching to the upper unit.

Environment

- Operating temperature: 0°C to +55°C.
- Storage temperature: -25°C to +70°C.
-  marking (89/336 rev.92/31).



Functions

- Universal, more than 28 measurable parameters, for all network types.
- Programmable input calibers:
Current: 1A and 5A AC
Voltage: 100V_{L-N} / 175V_{L-L} & 330V_{L-N} / 600V_{L-L}
- Digital data link RS485 Modbus/Jbus.
- Fast cycle time: 40ms
- Universal (switch mode) power supply

Options

- Ethernet output - embarked web server
- Harmonics analysis
- 3 analog outputs (2 insulated ± 20 mA outputs + 1 0/20mA insulated output)
- 5 relay outputs, programmable by the user either as alarm or as energy pulse output.
- Profibus output

External features

- Protection :** Case / terminals: IP 20
IP 40 front face protection (IP 65 optional)
- Housing:** Self-extinguishing case of black UL 94 V1 polycarbonate.
- Connecting:** Plug-off connectors on rear face for screwed connectings (2.5mm², flexible or rigid)

DEFG
Relay outputs

HIJ
Digital data link 485

KL
Analog output

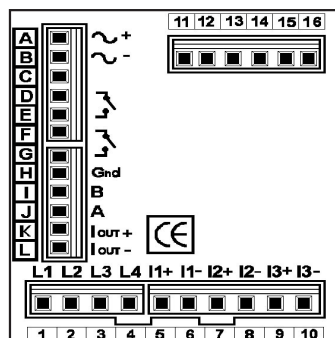
1 2 3 4
Measure voltages

5 6 7 8 9 10
Measure currents

AB
Power supply

11 12 13 14
Analog outputs (optional)

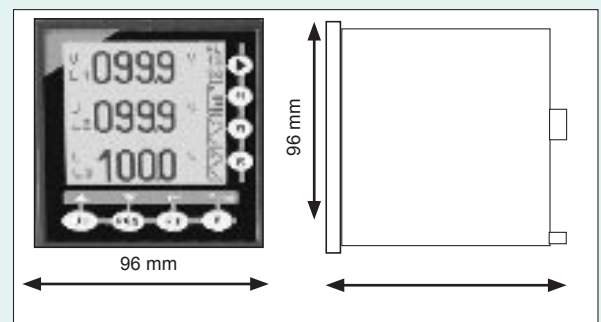
11 12 13 14 15 16
Relay outputs (optional)



11 12 13 14 15 16
Logic inputs (optional)

Dimensions

Case: 96 x 96 x 108 mm (with terminals)



Mounting : on panel; cut out 92 x 92 mm

Tightening : with 2 screwed pads

Weight : 400 g

Technical features

▶ inputs

- **Voltage** 2 programmable ranges
Un=100V L-N / 175V L-L and 330V L-N / 600V L-L
- **Current** 2 programmable ranges: 1 and 5A (In=1.2A and In=6A)
Measurable oversteppings: 1.2 In; 1.2 Un
Overload permanent: 750 V, 2 In
during 10 s: 1000 V, 10 In
Power draw voltage input: 1 MΩ resistances
current input: < 0.2 VA
Test voltage 2 kV / 50 Hz / 1 min.
Frequency 10...50...65 Hz (other frequencies: consult)
Network type single or 3-phased balanced/unbalanced
with or without neutral

▶ outputs

• **RS485 output**

- Type* 2-wire (galvanic partition / inputs 2 KV)
- Baud rate* 4800 / 9600 / 19200 bauds
- Protocole* Modbus / Jbus RTU 8 bits, programmable parity
- Format of the data* Integer 16 bits (table of units) or 32 bits decimal points and units fixed.

• **Relay outputs (option 2R or 5R)**

- Type of contact* potential free contact (galvanic partition: 2.5KV)
output 1 NO
- Rated load* 5A - 250 VAC
- either **SETPOINT OUTPUT**
Setting of the setpoints : 0 to 100% of the measure range, programmable
Switching hysteresis : 0 to 15% of the setpoint, programmable
Time delay : 0 to 15s, programmable

- or **PULSE OUTPUT**

- Count rate* : 4 / 2 / 1 pulses per second, according to the programmed width
- Width of the pulses* : 100 / 200 / 400ms, programmable

• **Analog outputs (option 3A or 1A)**

- Galvanic partition* 1kV(output 1 / output 2) 2KV (inputs)
- Output signal* programmable:
option 1A: bidirectionnal output
-20/20mA -10/10mA
-5/5mA 0/5mA 0/10mA 0/20mA 4/20mA
output 3A :
- 2 *bidirectionnal outputs*
-20/20mA -10/10mA
-5/5mA 0/5mA 0/10mA 0/20mA 4/20mA
- 1 *unidirectionnal output*
0/5mA 0/10mA 0/20mA 4/20mA
- Scale setting* 0 to 100% of the measure range by programming.
- Admissible load* up to 600Ω (20mA)
- Accuracy* < 0.1% of the full scale on -20/20mA
(in relation to the display)
< 0.2% on -5/5mA
- Max. residual ripple* >25mV (peak to peak) on 500Ω load
- Response time* 40ms (70ms input/output)
- Thermic drifts* < 120 ppm caliber -20/+20mA
< 200 ppm caliber 0/20 mA

• **Harmonics analysis (option H)**

Display of the current and voltage harmonics of the 3 phases up to rank 50. Retransmission possible in Modbus.

• **Logic inputs (option 3T)**

Input signal: 0/24Vdc or potential free contact
Input impedance: 3kΩ
Galvanic partition: 2kV

▶ power supply

Universal power supply
20...270 V_{AC} / 20...300 V_{DC}
Power draw 6 VA max. in AC, 3.5W max. in DC

▶ measure

• **32 measurable parameters**

- Accuracy rating* Voltages, currents: 0.2 (CEI688-1)
Powers: 0.5 (CEI688-1)
Energies : 1 (CEI61036)
- Thermic drifts* < 200ppm
- Measuring method* fast simultaneous sampling of the 3 voltages and the 3 currents. Digital calculation on 32 bits. Measuring of deformed signals, pass-band 2.5KHz
- Refreshing of the display*, every second
- Digital filtering* programmable on several levels
- Energies* Saved reading on 8 digits
- Cycle time* 40ms (for all network types)

▶ wiring

With detailed user handbook supplied with the instrument

Coding

Types:

- PECA 11** 3U, 3V, 3 I, cos φ, cos φ/phase, F, P 10/15min.,
Q 10/15min., S, P/phase, Q/phase, leak current,
E active, E reactive, inductive and capacitive

Options

- | | |
|---|--|
| 2R 2 relay outputs | H harmonics analysis |
| 5R 5 relay outputs | W radio output |
| 1A 1 analog output | F Ethernet output |
| 3A 3 analog outputs | S time-dated savings of the measures |
| 3T 3 logic inputs | P Profibus output |

Order example: For a PECA11 with 1 analog output and 2 relay outputs (setpoint or pulses), request reference:

PECA11 1A 2R

For a PECA11 with 1 analog output and 5 relay outputs (setpoints or pulses), request reference:

PECA11 1A 5R

This appliance is dedicated to industrial applications. It has to be installed in an electrical switchbox, or equivalent.

your representative



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