

ELECTRICAL NETWORK ANALYSERS

DISTURBANCE METER

Single or 3-phase unbalanced 3 or 4 wire networks

PECA11 D

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

Display

- Graphical rear-lit 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.
- **CE** marking (89/336 rev.92/31).

Functions

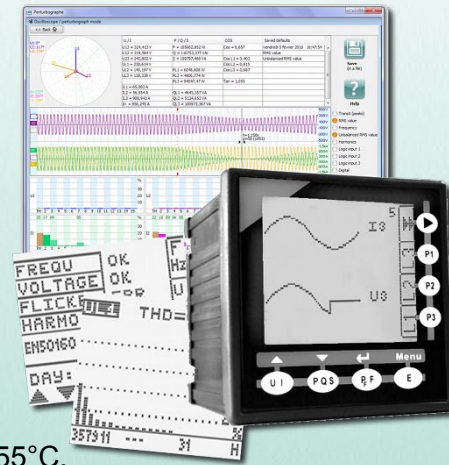
• 25 measurable parameters, watching of the electrical network disturbances in real time.
Current: 1A and 5A (programmable)
Voltage: 100V_{L-N} / 175V_{L-L} and 330V_{L-N} / 600V_{L-L}

- Digital data link RS485 Modbus/Jbus.

- Analysis of the disturbances acc. to the standard EN50160.
- Display of the U, I, F errors, harmonics and Thd over 1 week.
- Universal (switching) power supply.
- 3 insulated logic inputs for watching external errors.

Options

- 5 relay outputs, programmable by the user as alarm setpoint.
- Modbus TCP Ethernet 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)

KL - MN
Relay outputs

CD
Digital data link 485

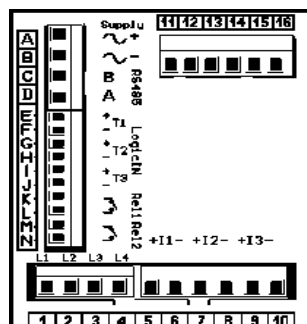
EF - GH - IJ
Logic inputs

1 - 2 - 3 - 4
Measure voltages

5 - 6 - 7 - 8 - 9 - 10
Measure currents

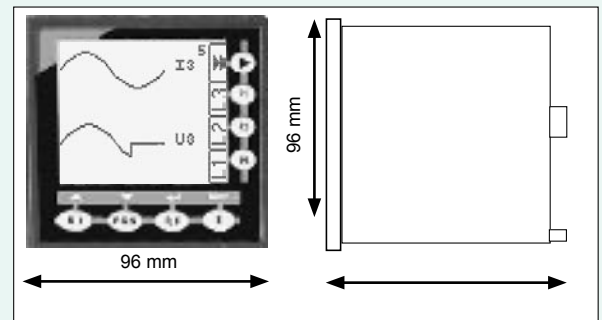
AB
Auxiliary power supply

11 - 12 - 13 - 14 - 15 - 16
Relay outputs (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
- Overloads* 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* 50Hz (other frequencies: consult)
- Network type* single or 3-phase unbalanced with or without neutral

• **Logic inputs** 3 insulated inputs

- Galvanic partition* 1kV (input 1 / input 2) 2KV (inputs)
- Type* pot. free contact or 24V (to be requested on order)

▶ 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 the 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 1NO
- Rated load* 5A - 250 VAC
- **SETPOINT OUTPUT**
- Setting of the setpoints : 0 to 100% of the measure range, program.
- Switching hysteresis : 0 to 15% of the setpoint, programmable
- Time delay : 0 to 15s, programmable

▶ power supply

- Universal power supply
20...270 VAC / 20...300 VDC
- Power draw* 6 VA max. in ac, 3.5W max. in DC

▶ measures

• **Function analysis and display of the disturbances**

- Programmable detection setpoints allowing the recording of the measures, the wave shapes...
- Watching of the voltages, the currents, the frequency, the harmonics, the Thd and the flicker for the 3 phases over 1 week. Display of the results day per dat according to EN50160.
- Function oscilloscope for the 3 voltages and the 3 currents.
- Display of the Fresnel vectors in real time.
- Display of the harmonics up to rank 32
- Plotter for 3 measures on choice over 1h, 1 day, 1 week.
- Recording and visualising of the average values over 10 minutes during 1 week for the voltages, the powers and the tangent.

• **25 measurable parameters**

- Accuracy rating* Voltages, currents: 02 (IEC688-1)
Powers: 0.5 (IEC688-1)
Energies: 1 (IEC61036)
- 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 1.6KHz
- Refreshing of the display*, every second
- Digital filtering* programmable on several levels
- Energies* Saved
reading on 8 digits
- Cycle time* 20ms (for all network types)

▶ wiring

With detailed user handbook supplied with the instrument

Coding

Types:

- PECA 11D** 3U, 3V, 3 I, cos φ, cos φ/phase, F, P, Q, S
P/phase, Q/phase,
E active, E reactive

Options

- 2R** 2 relay outputs
- 5R** 5 relay outputs
- F** Ethernet output

Order example: For a PECA11D with 5 relay outputs request the reference: **PECA11D 5R**

For a PECA11D with 2 relay outputs request the reference: **PECA11D 2R**

For the 3 logic inputs specify if potential free contact or 24V

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

your representative



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