

ELECTRICAL NETWORK ANALYSERS

PECA11 / DIVA11

ARDETEM

SFERE



Type

The analysers **PECA11/DIVA11** 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 / MCvision*.



Display

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

Environment

- Operating T°: 0°C to +55°C
- Storage T°: -25°C to +70°C
- CE marking

Functions

- Measurement in true RMS values (TRMS)
- Universal, with more than 28 measurable parameters, for all network types.
Programmable input calibers:
Current 1A et 5A AC
Voltage: 100V L-N / 175V L-L and 330V L-N / 600V L-L
- Digital data link RS485 Modbus/Jbus.
- Fast cycle time: 40ms
- Automatic correction of the wiring
- Universal (switch mode) power supply

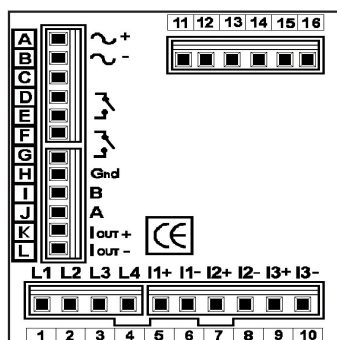
Options

- Ethernet output - embarked web server
- Ethernet output + IEC61850 MMXU / MMTR communication
- Harmonics analysis
- 3 analog outputs (2 isolated outputs $\pm 20\text{mA}$ + 1 isolated output 0/20mA)
- 5 relay outputs, programmable by the user either as alarm, or as energy pulse output.
- Profibus output

External features

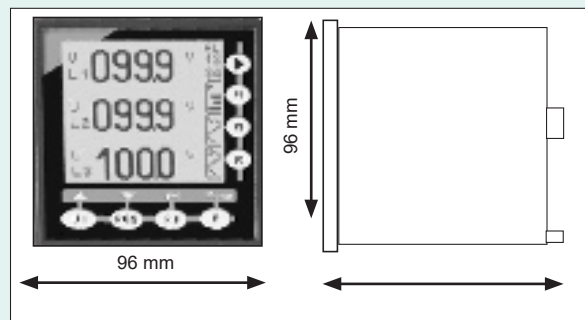
- Protection :** Case / terminals: IP 20
IP 40 front face protection (IP 65 optional)
- Housing:** Self-extinguishing case of black UL 94 V1 polycarbonate.
- Connecting:** Plug-off connectors on rear face for screwed connectings (2.5mm², flexible or rigid)

- 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
- 13 14 15 16**
Analog 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 VAC / 20...300 VDC

Power draw 6 VA max. in AC, 3.5W max. in DC

measure

• 32 measurable parameters

Accuracy rating Voltages, currents: 0.2 (IEC688-1)
Powers: class 0.5 (IEC688-1)
Active energy: class 1 (IEC62053-21)
Reactive energy: class 2 (IEC62053-23)

Option P: Active power: class 0.2 (IEC688-1)
Active energy: class 0.5 (IEC62053-22)
Reactive energy: class 1 (IEC62053-24)

Thermal drifts < 200ppm

Measuring method fast simultaneous sampling of the 3
voltages and the 3 currents. Digital
calculation on 32 bits. Measuring of
deformed signals, sampling frequency
6.40KHz

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:

ARDETEM reference: PECA11

SFERE reference: DIVA11

PECA 11 3U, 3V, 3 I, cos φ, cos φ/phase, F, P 10/15min.,
DIVA 11 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 + em- barked web server
3A	3 analog outputs	Fi	Ethernet output + communication IEC61850 - MMXU / MMTR
3T	3 logic inputs	S	time-dated savings of the measures
P	option class 0.2	PB	Profibus output

Order example: For a PECA11 or a DIVA11 with 1 analog output
and 2 relay outputs (setpoint or pulses), request the reference:

PECA11/DIVA11 1A 2R

For a PECA11 or a DIVA11 with 1 analog output and 5 relay
outputs (setpoints or pulses), request the reference:

PECA11/DIVA11 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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