ANALYSERS FOR DC ELECTRICAL NETWORKS

PECA11DC / DIVA11DC

ARDETEM **SFERE**





Type

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

Simple programming, accessible on front face or by PC via the software *SuperVISION (ARDETEM) or MCvision (SFERE)*.

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

- Universal, for measuring all the parameters of DC current networks.
- Current input on 100mV DC shunt Voltage input: 2 versions: 130 and 400 V DC OR 15 and 50 V DC.
- Output RS485 Modbus/Jbus.
- Quick cycle time: 40ms
- Universal power supply

Options

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

External features

Protection : Case / terminals: IP 20
Front face IP 40 (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)

D E F G
Relay outputs

H I J
Digital data link 485

K L
Analog output

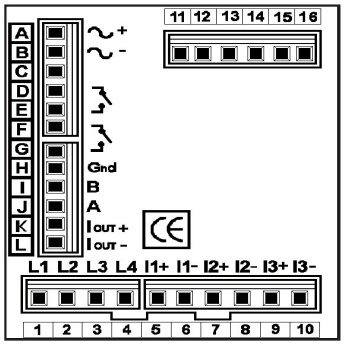
1 4
Measure voltage

5 6
Measure current

A B
Power supply

13 14 15 16
Analog outputs (optional)

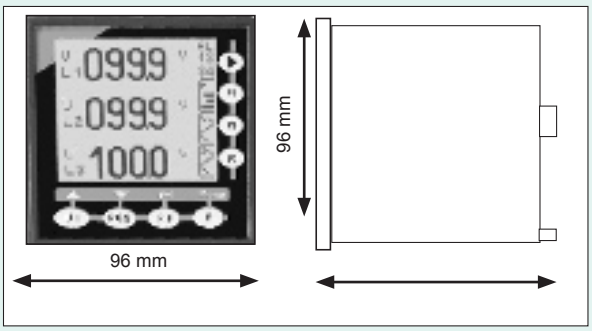
11 12 13 14 15 16
Relay outputs (optional)



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

ARDETEM SFERE®
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Technical features

inputs

- **Voltage** — 2 versions with 2 programmable ranges:
  Un=130V DC & 400V DC OR Un=15V DC & 50V DC
- **Current** — On 100mV shunt
  Consult for the supply of the shunt

Measurable oversteppings: 1.5 In; 1.3 Un

Overload	permanent: 750 V, 2 In during 10 s: 1000 V, 10 In
Power draw	voltage input: resistances 1 MΩ current input: external shunt, resistances 2kΩ
Test voltage	2 kV / 50 Hz / 1 min.

outputs

• RS485 output

Type	2 wire (galvanic partition / inputs 2 KV)
Speed	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	on potential free contact (galvanic partition: 2.5KV) output 1NO
Rated load	5A - 250 VAC

- either **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)

- 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 bidirectional outputs* -20/20mA -10/10mA -5/5mA 0/5mA 0/10mA 0/20mA 4/20mA *- 1 unidirectional output* 0/5mA 0/10mA 0/20mA 4/20mA
Scale setting	0 to 100% of the measure range (programmable)
Admissible load	up to 600Ω (20mA)
Accuracy of the board	< 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)
Thermal drifts	< 120 ppm caliber -20/+20mA < 200 ppm caliber 0/20 mA

• Logic inputs (option 3T)

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

supply

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

measure

• 5 measurable parameters

Accuracy rating	Voltages, currents: 0,2 (IEC688-1) Powers : 0.5 (IEC688-1) Energies : 1 (IEC61036)
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, 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*

wiring

With detailed user handbook provided with the instrument

Coding

Types:

ARDETEM reference: PECA11 DC
SFERE reference: DIVA11 DC

Measures : U, I, P, drawn and generated energy

PECA11/DIVA11 DC 15-50 or **PECA11/DIVA11 DC 130-400**

Options

2R	2 relay outputs		
5R	5 relay outputs	W	radio output
1A	1 analog output	F	Ethernet output
3A	3 analog outputs	S	sauvegarde horodatée des mesures
3T	3 logic inputs	P	Profibus output

Order example: For a PECA11DC/DIVA11DC with a 400 VDC input, 1 analog output and 2 relay outputs (setpoint or pulses) request the reference:

PECA11DC/DIVA11DC 130-400 1A 2R

For a PECA11DC/DIVA11DC with a 24 VDC input ,1 analog output and 5 relay outputs (setpoint or pulses) request the reference:

PECA11DC/DIVA11DC 15-50 1A 5R

This appliance is designed for industrial applications. It has to be installed in an electrical cabinet, or equivalent.

CA AN2016/04 - B 07/19 - Any data in this documentation may be modified without prior notice.

your representative

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