

Computer PV 12

Computer PV 12, Reactive energy regulator for photovoltaic applications

Code: R13882.

> Alarm relay: Yes
> Communications: RS-485
> Measurement Range (V): 20...300
> IΔn (A): yes
> Power supply: 100...520 Vac
> Nr steps: 12
> Input current: ... /5 A | ... /1 A.
> Switching unit: Contactor

Description

The **Computer PV12** is a power factor controller designed for installations with photovoltaic self-consumption and for applications where it is necessary to sum currents from different energy sources.
The device measures the cos φ of the network and controls capacitor connection and disconnection to maintain it at the target value. Additionally, it calculates and displays the main electrical parameters in single-phase and balanced three-phase networks.

The measurement is carried out in true effective value (True RMS) through 4 AC voltage inputs, 3 independent current inputs, and 1 input for measuring leakage current.
The **Computer PV12** range allows up to 3 independent energy source measurements and combines them into a total reading.

Application

The connection with 1, 2, or 3 current transformers allows the **Computer PV12** to sum the contributions of different energy sources, making it ideal for photovoltaic self-consumption installations where a conventional controller may struggle to correctly read and compensate the cos φ.

It is also suitable for installations requiring up to 4 cos φ targets, enabling the compensation to adapt to different needs, for instance across time slots.



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Medium Voltage
Reconnection Safety

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Specifications

AC power supply

Installation category	CAT III 300 V
Consumption	13 ... 20 VA
Frequency	50 ... 60 Hz
Nominal voltage	100 ... 520 V ~

Mechanical characteristics

Size (mm) width x height x depth	144 x 144 x 71 (mm)
Envelope	Plastic V0 self-extinguishing
Fastening	Panel
Weight (kg)	0,6

Environmental characteristics

Protection class	IP 51 (Front), IP 31 (unmounted)
Relative humidity (without condensation)	5 ... 95%
Storage temperature	-20 ... +70 °C
Working temperature	-10 ... +55 °C

Current measurement circuit

Nominal current (In)	.../5A ó .../1A
Phase current measuring range	1 ... 120 % In
Minimum current measurement	50 mA

Voltage measurement circuit

Installation category	CAT III 300 V
Sampling frequency	45 ... 65 Hz
Input impedance	660 kΩ
Frequency measuring range	45 ... 65 Hz
Voltage measuring range	20...300 V Ph-N , 35...520 V Ph-Ph
Nominal voltage	230 V Ph-N, 400 V Ph-Ph
Minimum measurement voltage (Vstart)	20 V F-N, 35 V F-F

Standards

Electrical safety, Maximum height (m)	2000
Standards	IEC 61010, IEC 61000-6-2, IEC 61000-6-4, Medidas conforme a : IEC 61557-12

User interface



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LED	4 LED
Keyboard	Capacitive, 5 keys
Display type	LCD Custom COG

Digital inputs

Input/output insulation	Optoisolated
Type	Potential-free contact

Leakage current measurement (ID)

Minimum current measurement (Istart)	10 mA
Measurement range	0,01 ... 1,5 A

Digital relay outputs

Quantity	14 (12 salidas, 1 ventilador, 1 alarma)
Maximum current	1A
Maximum open contact voltage	1 kV
Electrical life	30 x 10^3 ciclos
Mechanical life	5 x 10^6 Cycles
Maximum switching capacity	2500 VA

Digital transistor outputs

Type	NPN
Maximum current	50 mA

Measurement accuracy

Phase current measurement	0.5% ± 1 digit
Reactive energy measurement (kvarh)	Class 1
Reactive power measurement (kvar)	1% ± 2 digit
Active energy measurement (kWh)	Class 1
Active power measurement (kW)	0.5% ± 2 digits
Phase voltage measurement	0.5% ± 1 digit

Serial communication

Protocol	Modbus RTU
Technology / Type	RS-485

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CODE	TYPE	Power supply	Measurement Range (V)	Input current	Switching unit	IΔn (A)	Nr steps	Alarm relay	Communications
R13882.	Computer PV 12	100...520 Vac	20...300	.../5A | ... /1A	Contactor	yes	12	Yes	RS-485



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Dimensions

Connections

