

PV-Monitor-M Photovoltaic monitoring datalogger



Description

The **PV-Monitor-M** is an energy management device designed to monitor instantaneous self-consumption from photovoltaic installations. To this end, it comprises an inbuilt datalogger, web server with **Embedded PowerStudio** and a SCADA application.

The device provides real-time information on photovoltaic production, energy savings and consumption in a building, home, company, etc. , as well as storing historical data for periodic analysis.

It is also equipped with a MET probe to measure the PV module's solar radiation, plus its ambient and surface temperatures , the data obtained being used to calculate the installation's performance.

The **PV-Monitor-M** offers the following advantages:

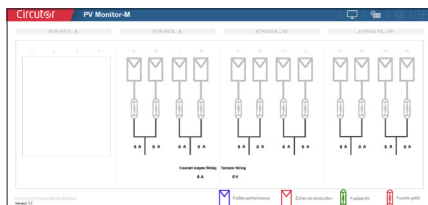
- Detection of low performance ratio (yield index) in the PV installation
- Instantaneous energy balance of consumption compared to PV generation
- Self-consumption percentage calculation for the current month (solar fraction)
- General alarms in the PV installation to notify of any anomalous operation (e-mail alerts)
- Reduction in energy consumed from the electrical network
- Reduction in CO₂ emissions released into the atmosphere

Applications

- Photovoltaic installations for self-consumption (with or without injection into the electricity grid)
- Remote energy balance monitoring and recording system (with or without injection into the electricity grid).



PV-Monitor-M - Main screen

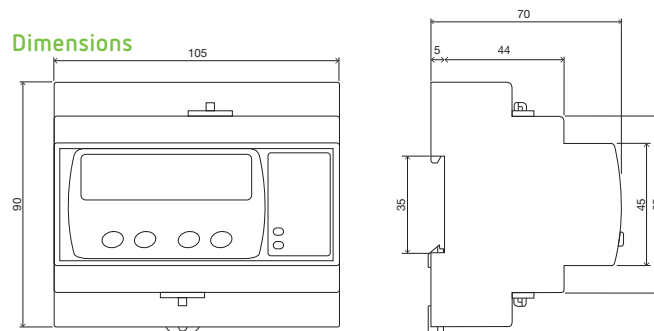


PV-Monitor-M - Strings status screen

References

Type	Code	Description
PV-Monitor-M	E8110.*	Datalogger for monitoring photovoltaic installations , with meteorological monitoring included
* 1 = Spanish / 2 = French / 3 = English Examples: E81001 = Spanish / E81102 = French		
Accessories		
CDP-0	E51001.	Dynamic power controller
RT-N150	EX0056.	Router
TRH16-RS485	E80005.	Multi-channel DC voltage and current analyser for photovoltaic strings
M/TR-25 x2	M80010.	Measurement module for 2 current circuits
M/TR-25 x4	M80011.	Measurement module for 4 current circuits
MET-485	EX0095.	Radiation, ambient temperature and PV module temperature sensor
PS-12	M60413.	MET probe power supply

Dimensions



PV-Monitor-M

Photovoltaic monitoring datalogger

Technical specifications

Power circuit	Power supply voltage	85... 264 V _{a.c.} / 120 ... 374 V _{d.c.}
	Frequency	47... 63 Hz
	Maximum Consumption	5... 8 VA
Output Characteristics	Type	Relay
	Number	6 Outputs
	Maximum operating power	740 VA
	Maximum operating voltage	250 V _{a.c.}
	Maximum switching current	5 A with resistive load
	Electrical life (250 V _{a.c.} / 5 A)	3 x 10 ⁴ operations
	Mechanical life	2 x 10 ⁷ operations
Input characteristics	Type	Opto-isolated voltage free
	Number	8 inputs
	Maximum activation current	50 mA
	Insulation	1500 V
Display	Backlit LCD	Configurable
Physical characteristics	Box material	Self-extinguishing V0 UL94 plastic
	Protection degree	IP 51
	Dimensions (mm)	105 x 70 x 90 mm (6 modules)
	Weight	280 g
Environmental conditions	Operating temperature	-10°C ... 60°C
	Humidity (without condensation)	5... 95% (without condensation)
	Maximum height	2000 m
Network interface	Type	Ethernet 10BaseTX
	Connector	RJ-45
	Network protocols	HTTP / Modbus / RTU
	Connector	RS-485
Server	Integrated Web and XML server	
Memory	Type	Internal
	Size	256 MB
Series interface	Type	RS-485 three wires (A/B/S)
	Transmission speed	4800, 9600, 19200, 34800, 57600, 115200 bps
	Data bits	8
	Parity	No parity, odd, even
	Stop bit	1 / 2
	Safety	Designed for CAT III 300/520 V AC installations according to EN 61010. Protection against electric shock by class II double insulation
Standards	IEC 60664, VDE 0110, UL 94, EN 61010-1, EN 55011, EN 61000-4-3, EN 61000-4-11, EN 61000-6-4, EN61000-6-2, EN 61000-6-1, EN 61000-6-3, EN 61000-4-5	

Connections

