SD05

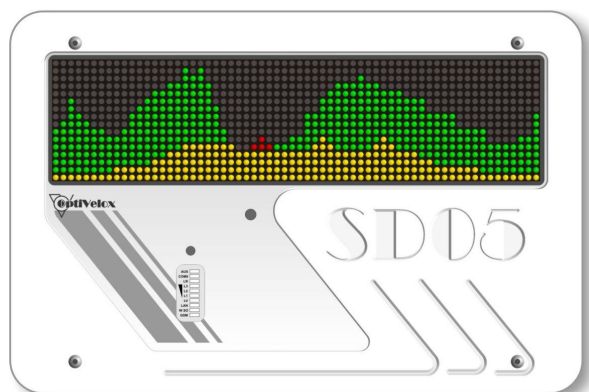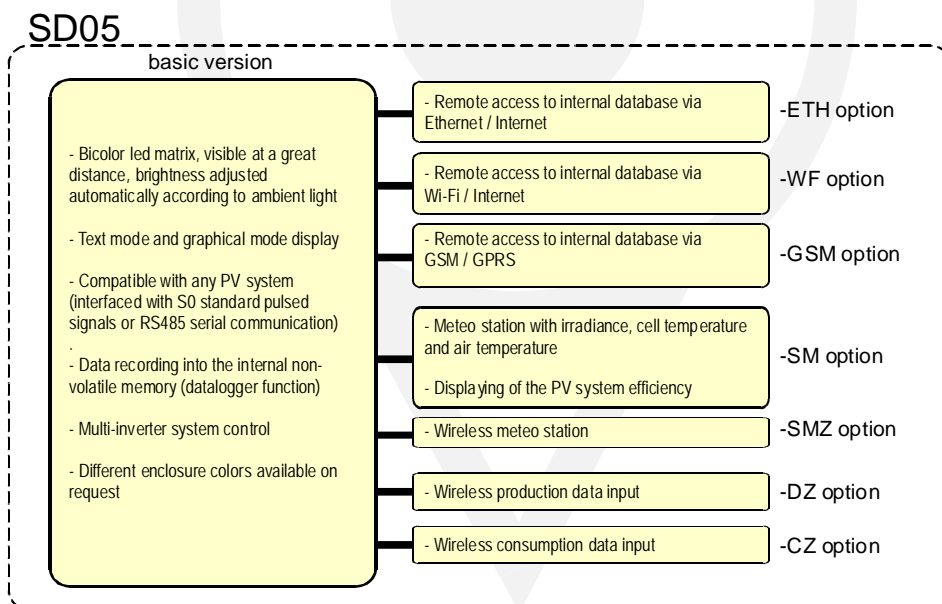## Visualization & control system for PV plants

The SD05 unit belongs to the SmartDisplay product line, a series of intelligent displays characterized by the presence in a single device of advanced features as datalogging, alarm and remote control. SD05 uses its bicolor led matrix to visualize the main variables of a photovoltaic system and at the same time it is able to store data, making them externally available via standard communication interfaces.
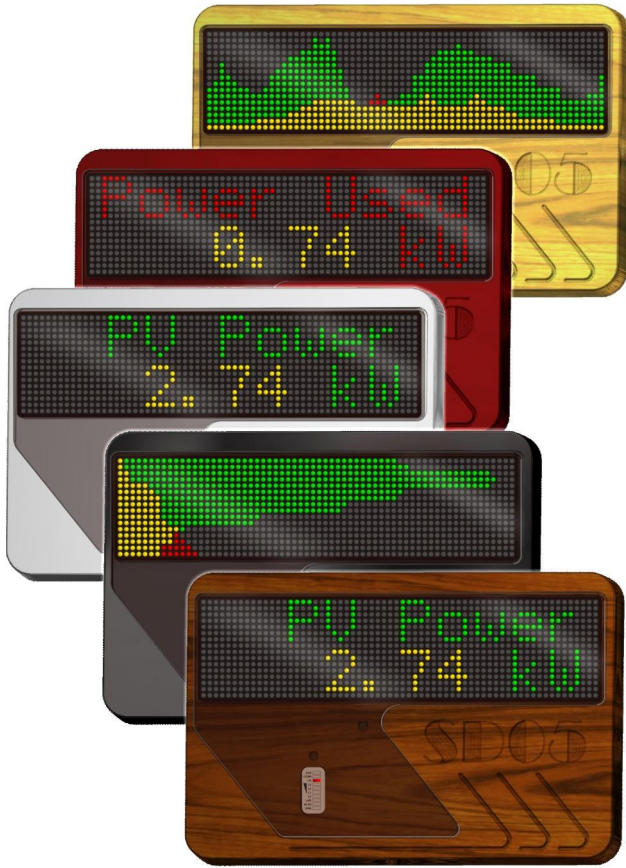
The graphic mode allows you to have an immediate feedback on the production and consumption of energy; which allows to optimize the temporal distribution of grid loads and save on electricity bills. SD05 can also send messages in case of poor performance of the PV system.

SD05 can easily be applied to any existing photovoltaic plant; it is sufficient to use a simple standard pulse signal generated for example by an energy meter. Alternatively SD05 can read the production data via a RS485 serial interface directly from one or more inverters (1) or via ZigBee wireless link.

The block diagram below shows the main functions of the SD05 unit depending on the requested options:

SD05

basic version

- Bicolor led matrix, visible at a great distance, brightness adjusted automatically according to ambient light

- Text mode and graphical mode display

- Compatible with any PV system (interfaced with S0 standard pulsed signals or RS485 serial communication) .

- Data recording into the internal non-volatile memory (datalogger function)

- Multi-inverter system control

- Different enclosure colors available on request

Function	Option
- Remote access to internal database via Ethernet / Internet	-ETH option
- Remote access to internal database via Wi-Fi / Internet	-WF option
- Remote access to internal database via GSM / GPRS	-GSM option
- Meteo station with irradiance, cell temperature and air temperature / - Displaying of the PV system efficiency	-SM option
- Wireless meteo station	-SMZ option
- Wireless production data input	-DZ option
- Wireless consumption data input	-CZ option

(1) Note: the list of inverters supported by the SmartDisplay family is under upgrading, see the website for the latest version.

Technical specifications

VALUES DISPLAYED
Chose among: power production, power production peak (last 24h), total energy produced, partial energy produced (last 24h), CO_2 saved, BEP saved, TEP saved, income, number of production days, irradiance, cells temperature, air temperature, global efficiency, power consumption

DISPLAY MODE
Automatic scan or manual settings (IR remote)

METEO DATA INPUT
RS485 interface or ZigBee wireless link

PRODUCTION POWER/ENERGY DATA INPUT
Standard pulse interface (S0 DIN 43864 / class A IEC 62053-31) or RS232/485 interface or ZigBee wireless link

CONSUMPTION POWER DATA INPUT
ZigBee wireless link

DATALOGGER ACCESS
USB / ETH / Wi-Fi / GSM interfaces

DISPLAY
64x16 bicolor led matrix, ~10 m visibility

BRIGHTNESS ADJUSTMENT
Pre-selectable via software or automatically set according to the environmental light

POWER SUPPLY
4.5...5.5 Vdc
2 W (typ)
< 0.1 W (sleep mode)

TEMPERATURE RANGE
-10°...55°C operative (RH max 85% at 25°C)
-20°...60°C storage

DEGREE OF PROTECTION
IP20

DIMENSIONS
300 mm x 200 mm x 31 mm
276 mm x 185 mm x 36 mm (SD05E)

MECHANICAL STRUCTURE
Aluminum
Wood (SD05E)

WEIGHT
~900 g

With the supplied IR remote, you can change the display mode at any time, from anywhere in the room

Ordering codes:

SD05 - ☐ - ☐

	Enclosure color
LW	Light Wood
DW	Dark Wood
B	Black
W	White
R	Red
X	Custom

The unit is available also in ECO version with a valuable solid wood enclosure (SD05E)

	Options
ETH	Ethernet remote access
WF	Wi-Fi remote access
GSM	GSM/GPRS remote access
SM	Meteo Station (RS485)
SMZ	Meteo Station (wireless)
DZ	Wireless production data input
CZ	Wireless consumption data input

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