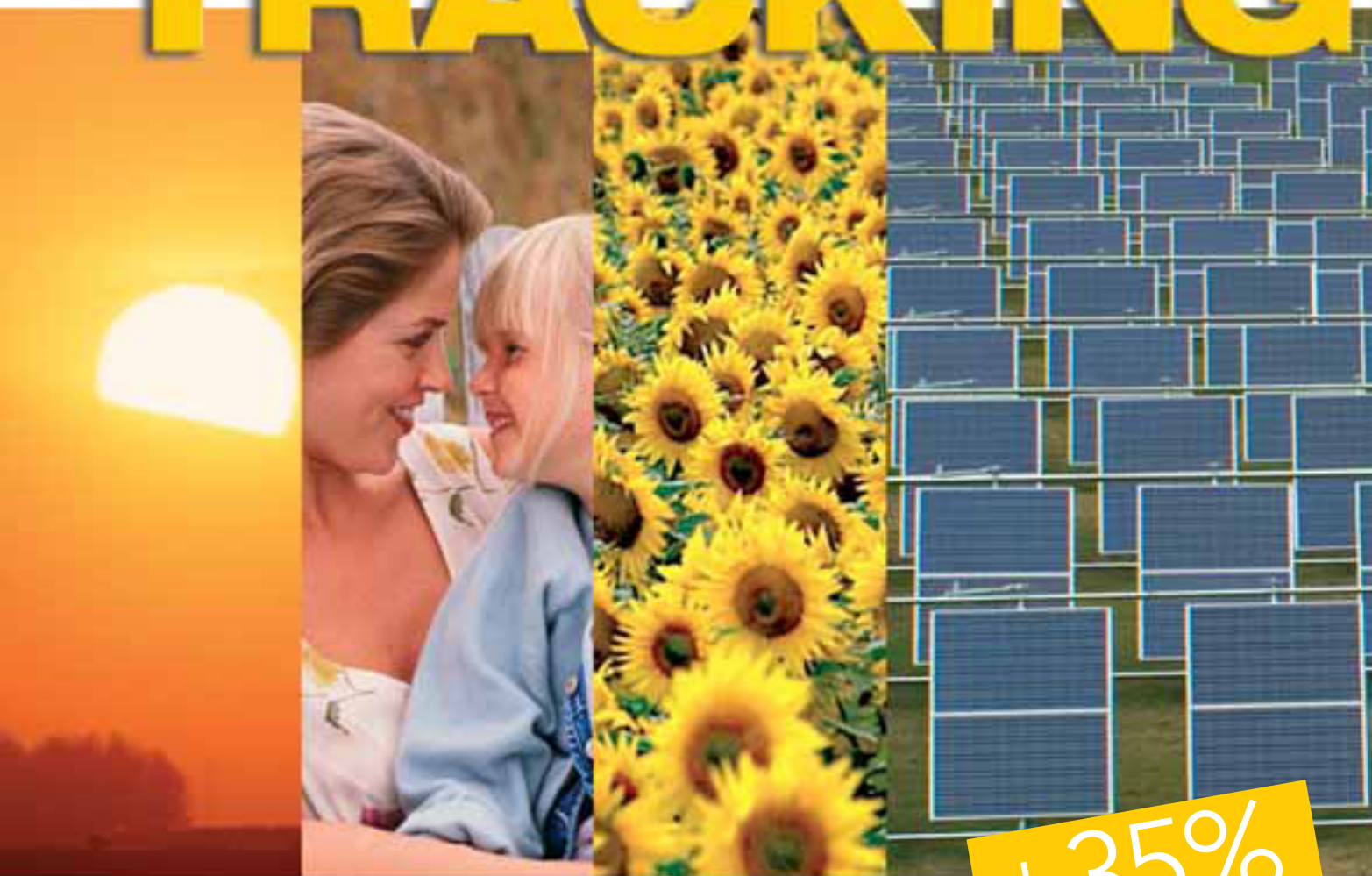


# TRACKING



+35%

Bi-axial  
solar tracking  
system





Solar+

# TRACKING



is SOLAR PIÙ's integrated solar tracking system.

This is an innovative technology that permits substantially upgrading the performance of any solar power system, both photovoltaic (for the production of electricity). Adaptable to any type of photovoltaic panel (both in size and weight)

## Perfect positioning

The fixed panels mounted on the ground or on roofs are only perfectly positioned for a few hours during the course of the day. Our integrated solar tracking system automatically changes the angle of the solar panels to favour better irradiation and ensure system optimisation.

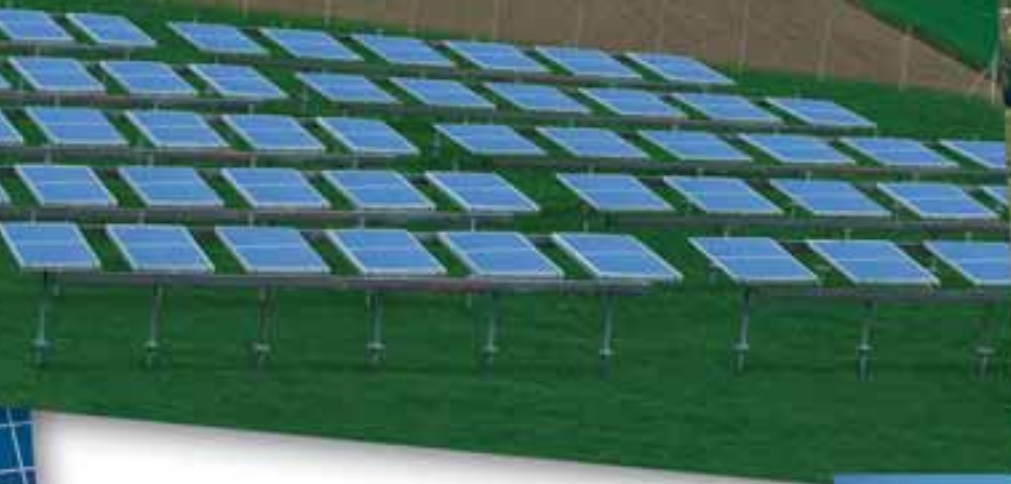


## 2-axis movement

SOLAR + moves automatically on 2 rotation axes, always positioning the solar panel perpendicular with respect to the sun. This way, average annual increases in the production of electricity of up to 35% can be obtained. Output increases even further during reduced-sunlight hours, when traditional systems normally produce less electricity.

## Advantages of photovoltaic solar energy

- Clean energy.
- Free energy.
- Production of a much greater quantity of electricity. + 35% compared to traditional systems.
- In the winter period, the increase is much higher than average with respect to a traditional system.



## An excellent investment

The installation of a solar tracking system permits buying the electricity to be used in coming decades at a fixed and constant price.

## 5-year warranty

All Solar+ products are covered by a 5-year warranty, which on request can be extended to 20 years.



# Supervisor Remote Control (Touch Screen LCD 3.8")

The remote control consists of:

- Micro-controller unit
- 3.8" LCD with "touch screen"
- Non-volatile EEPROM and FLASH memory
- Real Time Clock
- 2 serial interfaces rs232, rs485
- Buffer battery

Each supervisor controls through a circuit communication maximum 12 routers (144 trackers). This configuration permits reaching any router even though just one section of the network is interrupted or short-circuited.

Controls any communication towards a PC and GPRS modem

Controls the wind alarm, arranging the movement of the trackers so as to ensure safe operation.

Update the tracking tables stored in the routers

Display the data from the anemometer and then start protection

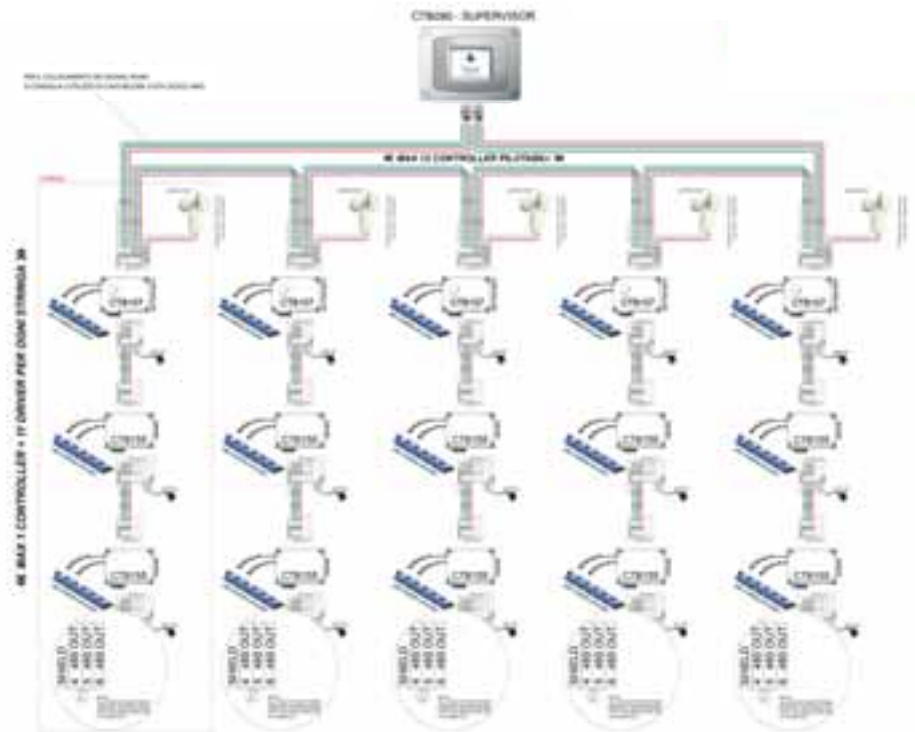
Display alarms coming from the trackers

Move any tracker within the circuit

More any tracker for snow alarm

Display of tracking data

Ongoing interrogation with supervisor (slave). This function allows the slave to take control of the network if the supervisor (master) stops operating.



## Characteristics of the SOLAR+ bi-axial tracker

Each SOLAR + modular tracking system consists of two to six PV panel carrying bi-axial supports for a maximum configuration of 12 Pv panels, of a power unit positioned on a tracker support for controlling the AZIMUT and TILT actuators, plus a ROUTER control unit that can pilot up to twelve tracking systems which is configured on an anemometer for wind alarm.

## Characteristics of CONTROLLER

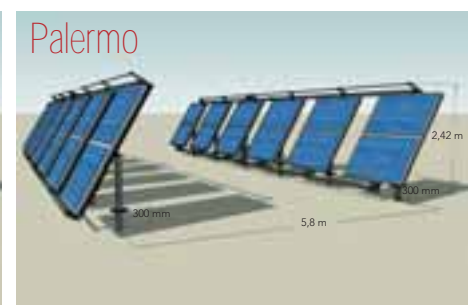
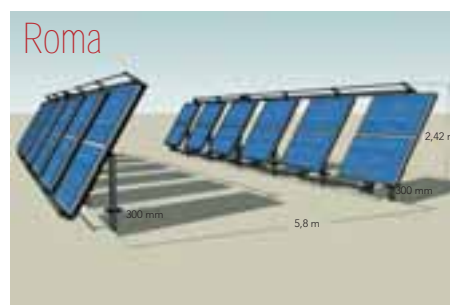
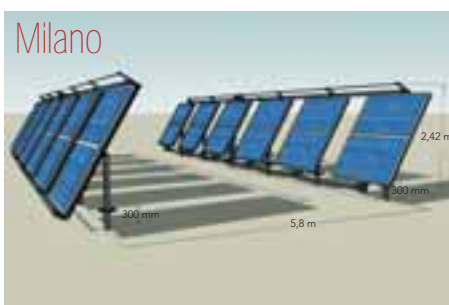
Unit controlling up to a maximum of twelve tracking systems. It features an EEPROM and FLASH memory, in which the tracking table is stored. It also features a real time clock, buffer battery and buzzer.

The router unit can control the weather column.

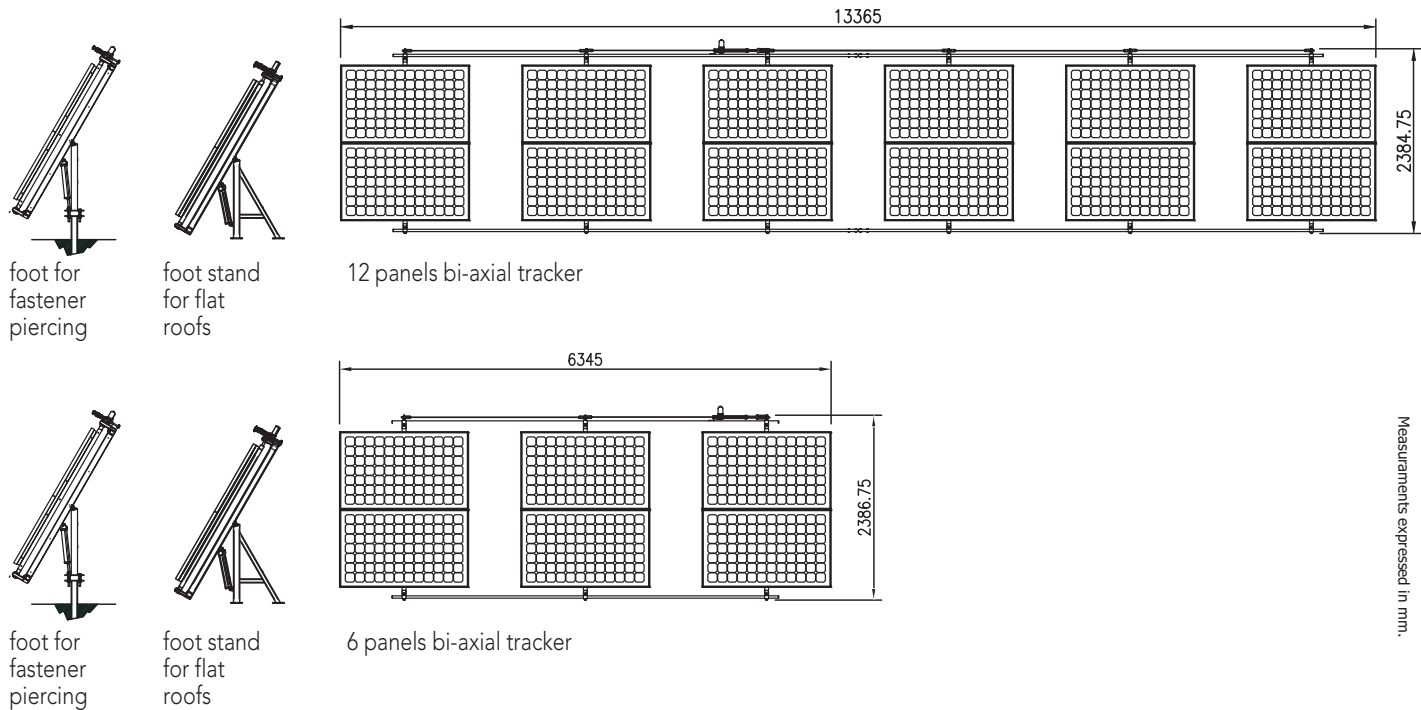
The unit features two buttons and two LEDs for performing the following functions:

- Engaging and disengaging the automatic tracking mode of the connected trackers
- Selecting a specific tracker
- Moving the selected tracker
- Checking the condition of the tracker (checking any alarms)

## Cone shadow



# Dimensions and overall dimensions for ground and flat-roof bi-axial



## Accessories

### Safety protection

Thanks to the safety installations (anemometer, system discharge snow, dedicated protection software) our system is self-protected against accidents caused by bad weather. - if excessive wind speeds are detected, the system automatically takes up a safety position.



### Remote Control

Solar+ is ready for a remote-control system that permits monitoring the state of the system at any time. To connect the remote control, a wireless system can be used.



### Software

Our modular solar tracking system features easy and intuitive software. The easy-to-understand interface favours ease of use and programming. By setting just a few data, a calculation algorithm integrated in the electronics obtains a yearly sun exposure map which, in a fully independent way, aligns the solar panels at the best angle.



### Remote Wireless Control

Remote-control system operated by means of GPRS modem. Permits dialoguing in wireless mode with the Solar+ control system.



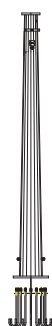
# Vela Solar+

Vela Solar+ is a sun tracking system that moves on two axes. The system is supplied complete with control electronics and anemometer.



## Technical features

Modello	SOLAR+ 35	SOLAR+ 40	SOLAR+ 60
Tracking technology	2 axes	2 axes	2 axes
Installed power	from 2,5 to 5 kWp	from 5,1 to 6,5 kWp	from 6,6 to 10 kWp
Max module surface area	max. 30 m <sup>2</sup>	max. 40 m <sup>2</sup>	max. 60 m <sup>2</sup>
Ground angle	max. 10°	max. 10°	max. 10°
Work area	> 30 mq	> 40 mq	> 60 mq
Positioning precision	max. ± 1°	max. ± 1°	max. ± 1°
System operation in windy conditions	≥ 13 m/s	≥ 13 m/s	≥ 13 m/s
Max resistance to wind speed	35 m/s	35 m/s	35 m/s
Safety position	Electro-mechanical 0° tilt	Electro-mechanical 0° tilt	Electro-mechanical 0° tilt
Weight (without pole, profiled bars, PV panels)	525 kg	620 kg	670 kg



### Support poles

#### standard version

Octagonal-shaped poles made of galvanised steel including tie-flanges

- h. 3 mt
- h. 5 mt
- h. 7 mt
- h. 9 mt

### Supply unit - optional

On request, Vela Solar+ can be equipped with emergency supply unit with batteries.



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