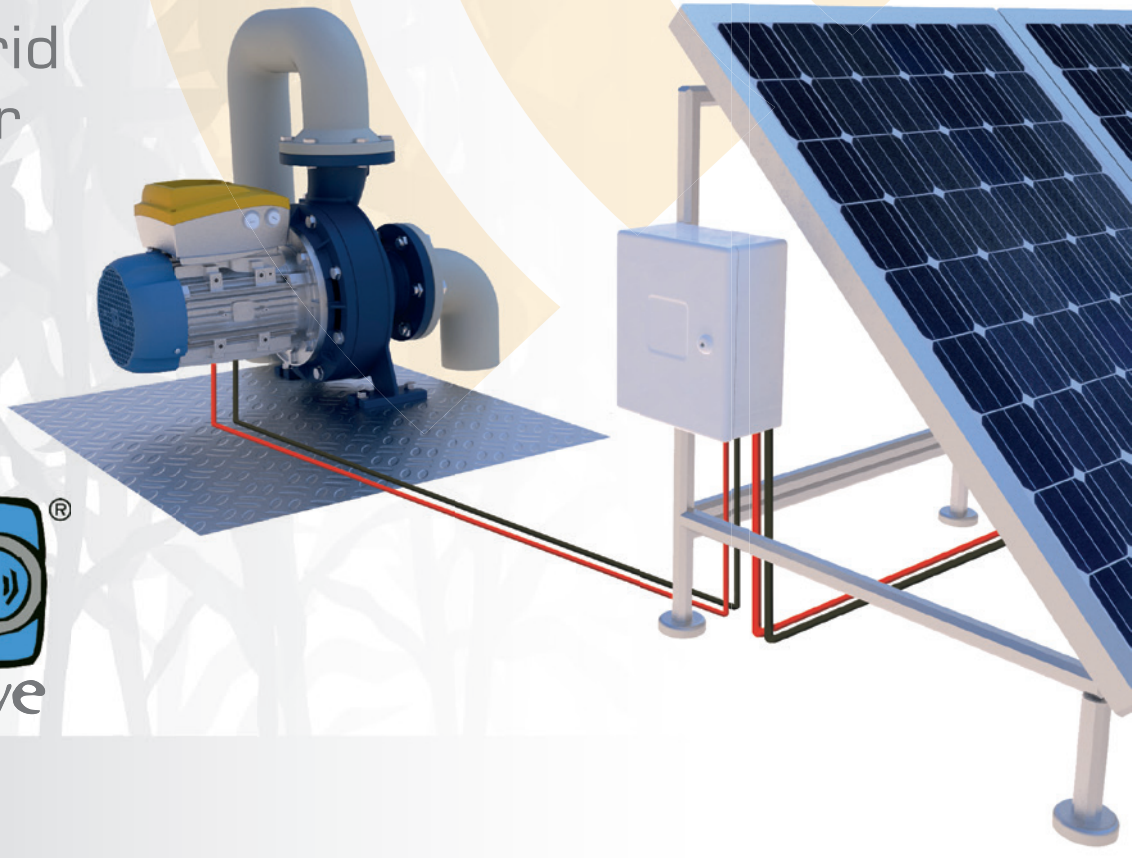
NEO-SOLAR

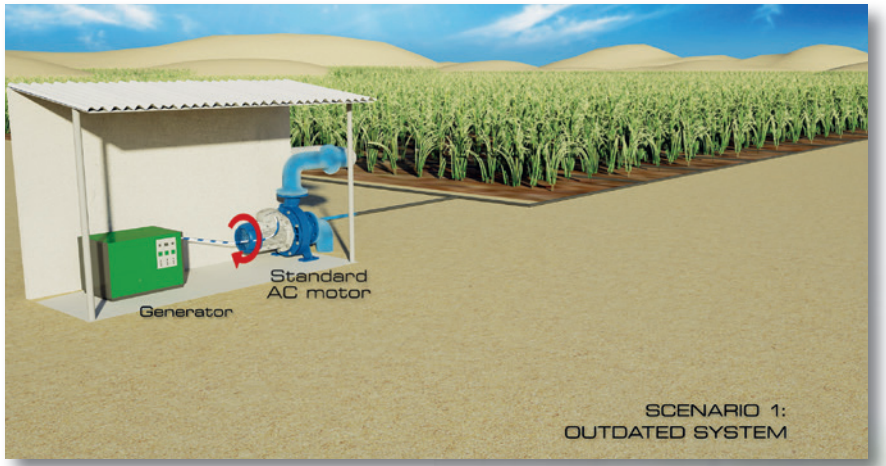
island or hybrid drive for solar pumps and motors

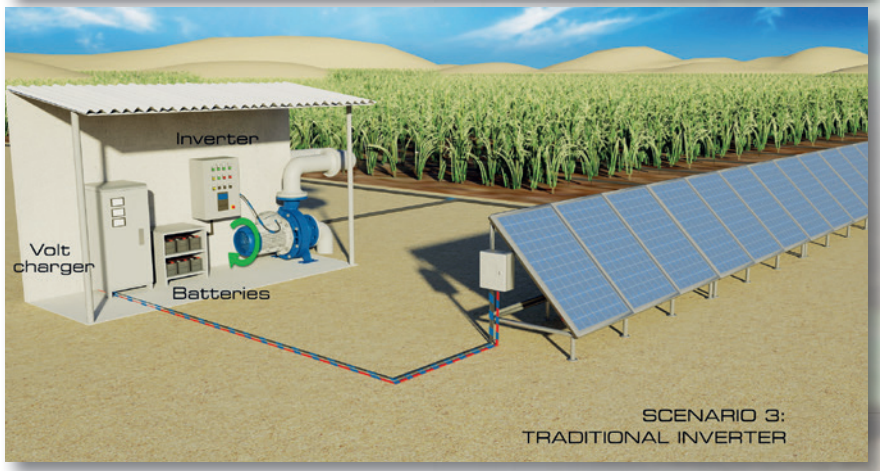


motive®

Before **NEO-SOLAR**,

there were 3 normal scenarios:



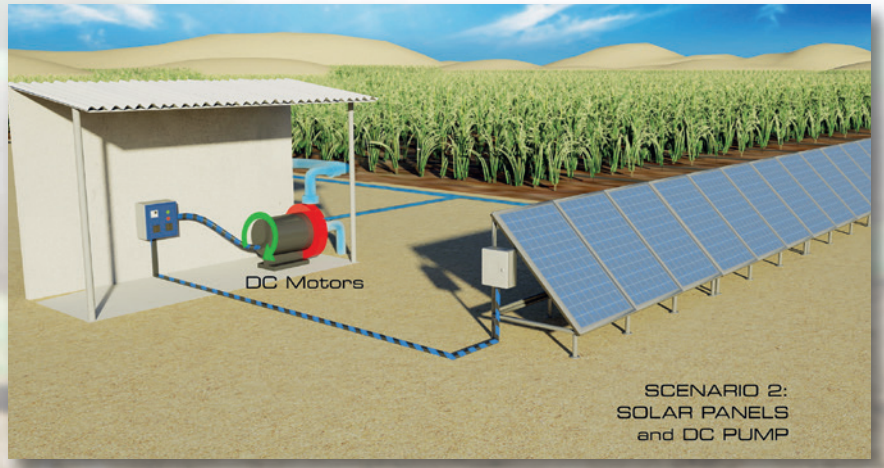


Know NEO-SOLAR on
https://www.youtube.com/watch?v=zjJV6oSiLDA

SCENARIO 4: NEO-SOLAR

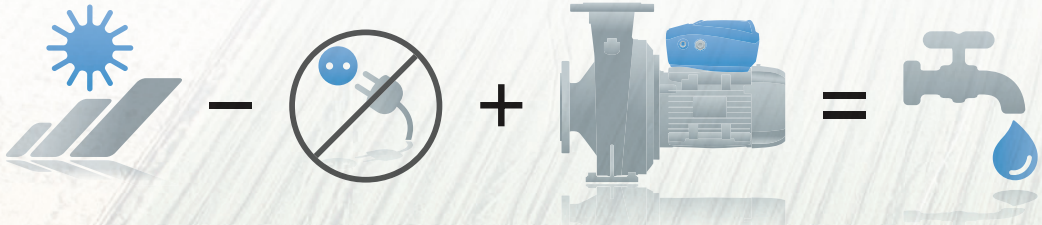
Compared to DC solar pumps, **NEO-SOLAR** offers the following advantages:

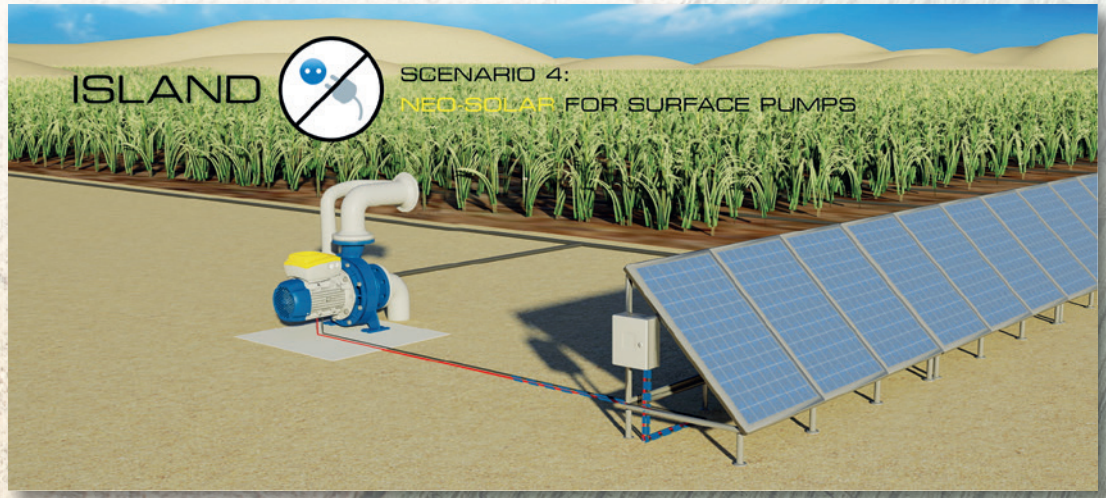
- It can work with a wider number of pumps that are already installed, since these are normally with AC motors, without any need to replace the pump. AC motors are in fact the most used on pumps, they are more economic and they can reach premium efficiencies (IE3).
- The installation and the maintenance of these systems is known and accessible for all technicians worldwide.
- Compared to DC pumps the current is lower, the cables are of thinner section, and there are less cable losses.
- It is possible to connect the pump at the same time to solar panels and to the net or a generator, to make it work when the sun is not enough or during the night (HYBRID).
- Higher max power, up to 11kW.



NEO-SOLAR can work in 2 ways, **ISLAND** and **HYBRID**.

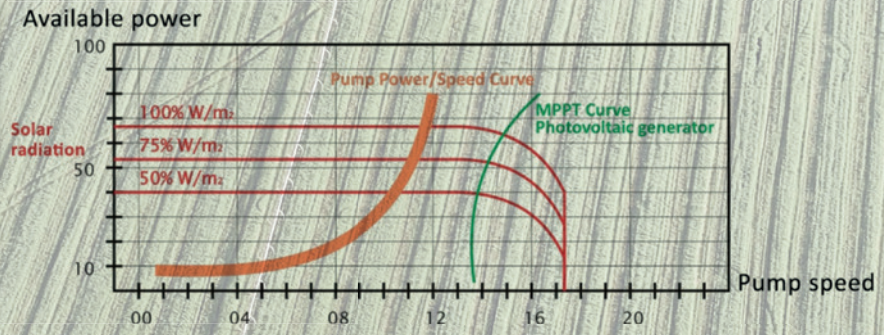
1. ISLAND





NEO-SOLAR MSPT (Maximum Speed Point Tracker) SW is a better solution compared to the traditional MPPT (Maximum Power Point Tracker) to achieve maximum results from a pump.

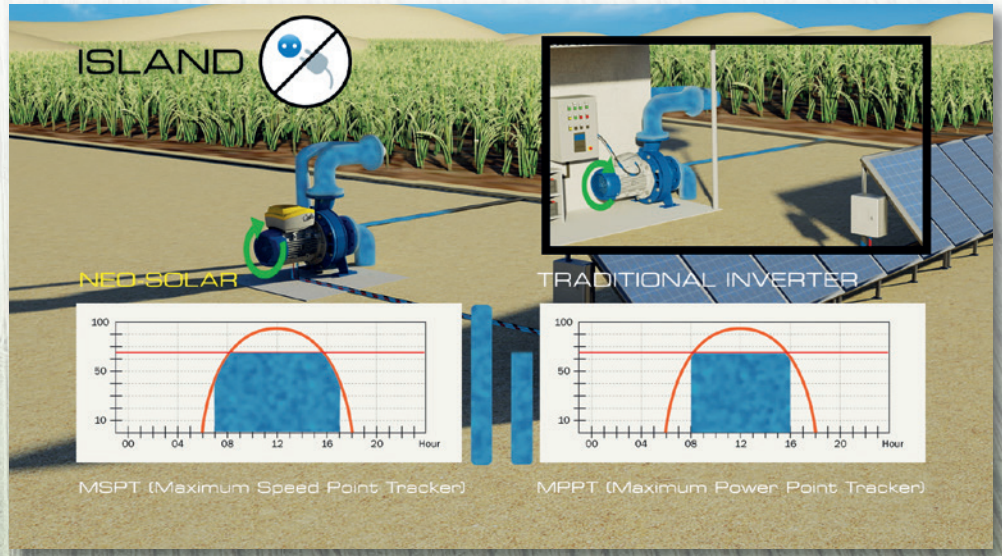
In fact, the purpose of the MPPT system is to constantly find a compromise between current and voltage, in order to store the extracted power, part of which, with such voltage and current values, if used to power a motor, would be useless for its operation. It is obvious that to make the pump work properly, its characteristic curve must operate within such a limit, leaving an operating margin in terms of available voltage and current.



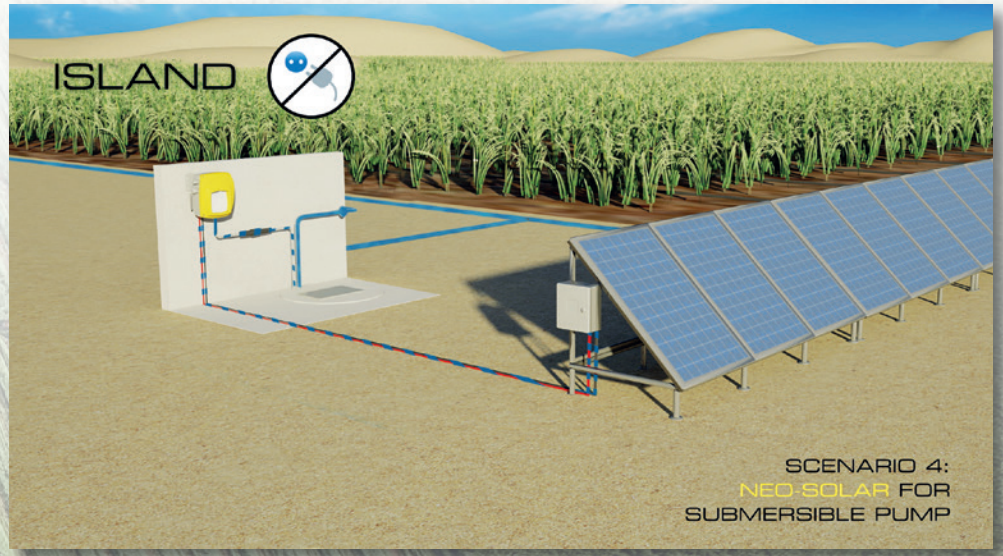
The MPPT is not an operating area for the motor and the use of this power extraction system could unnecessarily limit the delivery of current or voltage to the motor.

NEO-SOLAR MSPT improves current delivery to the motor and is therefore more suitable for the final objective, which is to have sufficient energy to maximize m^2/h prevalence throughout the day.

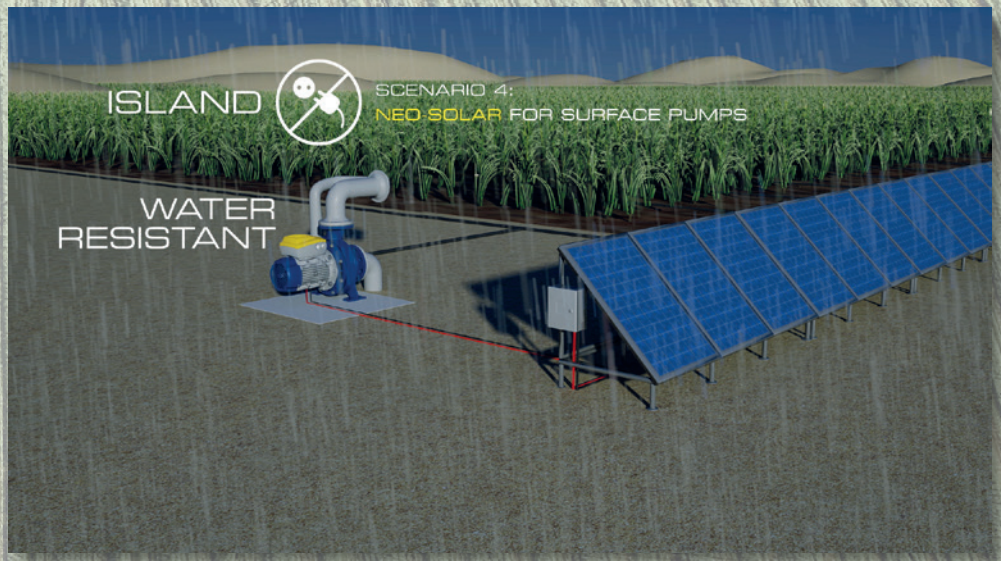
NEO-SOLAR MSPT vs traditional MPPT

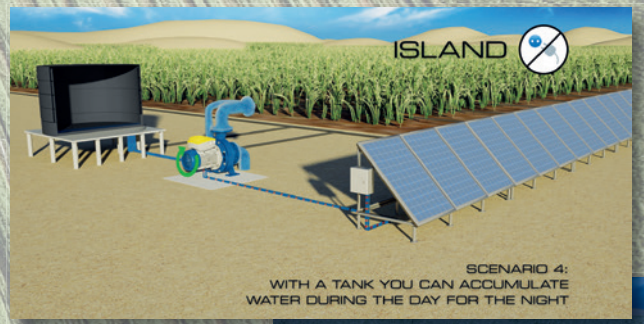


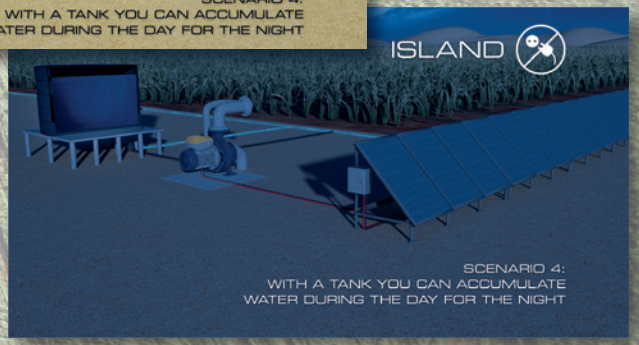
It can be mounted on a wall when connected to submersible pumps



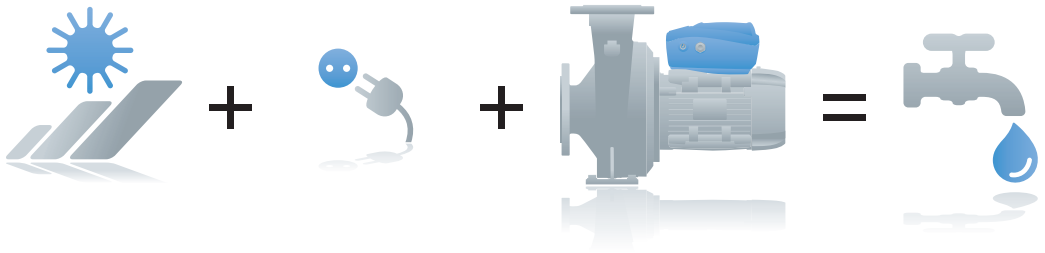
NEO-SOLAR is IP65







2. HYBRID



It is possible to connect the pump at the same time to solar panels
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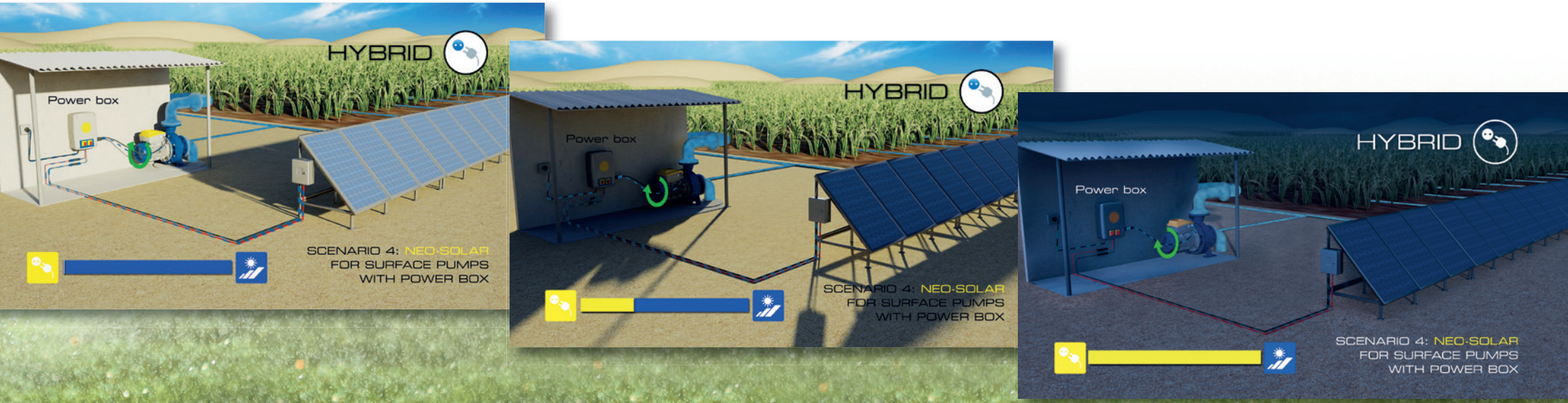

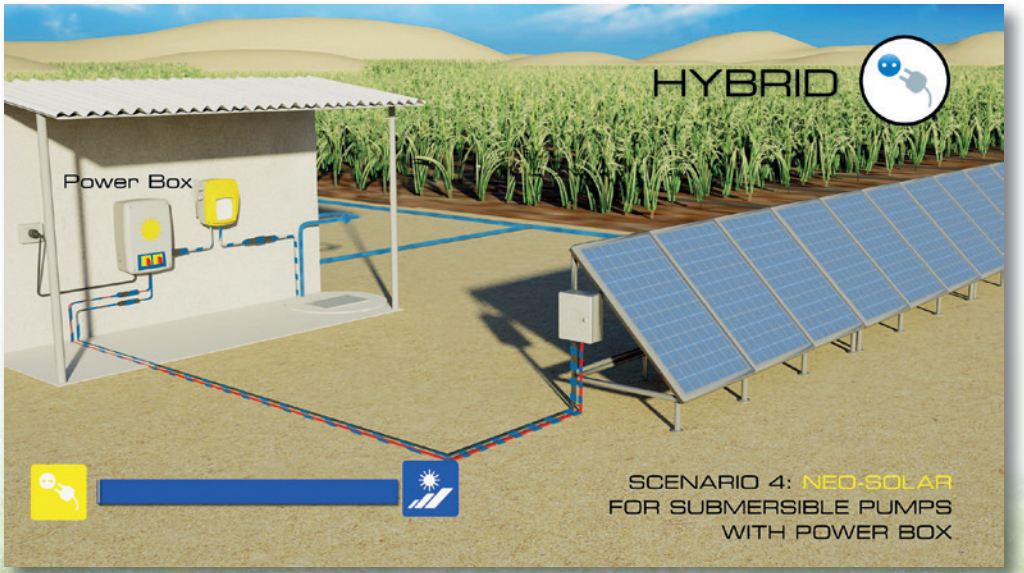

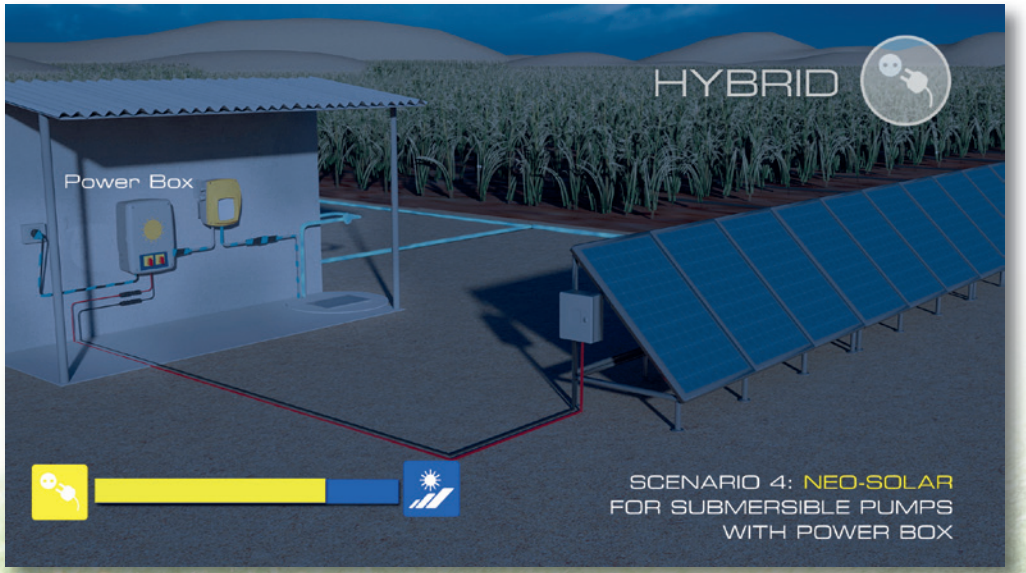

In systems where it is required to work only at a constant BAR pressure controlled by a pressure sensor, the programming menu of **NEO-SOLAR** permits to select also such alternative working way.

Motive Solar Utility:
It calculates the correct photovoltaic generator sizing and choses the right NEO-SOLAR for you after that you input some info like the panels data, max temperature, motor power, etc.

Only for Android

1. Download the APP from play-store or Google play
2. Digit "Motive Solar"
3. Click on Motive Solar Utility icon

Physical quantity	UOM	NEO-SOLAR-3kW	NEO-SOLAR-11kW
NEO protection degree		IP65	
Min starting voltage (from solar panels)	V	250Vdc	
Stop voltage (from solar panels)	V	170Vdc	
Max voltage (from solar panels)	V	650Vdc	
Motor rated voltage and frequency	V Hz	3PH 190-460Vac +/- 5% 50/60Hz	
Supply frequency to motor	Hz	20-110%	
Max output current from NEO-SOLAR to motor	A	7	22

Further characteristics	NEO-SOLAR-3kW	NEO-SOLAR-11kW
Programmer with built-in clock and battery (to make it possible to plan starts and stops)	NO	YES
Communication Protocol	MODBUS	MODBUS
MSPT working, to reach the max water quantity permitted by the sun	YES	YES
Constant pressure working	YES	YES
Programmable by motive wifi keypad	YES	YES
Programmable by PC	YES	YES
Programmable by smartphone/tablet	YES	YES

Download the technical manual from
http://www.motive.it/manuali/manuale-NEOSOLAR-eng.pdf

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