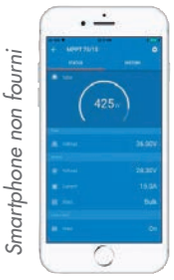
SOLAR PUMPING STATION

EDUCATIONAL OBJECTIVES

- **Apprehend a photovoltaic system dedicated to the power supply of a water pump.**
- **Perfom measurements of electrical parameters.**
- **Analyze and interpreting results.**
- **Perform wiring tests with commissioning and operation validation.**
- **Studying the efficiency and impacts of solar panels positioning**
- **Studying a solar charge regulator.**

TEACHING RESOURCES STUDENT & TEACHER



Bluetooth®

Requires download in Play Store or Apple Store the free application "Victron Energy".
Display on tablet or Smartphone:
- Voltage – Current of the panel / Power (W)
- Voltage – Current of the battery / Charge current
- On-Off state charge

Educational solar pumping station simulating the water supply of a population in a desert area.

Comprises

- 1 photovoltaic solar panel 200Wc mounted on a robust frame that tilts from 5° to 70°.
  Open circuit voltage: 57V DC.
  Optimum operating voltage: 47V DC.
  Short-circuit current: 4.6A.
  Optimum operating current: 4.3A.
- 1 30m. link cable.
- 1 100-l tank simulates the underground water source.
- 1 60-l transparent container acts as water reserve.
  A tap simulates user consumption and returns water to the tank.
- 1 sealed motor pump 140W- 24DVC-6A. 13l/min capable of pumping dry. It takes water from the tank and fills the reserve water container.
- 2 12V/6Ah batteries supply the pumping station when sunlight is absent.
- 1 24VDC-15A Bluetooth® regulator controls battery charging. One 2-button display accessible outside the cabinet enables configuration and viewing of the currents of the solar panel, the battery charge and the lamp and the battery voltage.
- 1 electrical cabinet includes the cabling of all the solar components on connection terminals. A lightning arrester protects the installation and each component is protected by fused circuit-breaker type gPV. The cabling is fully marked and students can easily remove the original strand to do their cabling.
  Students can also take voltage and current readings. A main switch isolates the solar panel from the electrical cabinet.
- A switched 24VDC lamp lights the area.

A wheeled frame for passing under doors.
SOLPUITS requires no direct water connection. Once the 80-l tank is filled with water, the system is totally self-contained.
Supplied cabled with detailed instructions and complete practical works.
Dimensions: 750 x 670 x 1980mm. Weight 141kg.

ref. SOLPUITS	**communicating version - Bluetooth®**
ref. SOLPUITS-N Sold without panel.	**communicating version - Bluetooth®**
Use your own panels with characteristics comprises between 18 and 50VDC.	

RECOMMENDED OPTION FOR INDOOR OPERATION

ARTIFICIAL SOLAR SOURCE
Qty 1