

# Solar and Fuel Cell Power Pack for LIDAR

Solar and Fuel Cell Power Pack for LIDAR installed in a flight case and a metal frame



## Description

- Solar and methanol fuel cell based power supply for LiDAR devices
- 3 Options:
  - Solar and Fuel cell (standard)
  - Solar only (for sunny countries between 40°N and 40°S)
  - Fuel cell only (for maximum mobility)
- Customized product to meet any LiDAR model

The solar and methanol fuel cell based power supply is especially designed for LiDAR devices.

The power supply is recommended for all climates, except arctic conditions with only little hours of sunshine.

The system combines a powerful Methanol-based EFOY Pro fuel cell and 2x 460 W solar modules (optional 4x). The system is equipped with two 28 liters fuel cell cartridges.

The EFOY Pro fuel cell is equipped with an EFOY cloud web monitoring platform. Alarms, such as low fuel or low battery voltage, can be configured. Thus the system automatically informs via email or SMS in case of triggering alarms.

Further we control power supply output through an ON/OFF relay triggered on the Victron cloud.

## Specifications

Summary
Energy system enclosure, incl. assembly and wiring

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Hybrid Power Pack, including <ul style="list-style-type: none"> <li>• Flight case with 130 Ah 24V Battery,</li> <li>• EFOY Pro2800 fuel cell with FM2 fuel manager</li> <li>• 2 x 460 W Solar Modules</li> <li>• PV frame for 2 x 460 W system Unistrut steel framing with all accessories, cable extension, connectors</li> </ul>
Remote control through Victron cloud with load control to switch the power supply ON and OFF

Characteristic	Description
Total output peak power	200 W
Output voltage	24 VDC
Battery bank	130 Ah / 24 V (two Victron Lead GEL battery batteries 130 Ah/12 V each) Victron low voltage battery protector
Solar supply	
Solar supply	2 solar modules @ 460 - 490 W / 24 V (Total: 920 - 980 W) PV Solar array extension cable with MC4 connectors and splitters PV frame for 2 x 460 W system Unistrut steel framing  4 solar modules instead of 2 is possible as an option (with a Unistrut framing for 4)  Solar charger: Victron SmartSolar 150/35 charging controller
Fuel cell	
Fuel cell reference	EFOY Pro2800 fuel cell with FM2 fuel manager
Power output	125 W
Nominal voltage	12/24 V DC
Fuel cell cartridge	2 x 28 liters Methanol, M28 cartridge + FM2 adapter Fuel Sensor FS2
	Operational panel to display status Modem 4G protection box Remote monitoring set: Industrial router (no SIM card) EFOY cloud monitoring WEB platform
	<a href="https://www.efoy-pro.com/en/efoy/efoy-efoypro/">https://www.efoy-pro.com/en/efoy/efoy-efoypro/</a> (Dimensions etc.)
Nominal Methanol consumption	0.9 liters/kWh

Characteristic	Description
Classification of Methanol	Index: 603-00100-X; EINECS, ELINCS, NLP: 200-659-6; CAS 67-56-1
Operating temperature	-20°C ... +40°C
Total dimensions	Power Pack 120 x 80 x 51 cm (LxWxH) Solar Module: 100 x 200 cm (LxWxH)
Total weight	Approx. 216 kg