

Hybrid Power Solution for Remote Applications



Reliable operation



Long periods of autonomy, maintenance-free



Economical, quiet and emission-free

Reliable off-grid power is a challenge in the oil and gas industry. The EFOY Pro provides a robust and dependable solution when off-grid power is required for applications such as: SCADA, measurement/instrumentation, RF communications, surveillance and other mission critical assets.

Harsh environments such as cold weather, blowing snow, and lack of long periods of sun can reduce efficiency of a solar system causing batteries to discharge to an unacceptable level. This ultimately results in inefficient use of manpower, lost production and even damage to the critical assets. A hybrid solar EFOY solution eliminates these is-



sues and ensures that your assets run through the winter months thus protecting your batteries from being deep cycled.

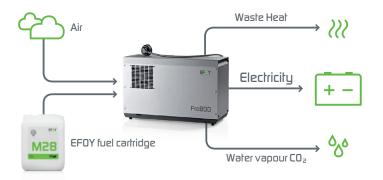
EFOY Pro Fuel Cell systems are designed to provide 12 or 24 VDC electrical power that is environmentally-friendly and operate for long periods of time without the need for refueling or maintenance. The compact EFOY Pro Fuel Cell is integrated into weatherproof outdoor boxes, in trailers or in NEMA Enclosures.

The EFOY Pro is the solution for your off-grid power needs.



EFOY Pro Fuel Cell Generators - Technology

EFOY fuel cell generators are based on DMFC (Direct Methanol Fuel Cell) technology. They use an eco-friendly catalytic process to convert methanol (methyl alcohol) into electricity in a direct and efficient process without intermediate steps. This makes this technology one of the cleanest ways of generating electricity.



DMFC fuel cell generators are the ideal energy solution for off-grid and mobile applications.

SFC fuel cell generators are smart energy producers that can be used to continuously and automatically recharge batteries. To do this, the fuel cell generator is connected directly to the battery and monitors its charge level. Depending on the demand, the fuel cell generator recharges the battery to its full capacity and then automatically switches to standby mode. There is no need for operator intervention.

EFOY Pro Fuel Cells compared to other technologies

- More power than solar and weather independent
- Longer autonomy than batteries

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EFOY

M28

Fuel cartridge

Solar cell

 More eco-friendly and economical than conventional generators

+

Battery

Consumer

Charge controller

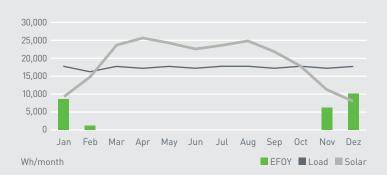
Fuel cell



The perfect solution for ensuring 100 % availability with minimum fuel consumption is the use of an EFOY Pro fuel cell generator as hybrid energy supply or as back-up for a solar power system. When the solar system is unable to deliver enough power, the fuel cell generator automatically switches on and compensates the shortfall in energy. Therefore, complex designs for large solar power systems can be avoided and the reliability of the system can be increased significantly.

EFOY Pro Hybrid Solutions deliver longterm power and compensate solar systems during winter

- EFOY Pro hybrid solutions guarantee power 24/7/365
- During summer, EFOY Pro fuel cells cover bad weather periods
- With only one M28 fuel cartridge, a 25 W SCADA application is powered over 365 days in combination with solar



EFOY Pro Energy Solutions

Off-grid power supply for extreme weather conditions down to -40 °C (-40 °F)





EFOY ProCabinet for stationary applications in remote regions

The EFOY ProCabinet is a standardized hybrid power solution fully integrated in a NEMA 3R weatherproof enclosure. The power supply includes an EFOY Pro 800 Duo or EFOY Pro 2400 Duo, M28 fuel cartridges and based on customer needs solar panels, solar charger and batteries.

- High reliability & low maintenance
- ✓ Competitive price
- Easy installation

EFOY ProEnergyBox for extreme weather conditions

The EFOY ProEnergyBox has been developed specifically for use in extreme weather conditions. The box contains an EFOY Pro 800 or 2400 fuel cell generator, a battery and EFOY fuel cartridges. Thanks to effective temperature regulation, the EFOY ProEnergyBox runs reliably in subzero temperatures as well as in high ambient temperature environments.

- 🗸 Plug & play
- Long autonomy
- Solar hybrid compatible





Extremely high energy density

Fuel cartridges	M28		
Volume	28 l (7.4 gallons)		
Weight	22 kg (48.5 lbs)		
Nominal Capacity	31.1 kWh		
Size L x W x H	370 x 285 x 395 mm 14.6 x 11.2 x 15.6 in		
Autonomy @ 20 W cont.	65 days		

Certified safety



Proven Track Record - 30,000 EFOY Fuel Cells in the Market



Reliable power solutions for Oil & Gas applications

EFOY Pro Hybrid Solutions are used to supply reliable and efficient power for fixed and mobile equipment in challenging and harsh outdoor environments.

Hundreds of Oil & Gas SCADA and surveillance sites are already equipped, throughout many countries of the world.

EFOY Pro advantages

- ✓ 24/7/365 power availability
- Remote monitoring
- Reduced installation costs
- Reduced service and operation costs

EFOY Energy Solutions	EFOY ProCabinet 4060S	EFOY ProCabinet 4120S	EFOY ProEnergyBox 4060P
Dimensions D x W x H	24 x 36 x 42 (inch) 610 x 914 x 1067 (mm)	28 x 44 x 46 (inch) 711 x 1118 x 1168 (mm)	48 x 31 x 30 (inch) 1225 x 790 x 775 (mm)
Weight (empty)	130 kg/300 lbs	236 kg/521 lbs	56 kg/125 lbs
Housing	Metal Enclosure	Metal Enclosure	Pelican Hardigg TM, box
IP-protection category	NEMA 3 R Weatherproof	NEMA 3 R Weatherproof	NEMA 3 R/IP43
Housing color	Grey		
Nominal voltage	12 V or 24 V		
Temperature range	-40 °F to +122 °F/-40 °C to +50 °C		
Configuration possibilities			
Compatible EFOY Pro Fuel Cells	EFOY Pro 800 Duo or 2400 Duo		
Number of EFOY Fuel Cartridges	max. 2 x M28	max.4 x M28	max. 2 x M28
Battery capacity @ 12 V / 24 V	2 batteries	4 batteries	2 batteries
Solar charge current (max.) @ 12 V / 24 V	20 to 60 A, subject to design		
Additional space for customer equipment (L x W x H)	Din rail available, please contact Simark Controls		
Mounting feets	optional available		

Our North American Subsidiary



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