


# Data Sheet – EFOY Pro Fuel Cells

Fuel Cells	EFOY Pro 800	EFOY Pro 800 Duo	EFOY Pro 2400	EFOY Pro 2400 Duo
Max. nominal power	45 W	45 W	110 W	110 W
Min. nominal power <sup>1</sup>	25 W	25 W	80 W	80 W
Nominal voltage	12 V dc / 24 V dc	12 V dc / 24 V dc	12 V dc / 24 V dc	12 V dc / 24 V dc
Charging current at 12 V / 24 V	max.: 3.75 A / 1.88 A min.: 2.1 A / 1.05 A	3.75 A / 1.88 A 2.1 A / 1.05 A	9.17 A / 4.58 A 6.7 A / 3.3 A	9,17 A / 4,58 A 6,7 A / 3,3 A
Recommended battery capacity <sup>2</sup> at 12 V (Lead acid, gel and AGM) at 24 V	40 to 160 Ah 10 to 100 Ah	40 to 160 Ah 10 to 100 Ah	60 to 350 Ah 30 to 175 Ah	60 to 350 Ah 30 to 175 Ah
Weight	8.0 kg / 17.6 lbs	8.3 kg / 18.3 lbs	9.0 kg / 19.8 lbs	9.3 kg / 20.5 lbs
Warranty <sup>3</sup>	24 Month / 4.500 hours	24 Month / 4.500 hours	24 Month / 4.500 hours	24 Month / 4.500 hours
Connectable cartridges (with DCS1)	1 (2)	2 (4)	1 (2)	2 (4)
Length fuel cartridge connector	70 cm / 27.6 in			
Switching threshold for automatic battery charging at 12 V / 24 V <sup>4</sup>	On: <12.3 V / <24.6 V Off: >14.2 V / >28.4 V			
Required start-up voltage at 12 V / 24 V	>9 V / >18.5 V			
Maximum battery voltage at 12 / 24 V	<16 V / <32 V			
Overvoltage protection at 24 V	>30.5 V			
Noise level (at 1m / 7m distance)	42 dB(A) / 25 dB(A)			
Nominal consumption <sup>5</sup>	0.9 l/kWh			
Quiescent current draw at 12 V	20 mA			
Operating temperature	-20 °C to +50 °C / -4°F to +122°F			
Start-up temperature	+3 °C to +50 °C / +37.4 °F to +122°F			
Storing temperature	+1 °C to +50 °C / +34°F to +122°F			
Recommended altitude <sup>4</sup>	Standard: ≤1,500 m / ≤4,920 ft (up to 2,000 m / 6,561 ft)			
Dimensions D x W x H	433 x 188 x 278 mm / 17 x 8 x 11 in			
International Protection (IP-Class)	IP 21			
Inclination along the roll axis	Permanent: max. 35°; temporary (<10 min): max. 45°			
Inclination along the lateral axis	Permanent: max. 20°			
Communication protocols	MODBUS RTU; Clear text protocol (SIO commands)			
User-Interface	At the unit or via Operating Panel OP2 with text display			
Data-Interface	RS232 RJ-45 plug for accessories (e.g. Interface adapter)			
Electrical Interface	MNL-plug 4-pins (e.g. Tyco Electronics Universal Mate-N-Lok – Nr. 350779)			
Certificates				

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Scope of delivery SET		
Standard SET Equipment	<ul style="list-style-type: none"> <li>Operating panel OP2 with cable</li> <li>Mounting plate for EFOY Pro</li> <li>Charge line for battery connection</li> <li>Fuel cartridge holder with belt</li> </ul>	<ul style="list-style-type: none"> <li>Exhaust hose</li> <li>Off heat duct</li> <li>Service fluid</li> <li>User manual</li> </ul>
Basic SET Equipment	<ul style="list-style-type: none"> <li>Service fluid</li> </ul>	<ul style="list-style-type: none"> <li>User manual</li> </ul>

Accessories <sup>6</sup>		
DuoCartSwitch DCS1	Dimensions D x W x H	174 x 119 x 96 mm / 6.9 x 4.7 x 3.8 in
	Weight	0.7 kg / 1.54 lbs
	International Protection (IP-Class)	IP 20
	Quiescent current draw	7.5 mA
GSM modem GSM-2-SMS	Dimensions D x W x H	72 x 32 x 65 mm / 2.8 x 1.3 x 2.6 in
	Weight	0.5 kg / 1.1 lbs
	Input Voltage	8 – 30 V dc
	Max. peak current	3.2 A
	Average current draw (Quiescent / SMS / GPRS)	30 / 100 / 100 mA
EFOY IP Gateway	Dimensions D x W x H	105 x 102 x 33 mm / 4.1 x 4.0 x 1.3 in
	Weight	0.3 kg
	Input Voltage	8V - 42V dc
	Average current draw	< 10 mA
Fuel cartridge sensor FS1	Dimensions D x W x H	50 x 20 x 5 mm / 19.7 x 7.9 x 2.0 in
Interface adapter IA1	Dimensions D x W x H	60 x 33 x 16 mm / 2.4 x 1.3 x 0.6 in
Cluster controller CC1	Dimensions D x W x H	149 x 77 x 270 mm / 58.7 x 30.1 x 106.3 in
	Weight	0.16 kg / 1.3 lbs
M28 adapter	Dimensions D x W x H	70 x 70 x 61 mm / 2.8 x 2.8 x 2.4 in

Fuel Cartridges	M5	M10	M28 (only with M28-Adapter)
Volume	5 litre / 1.32 US gallons	10 litre / 2.64 US gallons	28 litre / 7.4 US gallons
Weight	4.3 kg / 9.5 lbs	8.4 kg / 18.5 lbs	23.4 kg / 51.6 lbs
Nominal capacity	5.5 kWh	11.1 kWh	31.1 kWh
Dimensions D x W x H	190 x 145 x 283 mm / 7.5 x 5.7 x 11.1 in	230 x 193 x 318 mm / 9.1 x 7.6 x 12.5 in	370 x 285 x 395 mm / 14.6 x 11.2 x 15.6 in with M28 Adapter: 370 x 285 x 425 mm / 14.6 x 11.2 x 16.7 in

<sup>1</sup> Nominal power varies by ±10 %, decreases with the operation hours. Specification valid within warranty period.

<sup>2</sup> Depends on battery type and application - bigger batteries possible, if additional energy source available (e.g. solar)

<sup>3</sup> Regional warranty conditions for EFOY Pro fuel cells apply.

<sup>4</sup> Factory Setting - can be modified with Interface Adapter and PC or operating panel OP2.

<sup>5</sup> Effective consumption depends on operating conditions.

<sup>6</sup> All EFOY Pro accessories are for operating in following temperature ranges: -20 °C to +50 °C / -4 °F to +122°F