EFOY Hydrogen 2.5
EFOY Hydrogen Controller
Data sheet

The EFOY Hydrogen 2.5

The EFOY Hydrogen 2.5 is the heart of your energy solution. This is where the chemical reaction takes place and electrical energy is generated. Depending on your power requirements, you can equip your energy solution with one or up to four EFOY Hydrogen 2.5 units.

Technical Data	EFOY Hydrogen 2.5
Output power [1] (@44V)	2.5 kW
Power after 5,000 operating hours (@44V)	2.0 kW
Nominal voltage	48 V DC
Supply Voltage	41 to 57 V DC
Weight	28.5 kg
H_2 connection	1/4" NPT connector (female)
Fuel	Hydrogen H_2
H_2 consumption	0.06 kg H_2 / kWh
H_2 purity	3.0 or better
Nominal input pressure at the fuel cell	0.45 bar
Leakage rate during operation [2]	Approx. 0.35 l H_2 / min
Oxygen consumption	Approx. 335 l / kWh
Continuous consumption in standby mode	‹ 50 W
Operating temperature [3]	+ 3 °C to + 50 °C
Storage temperature	- 40 °C to 70 °C Ideal: 10 °C to 25 °C
Maximum operating altitude [4]	Up to 3,000 m above sea level
Dimensions D x B x H	With handles: 535 x 483 x 310 mm Without handles: 498 x 483 x 310 mm
IP protection class	IP 20
Data interface	Internal, between fuel cell and controller: CAN BUS

[1] With increasing operating hours and temperatures › 30 °C, the output power gradually decreases.
[2] The leakage rate increases proportionally with increasing operating hours of the fuel cell module.
[3] When installed in a suitable cabinet with integrated heating. Otherwise, a base load of 1,000 W is required.
[4] Higher altitudes may result in a reduction in power.

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All technical data at test conditions of
20 °C / 68 °F
Subject to modifications and errors
Valid from 14.02.2024

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The EFOY Hydrogen Controller

The EFOY Hydrogen Controller is the control unit of your energy solution. It controls up to four EFOY Hydrogen 2.5 units and offers interfaces for external signal transmission.

Technical Data	EFOY Hydrogen Controller
Supply Voltage	36 to 57 V DC
Energy consumption	Max. 2 A @ 48 V
Weight	6.4 kg
Operating temperature	+ 3 °C to + 50 °C
Dimensions D x B x H	With handles: 527 x 483 x 133 mm Without handles: 492 x 483 x 133 mm
IP protection class	IP 20
Internal data interface	Between fuel cell and controller: CAN Bus • 2 x RJ 45 connector on the back
External data interfaces: Connector/communication	RJ 45 connector on the front with following interface: • Ethernet for web interface Sub-D connector with following interfaces • MODBUS RTU protocol via RS 485 • Potential-free alarm contacts • External stop signal • Rectifier voltage reduction • Heating / ventilation • 24 V supply of external components

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