

IE-Lift™ specification

Preliminary

Performance	Rated net power ^{1,2}	1.2kW @ >24V
	Output voltage ³	21 to 58V via factory configuration parameters. Typically for use with 24, 36 or 48V battery. User configurable for -ve, +ve or floating earth Voltage regulation to ETS 300-132-2 @ 48V
	Rated current	50A max @ <24V, 25A @ 48V
	Emissions	Water vapour in warm exhaust air ⁴
Fuel	Fuel type	Hydrogen gas
	Fuel pressure	600 +/- 100mbarg ⁵
	Fuel consumption	Less than 70g per kWh
	Fuel supply and storage	Designed for use with external fuel storage or production, (not included). Use of reformer gas subject to suitable pressure and purification.
	Fuel composition	99.9% gaseous hydrogen or better ⁶
Operations and maintenance	Manual start/stop	Interface connections provided for 'enable/reset' and 'run' switch or signal. Accessory switches available ⁷
	Automatic start/stop	Operation governed by factory configurable time, voltage and current levels in 'run' state. Level set to suit application battery and load ^{2,7}
	Status display	Interface connections provided for accessory status display ⁷
	Start-up time	Less than 20 seconds ⁸
Safety features	Certification of IE-Lift™	Designed in accordance with CE and FCC
	Health monitoring	Options available ^{7,9}
Physical	Mass	~10kg
	Max dimensions ¹⁰	196mm (W) × 294mm (H) ¹¹ × 294mm (D)
	IP rating	IP20
	Connections, gas	G1/8 parallel BSP threaded port with face seal, female ¹²
	Connections, electrical	Power connection FCM 'enable/reset' input FCM 'run' input, CAN hi/low/gnd Communications either CAN or Serial (selectable). Propriety 4 wire Intelligent Energy (IE) interface bus for connection to other IE units and accessories
	Vibration (to IEC/EN 60068-2-6)	5 to 30Hz, 10mm peak 5G 30 to 200Hz, 2.5G 10 minutes per sweep, 4 hours for each of 3 axes
	Repetitive shock (to IEC/EN 60068-2-27)	40G, 4000 times, for each of 2 directions, 3 axes
	Non-repetitive shock (to IEC/EN 60068-2-27)	50G, 10 times, for each of 2 directions, 3 axes
Normal operating conditions	Altitude	0m to 4000m ^{7,13}
	Operating ambient temperature range	-10°C to 40°C ^{14,15,16}
	Relative humidity	10% to 90% ^{7,16}
	Storage temperature	-40°C to 70°C

1 >95% duty cycle.

2 Typically hybridised with external battery allowing higher combined peak power. Available load power reduced during battery charge. Multiple units may be operated in parallel to increase power.

3 Rated power available when above 24V.

4 No production of CO, CO₂ or NO_x. Contains safety permitted trace levels of hydrogen.

5 +/- 100mbar pressure transients on purge permitted.

6 According to quality characteristics of Type 1, Grade E and Category 3 hydrogen fuel specified in BS ISO 14687-3:2014(E).

7 Please contact us to discuss your requirements.

8 Up to 5 minutes when below 5°C.

9 Options available for continuous health monitoring and predictive maintenance scheduling for high system availability.

10 Dimensions excludes protruding fasteners, mating connectors and accessories. Unit designed to be used with either the H-axis vertical or rotated so the W-axis is vertical. Any single axis may be +/-20°.

11 -30°C accessory cold pack adds 80mm to height (H).

12 Accessory 90° adaptor available.

13 Rated power to 1500m. Power de-rate commences above 1500m.

14 -5°C start up, -10°C running once started, power to exceed 300W for operation below 0°C.

-20°C start up, -30°C running once started with accessory cold pack.

15 Operation up to 50°C possible subject to de-rate, please contact us to discuss your requirements.

16 De-rated power when RH is less than 30%.

For more information about our products visit our website: www.intelligent-energy.com

To arrange a meeting with a sales representative in your region email: sales@intelligent-energy.com