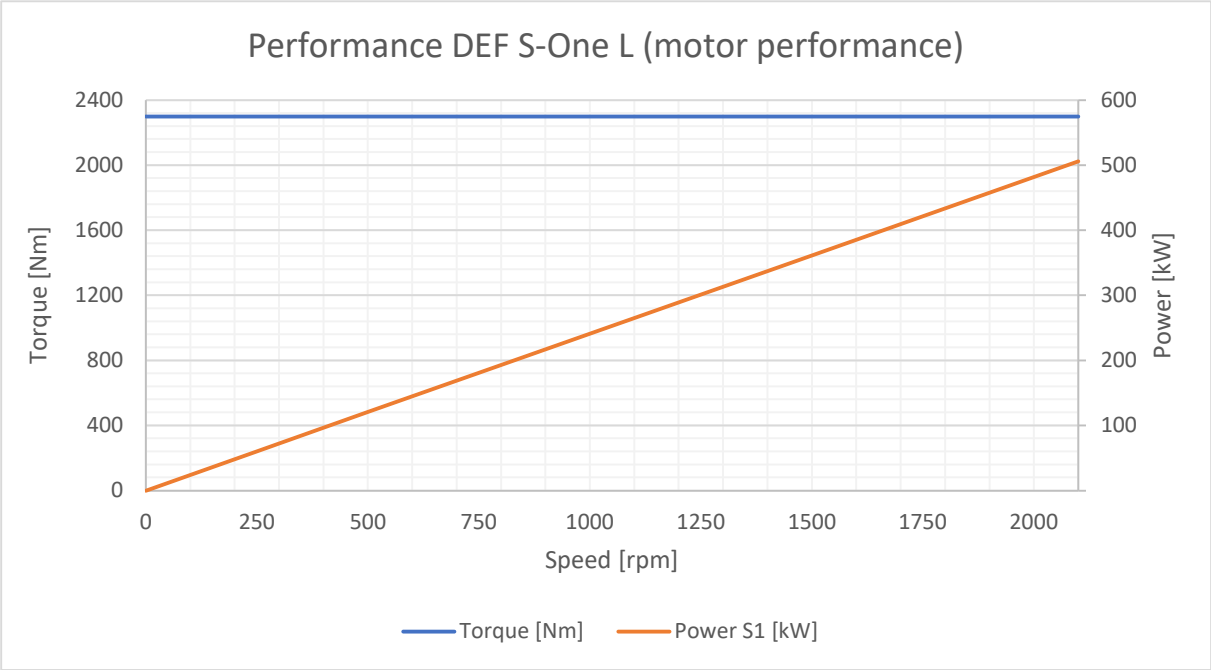
Technical datasheet DEF S-ONE L 900A-2300-2p



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Motor type and information

- Permanent magnet synchronous machine
- Available in **double-bearing** configuration with customized shaft end
- Available in **1x3 – Phase** configuration
- Available in **2x3 – Phase** configuration
- Available with customized **mounting brackets** on housing
- Tested according to **ISO 16750-3 and -4** (Vibration and climate)

Dimensions and Mass (preliminary)

- Max. diameter of housing: 600 mm
- Length of housing: 444 mm (from flange face, excluding junction box)
- Mass double-bearing config: 325 kg *(preliminary)*

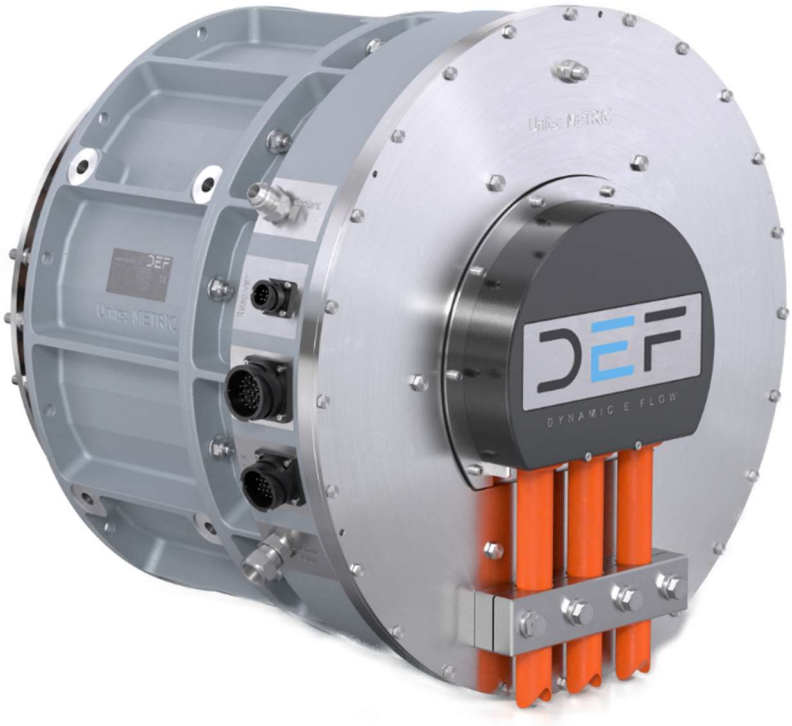

Figure 1: example configuration

General

Deviation of up to ± 8 % may be possible

- Nominal Line-Line Voltage 390 Vrms
- No-Load Voltage (1. harm) 461 Vrms @ 2,500 rpm / 25 °C
- Nominal phase current 900 Arms
- Speed (rated) 2,100 rpm
- Overspeed (mech. Limit) 2,500 rpm
- Rotor inertia 2.30 kgm^2
- Switching frequency 12 kHz
- Number of pole pairs 12

- DC Resistance Line-Line 4.1 mΩ @ 25 °C
- Differential Ld Inductance 52.4 µH @ 900 A
- Differential Lq Inductance 50.8 µH @ 900 A

- Isolation class H

- Protection rating IP65

Performance

Performance Motor (S1 operation):

Speed	1,800 rpm	2,100 rpm	Unit
Torque	2300	2300	Nm
Mech. Power*	434	506	kW
Line-Line Voltage	336	390	Vrms
Phase Current	900	900	Arms
Efficiency	95.7	96.0	%
cos ϕ	0.84	0.84	[-]
Control Angle	5.6	5.6	deg
Frequency	360	420	Hz

Performance Generator (S1 operation):

Speed	1,800 rpm	2,100 rpm	Unit
Torque	2500	2500	Nm
Mech. Power*	471	550	kW
Electrical Output Power	451	528	kW
Apparent Power	537	629	kVA
Line-Line Voltage	334	390	Vrms
Phase Current	900	900	Arms
Efficiency	95.7	96.0	%
cos ϕ	0.84	0.84	[-]
Control Angle	5.6	5.6	deg
Frequency	360	420	Hz

Max. Operating temperature S1

- Ambient -20 °C….+65 °C
- Winding 120 °C
- Magnets 140 °C
- Bearing 130 °C

Sensors

- Rotational sensor: Resolver
- Temperature sensors:
  - Coolant inlet
  - Coolant outlet
  - Winding temperature (winding head, 2 sensors per phase, optionally more)
  - Bearings
  - Rotor (indirect)
- Optionally available sensors:
  - Coolant pressure inlet
  - Coolant pressure outlet
  - Direct rotor magnet temperature measurement system
- Connectors: Customized

Bearings

- Operating life min. 50,000 h @ max. speed and max. load
  25,000 h bearing change interval
- Grease interval depending on operation (recommended once per year)

Interfaces (double-bearing, example configuration)