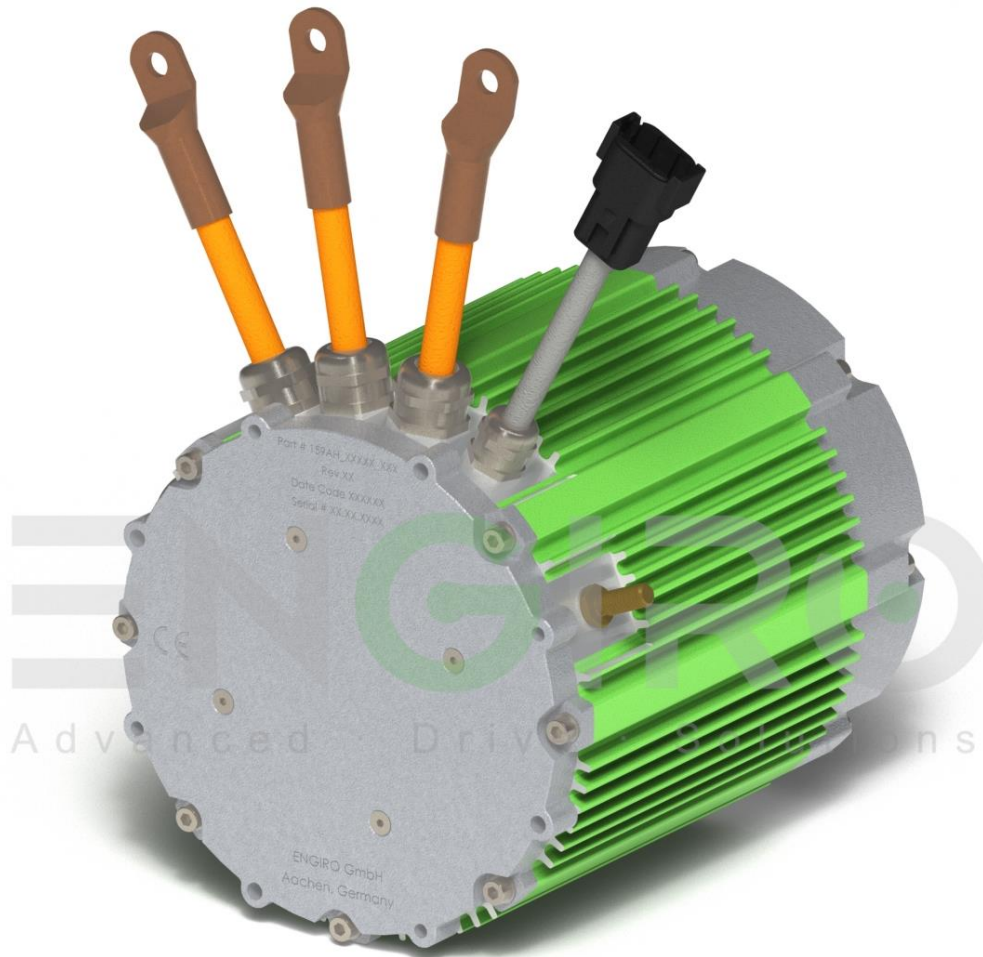


159AH-06012-ABC

air-cooled motor / generator with 10 kW continuous power

This datasheet applies to part numbers: see page 2



KEY FEATURES

- permanent magnet synchronous machine
- air-cooled
- convincing cost-benefit ratio
- delivery with controller possible

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Note:

On September 1st, 2024, we transferred our ERP systems to SAP. Due to this change, we are altering our **current part numbers**. To see how our article numbers and motor naming scheme has changed, please consider the conversion table below:

Part number conversion				
Part.no.	Old part.no.	Flange	Shaft	Position sensor
4752394	159AH_06012_SPE	S1	P1	E
4663844	159AH_06012_SHE	S1	H1	E
4775692	159AH_06012_EDE	E1	D1	E

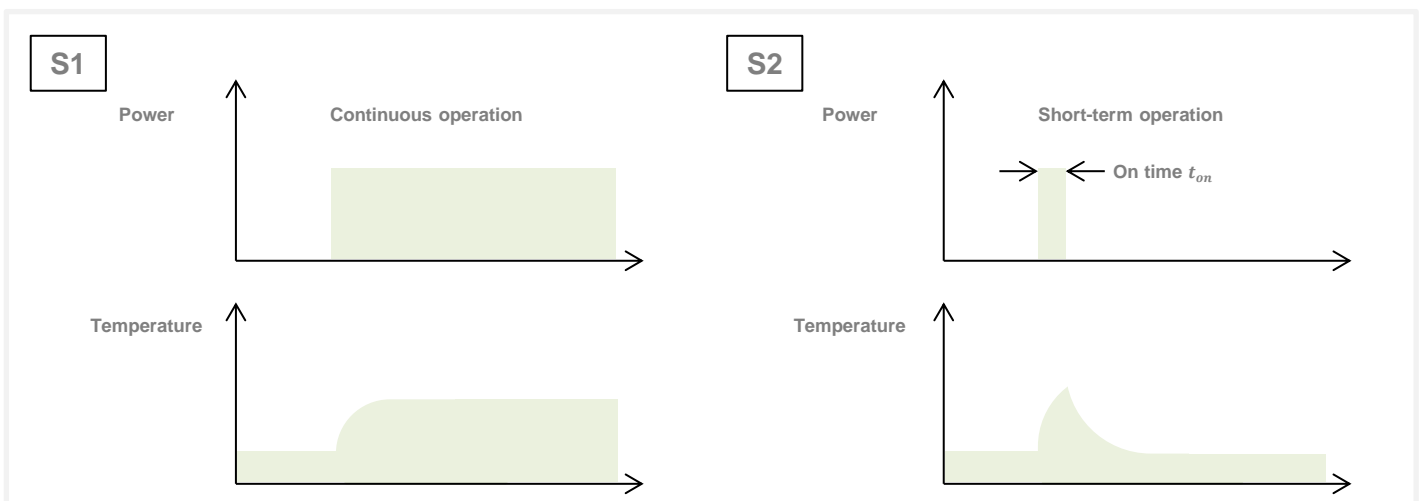
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Characteristic Operating Points (cooling as specified on next page)

		S1 ¹⁾	S2	
Feasible operating time	t_{peak}	continuous	60 sec	
Torque	T	27	75	Nm
Power	P	10	21	kW
Phase rms-current (AC)	I_{rms}	250 ^{2,3)}	830 ³⁾	A
Battery voltage (DC)	U_{DC}	48	48	V
Speed	n	3750	2750	rpm
Electric frequency	f_{el}	313	229	Hz
Efficiency	η_{tot}	95	85	%
Power factor	$\cos(\varphi)$	0.93	0.62	

Maximum Operating Range

		Max.	
Torque	T_{max}	75 @ 2750 rpm	Nm
Power	P_{max}	21 @ 2750 rpm	kW
Phase rms-current (AC)	$I_{rms,max}$	830 ⁴⁾	A
Speed	n_{max}	8000	rpm
Battery voltage (DC)	U_{max}	200	V
Electric frequency	$f_{el,max}$	666	Hz



- 1) Only valid for an ambient temperature ≤ 20 °C and air flow rate ≥ 6 m/s
- 2) Nominal current strongly dependent on cooling as specified below.
- 3) The cables must not exceed a temperature of 140 °C at any time. Temperature and service life depend on the installation condition.
- 4) Peak rating for max. 60 seconds on time

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Electrical Data				
Number of phases			3	
Number of pole pairs			5	
Maximal efficiency			96	%
T/I constant (I<I _{nom})			0.11	Nm/A _{rms}
U/n constant (AC) @20 °C motor temp.	rms:	6.9	peak:	10.1 V/(1000rpm)
Ke constant (AC) @20 °C motor temp.	rms:	0.013	peak:	0.019 V/(rad*s ⁻¹)
Additional Data				
Rotor moment of inertia			0.0052	kg*m ²
Allowed range of ambient temperature			-20 ... +85 ¹⁾	°C
Maximal motor temperature			140	°C
Cooling	Cooling medium		air	
	Air flow rate		6	m/s
	Cooling air temperature		20	°C
Temperature monitoring			1 x KTY84-130	
Ports				
Power terminals			3 x 50 mm ² cables with M8 cable lugs	
Length power cables			50	cm
Signal connectors			Deutsch DTM04-08PA	

1) Derating >25 °C

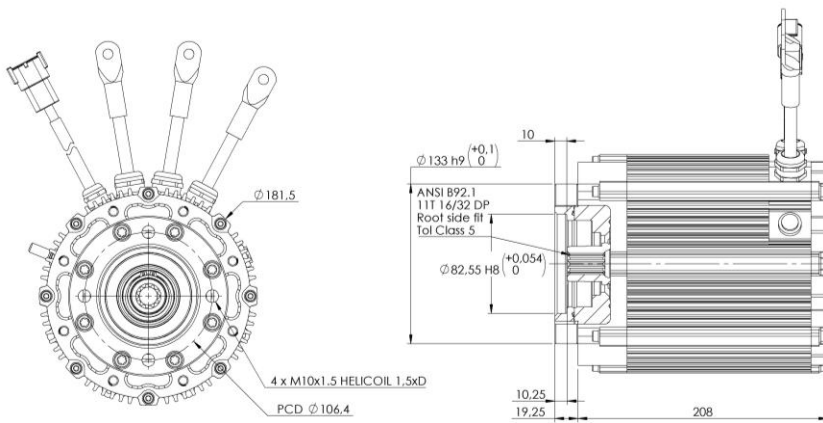
Certifications		
Type approval	CE, EN 60034	
Environmental	Prepared for ISO 9227	
Protection grade	ISO 20653 IP6K9K ²⁾	
Vibrations	Prepared for ISO 16750-3	
Customs tariff number	8501 5230	

- 1) Available upon request.
- 2) Please note that the IP6K9K rating is only valid if the machine is installed with suitable cable glands and an appropriate sealed interface at the drive side of the motor (flange and/or shaft). Please contact ENGIRO for further questions.

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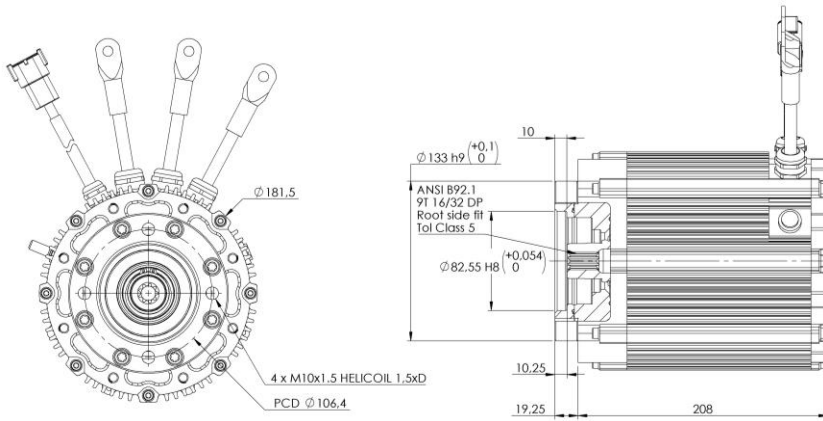
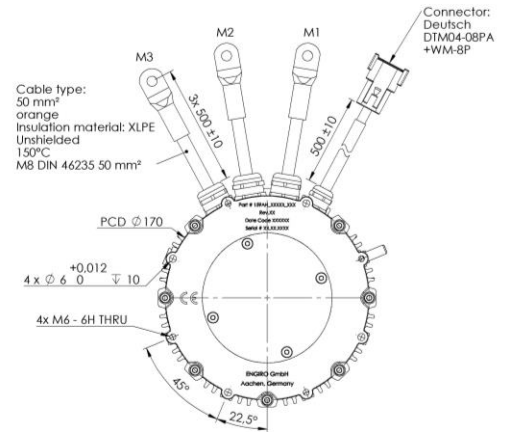
Shaft and Flange Combinations for 159AH-06012-ABC		Flange (A)	
		S1 (SAE J744 82-2 (A), Ø82,55 mm hydraulic pump)	E1 (IEC B14, Ø95 mm centering)
Shaft (B)	H1 (ANSI B92.1 9T 16/32 DP 30° flat root side fit, Tol. Class 5)	● (≈ 16 kg)	
	P1 (ANSI B92.1 11T 16/32 DP 30° flat root side fit, Tol. Class 5)	● (≈ 16 kg)	
	D1 (cylindrical shaft with keyway Ø19 mm)		● (≈ 16 kg)
Position Sensor (C)		E: sin/cos encoder	

Other individual combinations are also possible on request.



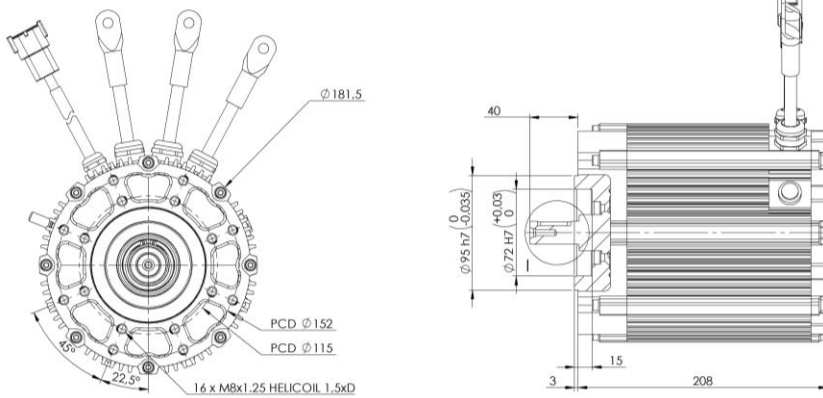
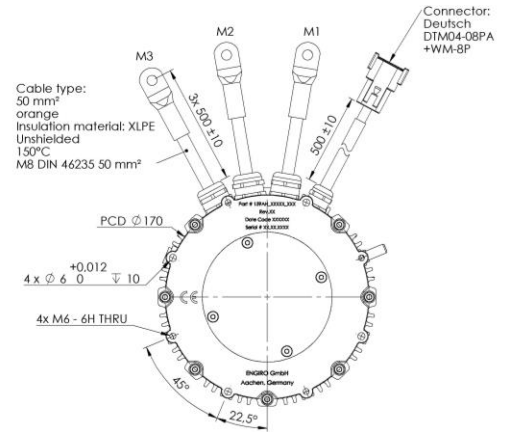
Flange S1

Shaft P1



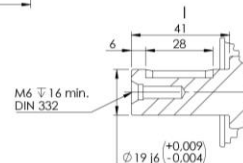
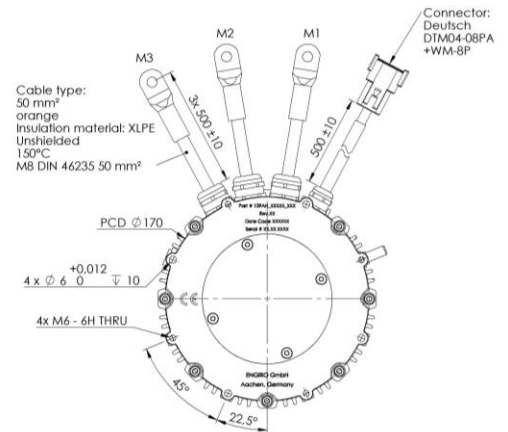
Flange S1

Shaft H1

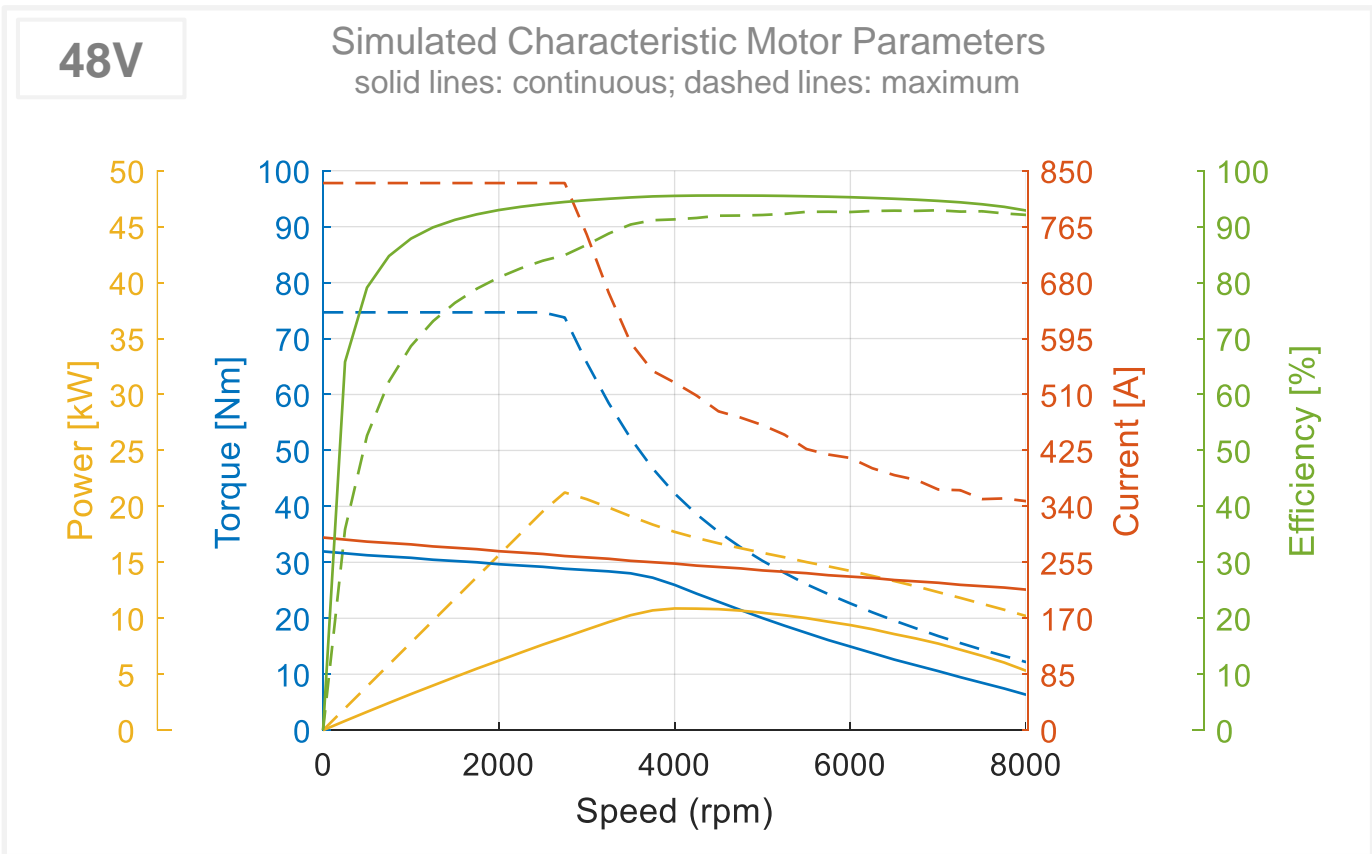
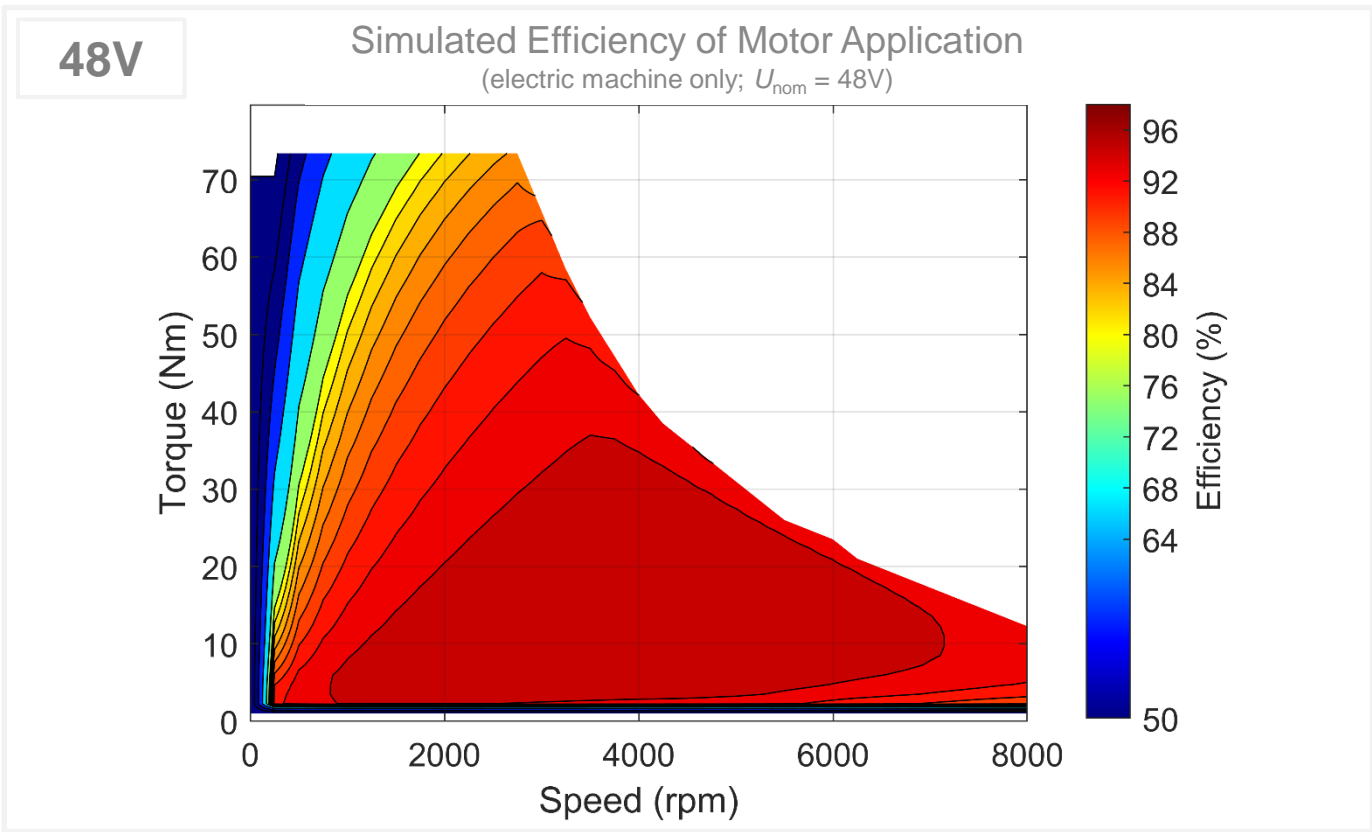


Flange E1

Shaft D1



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