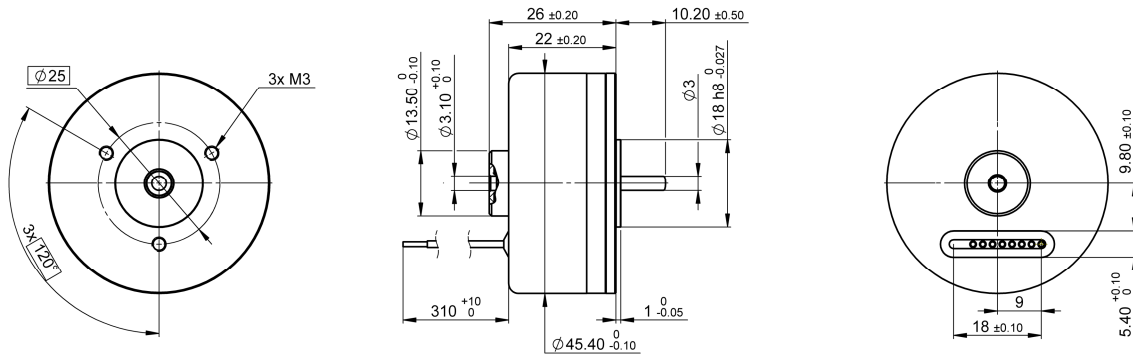


BRUSHLESS MOTOR – HALL SENSORS OR SENSORLESS



Motor parameters (25°C)

		1	2
Phase-Phase resistance	ohm	0.16	0.61
Torque constant	mNm/A	2.45	4.90
Back EMF constant	V/Krpm	0.26	0.51
Phase-Phase inductance	mH	0.09	0.35
Motor constant	mNm/vW	6.3	6.3
Rotor inertia	10 ⁻⁷ Kg.m ²	1.8	1.8
Mechanical time constant	ms	4.6	4.6
Electrical time constant	ms	0.58	0.58

Dynamic parameters at nominal voltage (25°C)

		1	2	
No load	Nominal voltage	V	12	24
	Current	mA	300	150
	Speed	rpm	46'800	46'800
	Electrical input power	W	3.6	3.6
Peak efficiency	Current	A	4.9	2.1
	Torque	mNm	11.3	9.8
	Speed	rpm	43'800	44'200
	Electrical input power	W	58.7	50.8
	Mechanical output power	W	51.7	45.5
Efficiency	%	88%	89%	

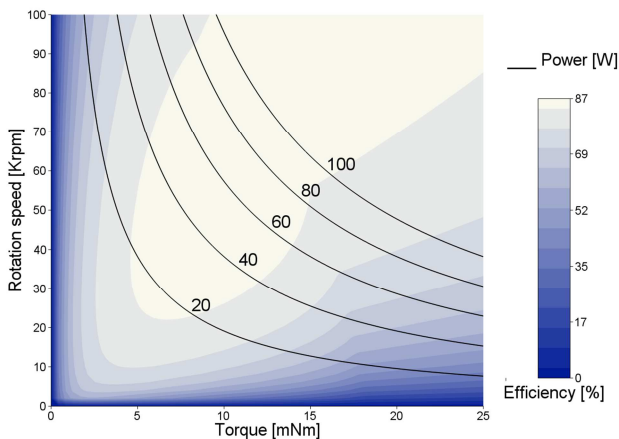
Motor specifications

Number of pole pairs	-	1
Number of phases	-	3
Motor Mass	g	100
Thermal resistance	°C/W	16
Max permissible winding temperature	°C	155

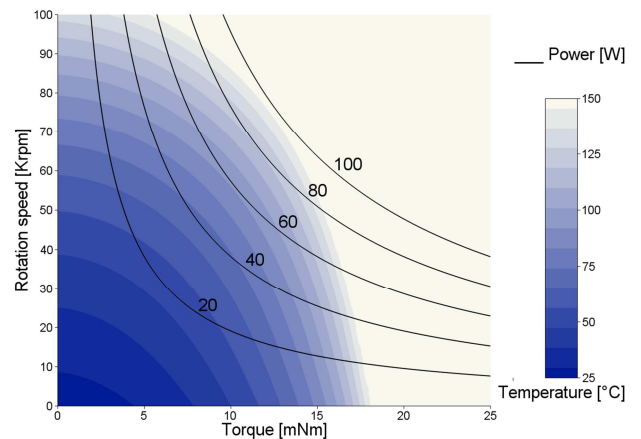
Motor configurations

All Electromag motors are available with custom configurations. Mechanical interface, windings and motor characteristics can be customized for each application. This generic outline drawing only shows the envelope of the motor. For detail dimensions and tolerances, please contact the factory.

Efficiency & Mechanical power



Temperature & Mechanical power



Notes

Efficiency and temperature maps are obtained using a heat sink that reduces the motor thermal resistance by 50% (typical case). Continuous operation is allowed until the maximum winding temperature has been reached. Beyond this point, intermittent operation or additional cooling should be considered.