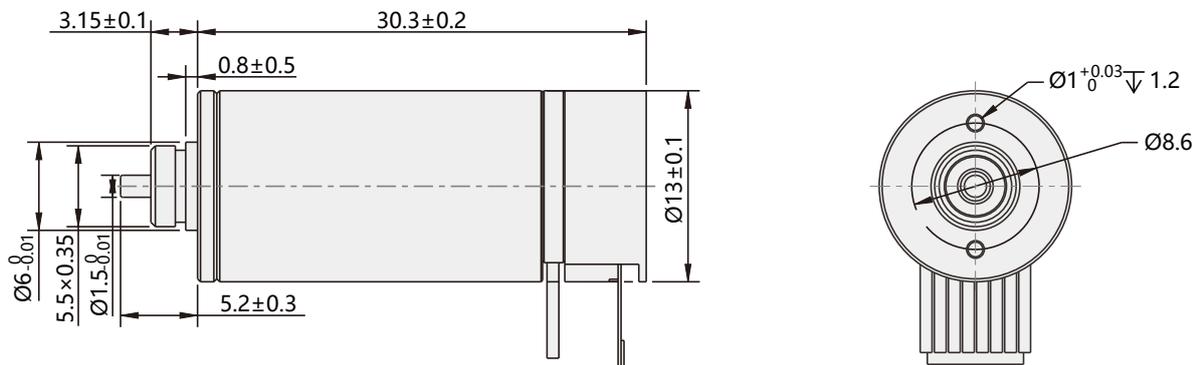


PSL1330 ϕ 13mm Series Brushless DC Slotless Motor

Key Data: 2.98-4.42 W, 2.0 mNm, 13,000-17,000 rpm



ELECTRICAL SPECIFICATION

	Unit	PSL1330-0302202	PSL1330-0603202	PSL1330-0903228	PSL1330-1204242
Rated Voltage	V	3.0	6.0	9.0	12.0
No-load Speed	rpm	20,202	20,202	22,870	24,242
No-load Current	A	0.25	0.13	0.10	0.01
Stall Current	A	4.44	2.23	1.88	1.65
Terminal Resistance	Ω	0.67	2.59	4.78	7.28
Stall Torque	mN·m	5.63	5.88	6.31	6.96
Maximum Efficiency	%	58.6	58.6	58.6	58.6
Maximum Power	W	2.98	3.11	3.78	4.42
Rated Torque	mN·m	2.0	2.0	2.0	2.0
Rated Current	A	1.50	0.75	0.56	0.45
Rated Speed	rpm	13,030	13,329	15,624	17,274
Torque Constant	mN·m /A	1.340	2.681	3.551	4.468
Back EMF Constant	V/Krpm	0.23	0.46	0.56	0.50
Speed/Torque Slope	rpm/mNm	3,586	3,436	3,623	3,484

MECHANICAL SPECIFICATION

Bearing		Ball Bearing
Max. speed	rpm	20,000
Axial play	mm	0...0.045
Radial play		Preloaded
Max. axial load (dynamic)	N	1
Max. force for press fits (static)	N	10
Max. radial load (5mm from flange)	N	4
Ambient temperature	$^{\circ}\text{C}$	-40...+100
Max. winding temperature	$^{\circ}\text{C}$	155

THERMAL RESISTANCE

Housing – Ambient	$^{\circ}\text{C} / \text{W}$	23
Winding – Housing	$^{\circ}\text{C} / \text{W}$	1.77

THERMAL TIME CONSTANT

Motor	s	352
Winding	s	0.44
Number of pole pairs		1
Number of phases		3
Weight	g	33

GEARBOX

♦ Planetary: PG13 (Page 25)

CONFIGURATION

- ♦ Hall Signal Output
- ♦ Incremental Differential Encoder (up to 5000CPR, Optional)
- ♦ Absolute Encoder (up to 12-bit, Optional)

WIRE DEFINITION

PIN 1	/A	PIN 5	B
PIN 2	/B	PIN 6	Z
PIN 3	/Z	PIN 7	Vcc 3V-3.6V
PIN 4	A	PIN 8	GND