

**BR4 Brushless Motor Data**

Date: 5/6/2024

CHARACTERISTICS	SYMBOL	UNITS	BR-4
Voltage supply	V	VDC	48
Max. Speed at voltage supply ( $\pm 10\%$ )	nm	rpm	1500
Stall Torque ( $\pm 10\%$ )	Ms	Nm	3.85
Stall Current ( $\pm 10\%$ )	Is	A	14.81
Nominal Torque at 1500rpm (3)	Mn	Nm	3.7
Peak Torque ( $\pm 10\%$ )	Mj	Nm	9.625
EMF Constant ( $\pm 5\%$ )	Ke	Vs/rad	0.15
Torque Constant ( $\pm 5\%$ )	Kt	Nm/A	0.26
Reluctance Torque	Ct	Nm	60
Winding Resistance ( $\pm 5\%$ )	R	W	0.25
Winding Inductance ( $\pm 5\%$ )	L	mH	0.44
Rotor Inertia	J	kgm <sup>2</sup> 10 <sup>-3</sup>	0.385
Mechanical Time Constant	Tm	ms	2.47
Electrical Time Constant	Te	ms	1.76
Thermal Time Constant (5)	Tth	s	2520
Thermal Resistance	Rth	°C/W	1.05
Insulation	Class		F
Max. winding temperature		°C	155
N° of poles			20
Axial force	Fa	N	134
Radial force	Fr	N	295
Weight	M	kg	2.18
Temperature sensor type			PTC155°
With an Aluminium heat sink plate (4)		mm	400x400x10

