

**BR2 Brushless Motor Data**

Date: 5/6/2024

CHARACTERISTICS	SYMBOL	UNITS	BR-2
Voltage supply	V	VDC	48
Max. Speed at voltage supply ( $\pm 10\%$ )	nm	rpm	3500
Stall Torque ( $\pm 10\%$ )	Ms	Nm	0.83
Stall Current ( $\pm 10\%$ )	Is	A	8.3
Nominal Torque at 3000rpm (3)	Mn	Nm	0.8
Peak Torque ( $\pm 10\%$ )	Mj	Nm	1.8
EMF Constant ( $\pm 5\%$ )	Ke	Vs/rad	0.06
Torque Constant ( $\pm 5\%$ )	Kt	Nm/A	0.1
Reluctance Torque	Ct	Nm	10
Winding Resistance ( $\pm 5\%$ )	R	W	0.71
Winding Inductance ( $\pm 5\%$ )	L	mH	0.41
Rotor Inertia	J	kgm <sup>2</sup> 10 <sup>-3</sup>	0.016
Mechanical Time Constant	Tm	ms	1.86
Electrical Time Constant	Te	ms	0.58
Thermal Time Constant (5)	Tth	s	192
Thermal Resistance	Rth	°C/W	1.17
Insulation	Class		F
Max. winding temperature		°C	155
N° of poles			20
Axial force	Fa	N	10
Radial force	Fr	N	71
Weight	M	kg	0.47
Temperature sensor type			-
With an Aluminium heat sink plate (4)		mm	300x300x10

