

### Environmental conditions

Item	Storage	Operation
Temperature (°C)	-20~65	0~40
Humidity (%)	20~90	20~90

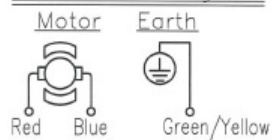
No dew condensation

Some structural parts are made from synthetic resin keep away industrial solvent, etc.

### Endurable load on motor shaft

Item	Symbol	Unit	Assembly	Operating
Radial load	$F_R$	N	25	20
Thrust load	$F$	N	100	20
	$F_1$	N	100	20

### Connection diagram



Motor				
Terms	Item	Symbol	Unit	Specification
	Degrees of protection			IP43
	Exciting method			Permanent Magnet
	Rated			Cont.
☆☆	Rated output	$P_R$	W	60
☆☆	Rated armature voltage	$V_R$	V	48
☆☆	Rated torque	$T_R$	N·m	0.159
☆☆	Rated current	$I_R$	A	2.0
☆☆	Rated speed	$N_R$	min <sup>-1</sup>	3600
☆☆	Continuous stall torque	$T_S$	N·m	0.17
☆☆	Peak torque	$T_P(N)$	N·m	0.52
☆☆	Continuous stall current	$I_S$	A	2.0
☆☆	Peak armature current	$I_P(N)$	A	6
	Maximum speed	$N_{max}$	min <sup>-1</sup>	5000
☆☆	Rated power rate	$Q_R$	kW/s	2.3
☆	Torque constant	$K_T$	N·m/A	0.1±10%
☆	Voltage constant	$K_E$	V/min <sup>-1</sup>	10.5×10 <sup>-3</sup> ±10%
	Rotor inertia	$J_M$	kg·m <sup>2</sup>	0.108×10 <sup>-4</sup>
☆	Armature resistance	$R_a$	Ω	3.4
☆	Armature inductance	$L_a$	mH	1.6
☆	Mechanical time constant	$t_m$	ms	3.7
☆	Electrical time constant	$t_e$	ms	0.47
	Insulation class			F
☆	Insulation Resistance		MΩ	10MIN. (DC500V megger)
☆	Dielectric Strength		V	600 (AC50/60Hz 1min)
	Mass	W	kg	0.65

### Encoder

Incremental encoder  
Resolution: 500P/R (Line driver)