



BRUSHLESS DC MOTOR

4 Wire
8 Watt

2-48/08_ _ .4CW
2-48/08_ _ .4CCW

TRIDENT ENGINEERING LIMITED
Trident House, King Street Lane,
Winnersh, Wokingham,
Berkshire, RG41 5AS

Telephone: 0118 978 6444

Fax: 0118 977 6345

Email: sales@tridenteng.co.uk

www.tridenteng.co.uk

Motor Data

Nominal voltage	V	12	24
Voltage range	V	10 .. 15	14 .. 28
Max. output power	1) W	8	8
No load speed	2) rpm	4300	4300
No load current	2) mA	210	130
Min starting torque	2) mNm	32	34
Nominal torque	2) mNm	22	22
Nominal speed	2) rpm	2900	3000
Nominal current	2) A	1.01	0.51
Max. current limit	A	1.4	0.7
Max. continuous torque	1) mNm	27	28
Min. adjustable speed	rpm	200	200
Rotor inertia	kgm ²	22x10 ⁻⁶	22x10 ⁻⁶
Mechanical time constant	ms	48	48
Max. flange temperature	1) °C	85	85

All relevant values in above table are valid for nominal supply voltages and Tamb.=22°C

- 1) For thermal reasons it is advised to mount the motor on a heat conducting frame if high output power is desired.
- 2) At Vctrl=5.0V

Maximum radial load 15 mm from
mounting front at 3000 rpm
Mass of motor

N	40
g	200

Options

Special shafts, diameter 3 ... 6mm
Direction of rotation pre-set (internal)
Square foot mounting flange

Electrical Connections

Lead colour	Signal name	Function	Size
red	+ Vs	+ Supply voltage	AWG 24
blue	GND	Ground (0V)	AWG 24
white	Vctrl	Control voltage input	AWG 24
green	FG	Frequency Generator output	AWG 24

Vctrl input data

Voltage range	V	0 --- 5
Max. input voltage	V	12
Threshold voltage	V	approx. 0.9
Speed/Vctrl relation (at no load)	rpm/V	approx. 1100

FG output data

FG pulses per revolution		6
Pulse length 'high'	ms	approx. 2.1
Output series resistance	Ohm	3K9
Output level 'high' (Iout<0.1mA)	V	4.2 --- 5.4
Output level 'low' (Iout<0.1mA)	V	<0.5

Features

4-wire concept with an extra lead for Frequency Generator output and a lead for speed adjustment (PWM control of motor voltage)
Long life (up to 20,000 hours)
EMC compliance with standards EN 55011, EN 55022 and EN 50082-1³⁾
Protected against wrong connection
Protection class IP30

- 3) Capacitor of 1000µF (for 12V motor versions) or 470µF (for 24V motor versions) needed at the supply terminals

