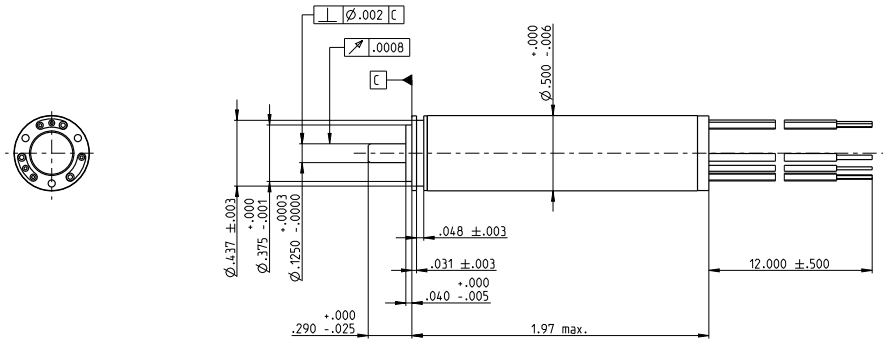


EC size 5 Ø0.5 in, brushless, 50 Watts

Sterilizable



M 1:1

Dimensions in inch

- Stock program
- Standard program
- Special program (on request)

A with Hall Sensors
B sensorless

Order Number

448816	448817	448818
448822	448823	448824

Motor Data (provisional)

Values at nominal voltage					
1	Nominal voltage	V	12	24	48
2	No load speed	rpm	73400	73400	73500
3	No load current	mA	270	135	67.6
4	Nominal speed	rpm	68000	68800	69000
5	Nominal torque (max. continuous torque)	oz-in	1.1	1.14	1.14
6	Nominal current (max. continuous current)	A	5.2	2.69	1.34
7	Stall torque	oz-in	17	21.4	22.4
8	Starting current	A	77.3	48.6	25.5
9	Max. efficiency	%	89	90	90
Characteristics					
10	Terminal resistance phase to phase	Ω	0.155	0.494	1.89
11	Terminal inductance phase to phase	mH	0.00676	0.027	0.108
12	Torque constant	oz-in / A	0.22	0.44	0.881
13	Speed constant	rpm / V	6140	3070	1540
14	Speed / torque gradient	rpm / oz-in	4330	3440	3290
15	Mechanical time constant	ms	2.31	1.84	1.75
16	Rotor inertia	oz-in-s ²	5.1·10 ⁻⁶	5.1·10 ⁻⁶	5.1·10 ⁻⁶

Specifications

Thermal data	
17	Thermal resistance housing-ambient 32.2°F/W
18	Thermal resistance winding-housing 1.27°F/W
19	Thermal time constant winding 0.743 s
20	Thermal time constant motor 352 s
21	Ambient temperature -40 ...+275°F
22	Max. permissible winding temperature +311°F
Mechanical data (preloaded ball bearings)	
23	Max. permissible speed 90000 rpm
24	Axial play at axial load < 25.2 oz 0 in
	> 25.2 oz max. 0.0335 in
25	Radial play preloaded
26	Max. axial load (dynamic) 21.6oz
27	Max. force for press fits (static) 25.2 oz
28	Max. radial loading, 0.197 in from 14.4 oz
Other specifications	
29	Number of pole pairs 1
30	Number of phases 3
31	Weight of motor 1.55 oz

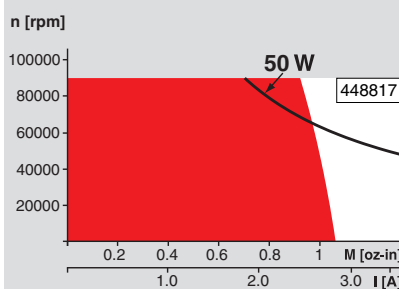
Values listed in the table are nominal

Connection A and B (Cable AWG 22)	
red	Motor winding 1
black	Motor winding 2
white	Motor winding 3
Connection A (Cable AWG 26)	
green	V _{Hall} 3.8 ... 24 VDC
blue	GND
red / grey	Hall sensor 1
black / grey	Hall sensor 2
white / grey	Hall sensor 3

Option:

Metric version EC13 as standard variant available

Operating Range



Comments

- Continuous operation**
In observation of above listed thermal resistance (lines 17 and 18) the maximum permissible winding temperature will be reached during continuous operation at 77°F ambient.
= Termal limit.
- Short term operation**
The motor may be briefly overloaded (recurring).
- Assigned power rating**

Application



Medicine/ surgery / chemicals

Hand tools such as bone saws, bone drilling and grinding machine can be sterilised.

Dermatological and dental tools
Infusion pumps
ECG
Therapy aid, analysis and dialysis equipment

Sterilisation information

In normal use, the motor can be sterilised 500 times in an autoclave. No need to dismantle.

Sterilisation with steam

Temperature	+273°F ± 7°F
Compression pressure up to	2.3 bar
Rel. humidity	100 %
Cycle length	20 minutes

maxon Modular System

Planetary Gearhead
GP size 5 M
sterilisable
Ø0.5 in
14 - 39 oz-in



Recommended Electronics:

ESCON 36/3 EC
ESCON Module 50/5
ESCON 50/5
DECS 50/5
DEC Module 24/2
DEC Module 50/5

Notes

Choke may be required