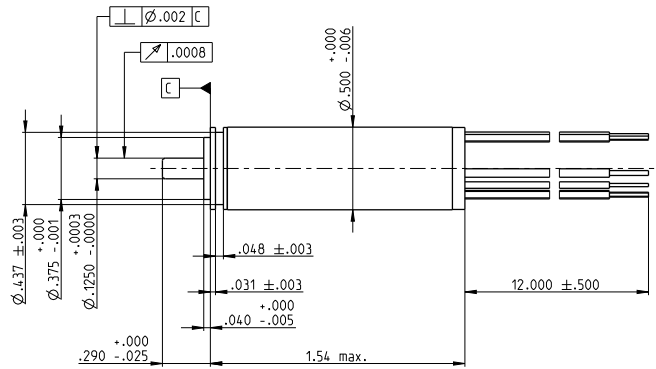
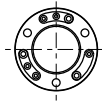


EC size 5 Ø0.5 in, brushless, 30 Watts

Sterilizable



M 1:1

Dimensions in inch

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

A with Hall Sensors
B sensorless

Order Number

448813	448814	448815
448819	448820	448821

Motor Data (provisional)

Values at nominal voltage		12	24	48	
1	Nominal voltage	V	12	24	48
2	No load speed	rpm	65300	65300	76000
3	No load current	mA	171	85.5	53.9
4	Nominal speed	rpm	59100	59400	70200
5	Nominal torque (max. continuous torque)	oz-in	0.708	0.706	0.633
6	Nominal current (max. continuous current)	A	2.99	1.49	0.788
7	Stall torque	oz-in	8.52	9.11	9.65
8	Starting current	A	34.5	18.4	11.4
9	Max. efficiency	%	87	87	87
Characteristics		0.348	1.3	4.22	
10	Terminal resistance phase to phase	Ω	0.348	1.3	4.22
11	Terminal inductance phase to phase	mH	0.018	0.072	0.213
12	Torque constant	oz-in / A	0.247	0.494	0.849
13	Speed constant	rpm / V	5470	2740	1590
14	Speed / torque gradient	rpm / oz-in	7710	7210	7920
15	Mechanical time constant	ms	1.63	1.53	1.68
16	Rotor inertia	oz-in-s ²	2.02·10 ⁻⁶	2.02·10 ⁻⁶	2.02·10 ⁻⁶

Specifications

Thermal data		
17	Thermal resistance housing-ambient	37.3°F/W
18	Thermal resistance winding-housing	4.64°F/W
19	Thermal time constant winding	1.87 s
20	Thermal time constant motor	391 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. 0.0394 in
25	Radial play	preloaded
26	Max. axial load (dynamic)	21.6 oz
27	Max. force for press fits (static)	36 oz
28	Max. radial loading, 0.197 in from flange	14.4 oz
Other specifications		
29	Number of pole pairs	1
30	Number of phases	3
31	Weight of motor	1.33 oz

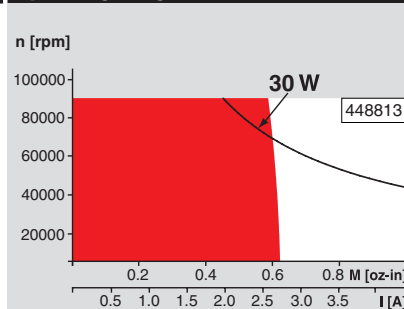
Values listed in the table are nominal

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