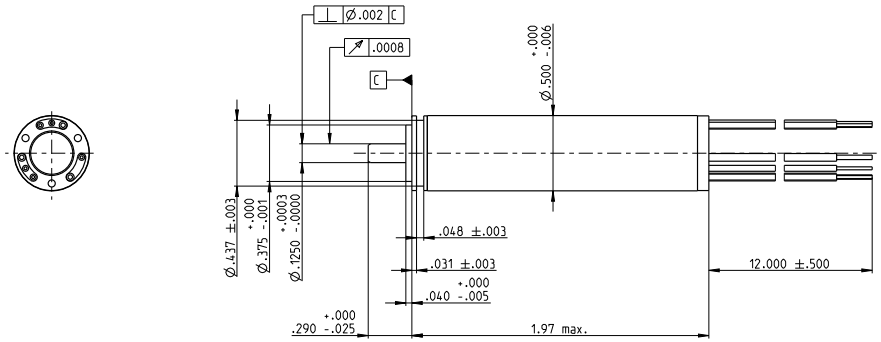


# EC size 5 Ø0.5 in, brushless, 50 Watts, sterilisable



## M 1:1

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

A with Hall Sensors  
B sensorless

### Order Number

373493	373762	373763
384273	384274	384275

### Motor Data (provisional)

Values at nominal voltage					
1	Nominal voltage	V	12.0	24.0	48.0
2	No load speed	rpm	79300	79400	79400
3	No load current	mA	257	129	64.3
4	Nominal speed	rpm	73600	74100	74200
5	Nominal torque (max. continuous torque)	oz-in	1.00	1.13	1.16
6	Nominal current (max. continuous current)	A	5.09	2.85	1.46
7	Stall torque	oz-in	16.0	20.2	21.2
8	Starting current	A	77.5	48.8	25.5
9	Max. efficiency	%	89	90	90
Characteristics					
10	Terminal resistance phase to phase	Ω	0.153	0.485	1.85
11	Terminal inductance phase to phase	mH	0.0068	0.0270	0.108
12	Torque constant	oz-in / A	0.204	0.409	0.818
13	Speed constant	rpm / V	6630	3320	1660
14	Speed / torque gradient	rpm / oz-in	4965	3937	3754
15	Mechanical time constant	ms	2.66	2.11	2.01
16	Rotor inertia	oz-in-s <sup>2</sup>	5.1·10 <sup>-6</sup>	5.1·10 <sup>-6</sup>	5.1·10 <sup>-6</sup>

### Specifications

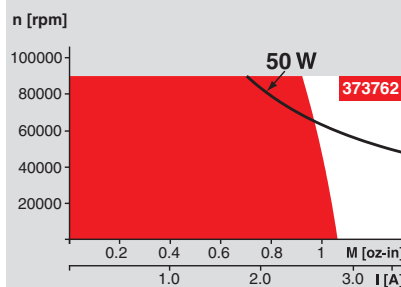
Thermal data		
17	Thermal resistance housing-ambient	28.8°F/W
18	Thermal resistance winding-housing	1.65°F/W
19	Thermal time constant winding	0.95 s
20	Thermal time constant motor	352 s
21	Ambient temperature	-40 ...+275°F
22	Max. permissible winding tempe-	+311°F
Mechanical data (preloaded ball bearings)		
23	Max. permissible speed	90000 rpm
24	Axial play at axial load < 7.2 oz	0 in
	> 7.2 oz	max. 0.0473 in
25	Radial play	preloaded
26	Max. axial load (dynamic)	25.2 oz
27	Max. force for press fits (static)	25.2 oz
28	Max. radial loading, 0.2 in from flange	14.4 oz
Other specifications		
29	Number of pole pairs	1
30	Number of phases	3
31	Weight of motor	1.6 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	V <sub>Hall</sub> 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
- see separate leaflet



- Recommended Electronics:**
- DECS 50/5 Catalogue page 289
- DEC 24/3 290
- DEC Module 24/2 290
- DEC 50/5 / Module 50/5 291
- DECV 50/5 297
- additional informaton**
- partially inductors necessary