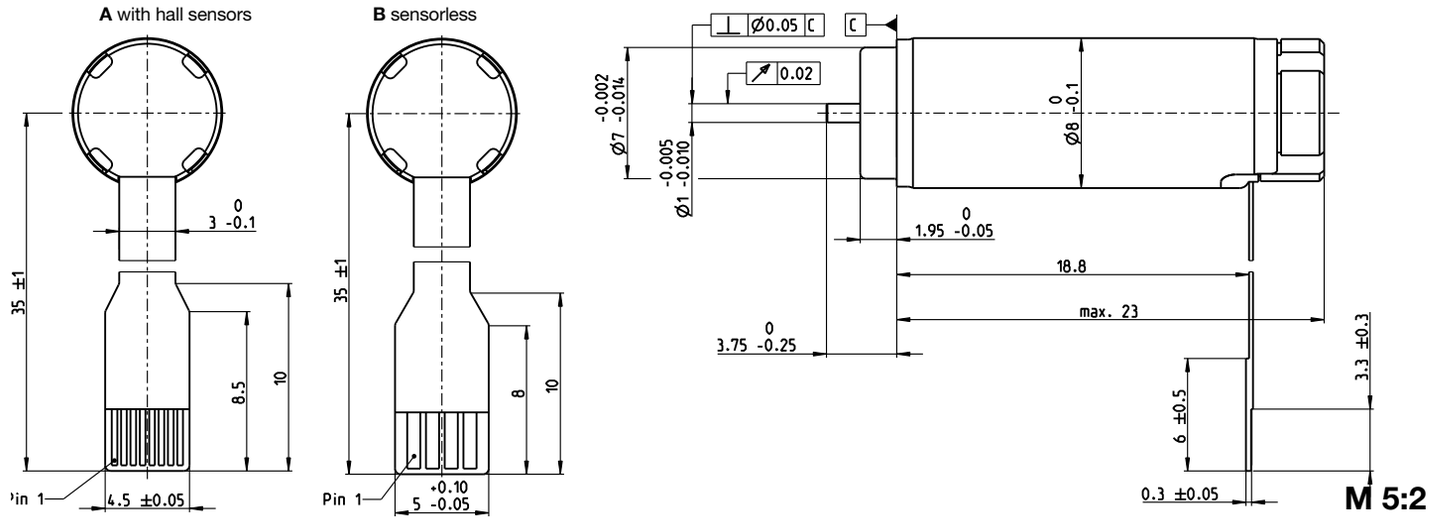
EC 8 ∅8 mm, brushless, 2 Watt



Stock program
Standard program
Special program (on request)

Part Numbers

A with Hall sensors	468334	468335	468336
B sensorless	468337	468338	468339

Motor Data

	Values at nominal voltage									
1	Nominal voltage	V	6	12	24					
2	No load speed	rpm	35900	43800	42700					
3	No load current	mA	69.2	46	22.1					
4	Nominal speed	rpm	24000	32800	32000					
5	Nominal torque (max. continuous torque)	mNm	0.977	0.942	0.944					
6	Nominal current (max. continuous current)	A	0.691	0.41	0.2					
7	Stall torque	mNm	3.05	3.9	3.93					
8	Stall current	A	1.98	1.54	0.755					
9	Max. efficiency	%	67	69	70					
	Characteristics									
10	Terminal resistance phase to phase	Ω	3.02	7.8	31.8					
11	Terminal inductance phase to phase	mH	0.039	0.106	0.447					
12	Torque constant	mNm/A	1.54	2.53	5.21					
13	Speed constant	rpm/V	6200	3770	1830					
14	Speed/torque gradient	rpm/mNm	12200	11600	11200					
15	Mechanical time constant	ms	3.19	3.03	2.92					
16	Rotor inertia	gcm²	0.024961	0.024961	0.024961					

Specifications

Thermal data

17	Thermal resistance housing-ambient		51.2 K/W
18	Thermal resistance winding-housing		3.5 K/W
19	Thermal time constant winding		0.832 s
20	Thermal time constant motor		154 s
21	Ambient temperature		-20…+100°C
22	Max. winding temperature		125°C

Mechanical data (preloaded ball bearings)

23	Max. speed		80000 rpm
24	Axial play at axial load	< 0.15 N	0 mm
		> 0.15 N	max. 0.06 mm
25	Radial play		preloaded
26	Max. axial load (dynamic)		0.1 N
27	Max. force for press fits (static)		10 N
28	Max. radial load, 2 mm from flange		2 N

Other specifications

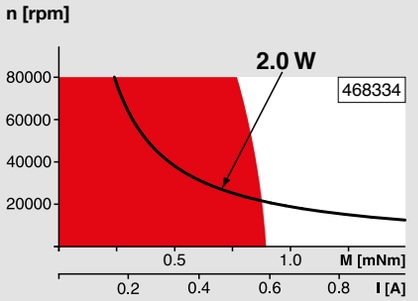
29	Number of pole pairs	1
30	Number of phases	3
31	Weight of motor	6 g

Values listed in the table are nominal.

Connection	**with hall sensors**	**sensorless**
Pin 1	Motor winding 1	Motor winding 1
Pin 2	Motor winding 2	Motor winding 2
Pin 3	Motor winding 3	Motor winding 3
Pin 4	V_{Hall} 3.8...24 VDC	N.C.
Pin 5	GND	
Pin 6	Hall sensor 1	
Pin 7	Hall sensor 2	
Pin 8	Hall sensor 3	
Connector	**Part number**	**Part number**
Molex	52745-0897	52207-0460
FCI	SFV8R-2STBE1HLF	SFW4R-2STGE1LF

Pin for design with Hall sensors:
FPC, 8 pole, pitch 0.5 mm, top contact style
Wiring diagram for Hall sensors see page 41

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 25°C ambient.
= Thermal limit.

Short term operation
The motor may be briefly overloaded (recurring).

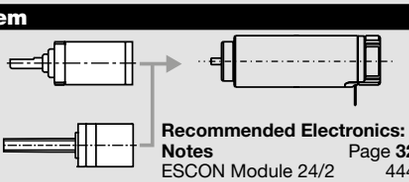
Assigned power rating

maxon Modular System

Overview on page 28–36

Planetary Gearhead
∅8 mm
0.01 - 0.1 Nm
Page 318

Screw Drive
∅8 mm
Page 367–368



Recommended Electronics:

Notes	Page **32**
ESCON Module 24/2	444
ESCON 36/3 EC	445
ESCON Mod. 50/4 EC-S	445
DEC Module 24/2	449