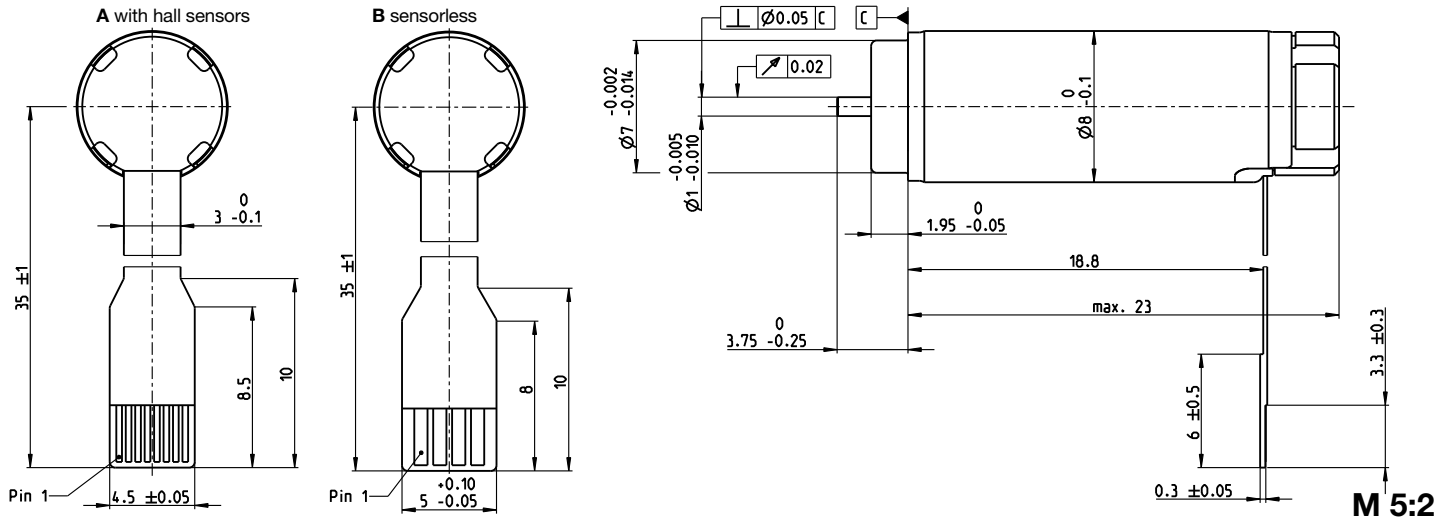


EC 8 $\varnothing 8$ mm, brushless, 2 Watt



- 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		6 V	12 V	24 V
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	gcm ²	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
24 Axial play at axial load > 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

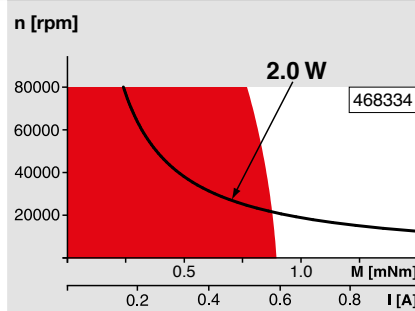
29 Number of pole pairs	1
30 Number of phases	3
31 Weight of motor	6 g

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



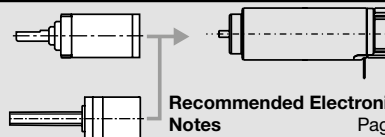
Comments

- 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

- 1 **Planetary Gearhead**
 $\varnothing 8$ mm
0.01 – 0.1 Nm
Page 318
- 3 **Screw Drive**
 $\varnothing 8$ 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