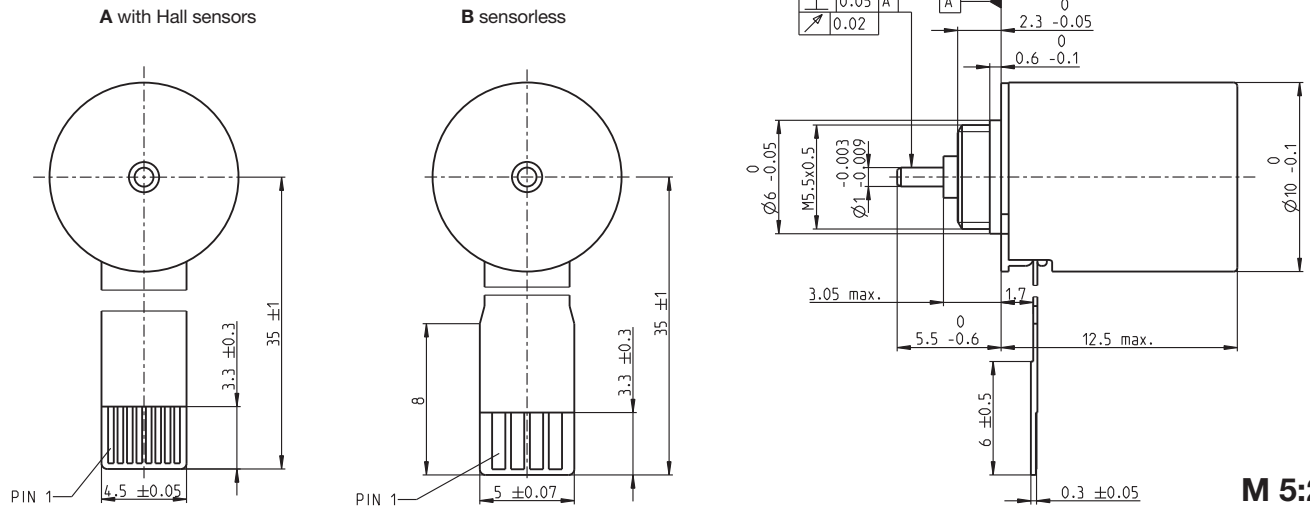


EC 9.2 flat $\varnothing 10$ mm, brushless, 0.5 Watt



M 5:2

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

Part Numbers	
A with Hall sensors	362790 370444 370445
B sensorless	371119 371120 371122

Motor Data (provisional)

Values at nominal voltage		3	4.5	6
1 Nominal voltage	V	3	4.5	6
2 No load speed	rpm	14500	15100	15600
3 No load current	mA	53.9	38.3	30.9
4 Nominal speed	rpm	4830	5260	5240
5 Nominal torque	mNm	0.764	0.809	0.684
6 Nominal current	A	0.447	0.327	0.222
7 Stall torque	mNm	1.22	1.32	1.1
8 Stall current	A	0.675	0.507	0.332
9 Max. efficiency	%	53	54	50
Characteristics				
10 Terminal resistance phase to phase	Ω	4.44	8.88	18.1
11 Terminal inductance phase to phase	mH	0.12	0.25	0.4
12 Torque constant	mNm/A	1.81	2.61	3.3
13 Speed constant	rpm/V	5270	3660	2890
14 Speed/torque gradient	rpm/mNm	12900	12500	15800
15 Mechanical time constant	ms	32.1	30.9	39.3
16 Rotor inertia	gcm ²	0.237	0.237	0.237

Specifications

Thermal data	
17 Thermal resistance housing-ambient	49.2 K/W
18 Thermal resistance winding-housing	13.2 K/W
19 Thermal time constant winding	1.47 s
20 Thermal time constant motor	73.8 s
21 Ambient temperature	-20...+85°C
22 Max. winding temperature	+100°C
Mechanical data (preloaded ball bearings)	
23 Max. speed	25000 rpm
24 Axial play at axial load < 0.5 N	0 mm
24 Axial play at axial load > 0.5 N	0.1 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	0.15 N
27 Max. force for press fits (static) (static, shaft supported)	15 N
27 Max. force for press fits (static) (static, shaft supported)	70 N
28 Max. radial load, 4 mm from flange	0.4 N

Other specifications

29 Number of pole pairs	4
30 Number of phases	3
31 Weight of motor	3 g

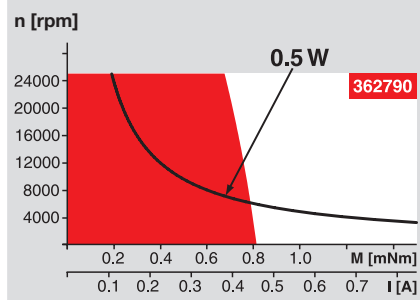
Values listed in the table are nominal.

Connection	with Hall sensors	sensorless	Part number
Pin 1	Motor winding 1	Motor winding 1	52207-0433
Pin 2	Motor winding 2	Motor winding 2	52089-0419
Pin 3	Motor winding 3	Motor winding 3	84953-4
Pin 4	V _{Hall} 3.8...24 VDC	Y	
Pin 5	GND		
Pin 6	Hall sensor 1		
Pin 7	Hall sensor 2		
Pin 8	Hall sensor 3		

Pin for design with Hall sensors:
FPC, 8-pol, Pitch 0.5 mm, top contact style
Wiring diagram for Hall sensors see p. 37

Option
Sleeve bearings in place of ball bearings

Operating Range



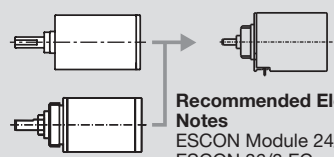
Comments

- 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 20–27

- Planetary Gearhead**
 $\varnothing 10$ mm
0.005 - 0.1 Nm
Page 313
- Planetary Gearhead**
 $\varnothing 10$ mm
0.01 - 0.15 Nm
Page 314



- Recommended Electronics:**
- | Notes | Page 26 |
|----------------------|---------|
| ESCON Module 24/2 | 416 |
| ESCON 36/3 EC | 417 |
| ESCON Mod. 50/4 EC-S | 417 |
| DEC Module 24/2 | 420 |
| EPOS2 24/2 | 424 |
| EPOS2 Module 36/2 | 424 |