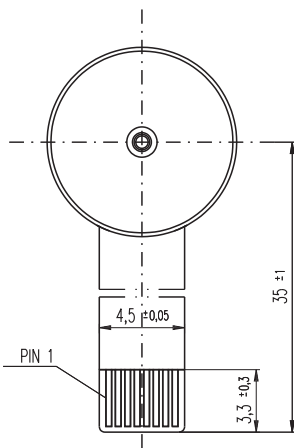


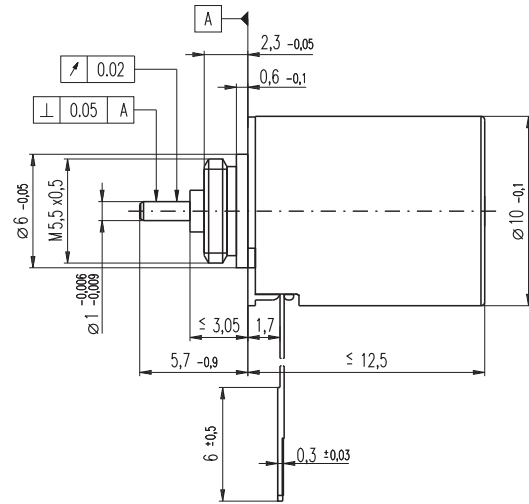
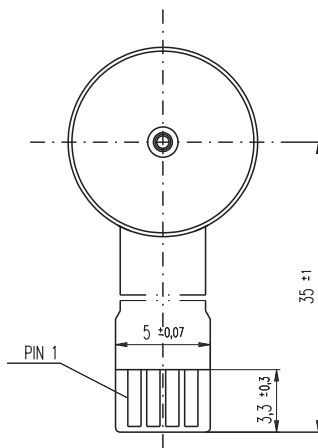
# EC 9.2 flat $\varnothing 9.2$ mm, brushless, 0.5 Watt

**NEW**

**A with hall sensors**



**B sensorless**



**M 2.5:1**

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

**Order Number**

A with hall sensors	<b>362790</b>	370444	370445
B sensorless	<b>371119</b>	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	14700	15400	15900
3	No load current	mA	58.8	41.6	33.3
4	Nominal speed	rpm	3720	4130	4010
5	Nominal torque	mNm	0.829	0.879	0.742
6	Nominal current	A	0.5	0.366	0.248
7	Stall torque	mNm	1.19	1.29	1.07
8	Starting current	A	0.675	0.507	0.332
9	Max. efficiency	%	51	52	48
<b>Characteristics</b>					
10	Terminal resistance phase to phase	$\Omega$	4.44	8.88	18.1
11	Terminal inductance phase to phase	mH	0.12	0.25	0.4
12	Torque constant	mNm / A	1.77	2.55	3.23
13	Speed constant	rpm / V	5400	3740	2960
14	Speed / torque gradient	rpm / mNm	13600	13000	16600
15	Mechanical time constant	ms	20.3	28.3	24.8
16	Rotor inertia	gcm <sup>2</sup>	0.143	0.143	0.143

**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 38.1 s
  - 21 Ambient temperature -20 ... +85°C
  - 22 Max. permissible winding temperature +100°C
- Mechanical data (preloaded ball bearings)**
- 23 Max. permissible speed 25000 rpm
  - 24 Axial play at axial load < 0.5 N 0 mm
  - > 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) 15 N
  - (static, shaft supported) 70 N
  - 28 Max. radial loading, 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

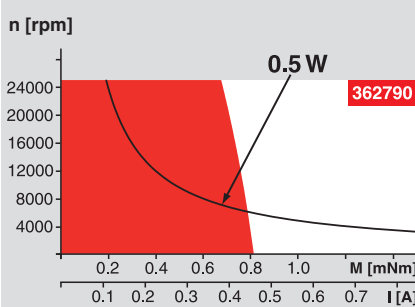
Values listed in the table are nominal.

Connection with hall sensors	sensorless
Pin 1	Motor winding 1
Pin 2	Motor winding 2
Pin 3	Motor winding 3
Pin 4	V <sub>Hall</sub> 3...18 VDC
Pin 5	Y
Pin 6	GND
Pin 7	Hall sensor 1
Pin 8	Hall sensor 2

Connector	Article number	Article number
FCI	SFV8R-2STE1LF	
Global Shine	GS200-08 1 1 1-2	
MOLEX	52745-0896	52207-0485
MOLEX		52089-0419
TYCO		84953-4

Pin for design with Hall sensors:  
FPC, 8 pole, pitch 0.5 mm, top contact style  
Wiring diagram for Hall sensors see page 29

**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 16 - 21

**Recommended Electronics:**  
DECS 50/5 Page 288  
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