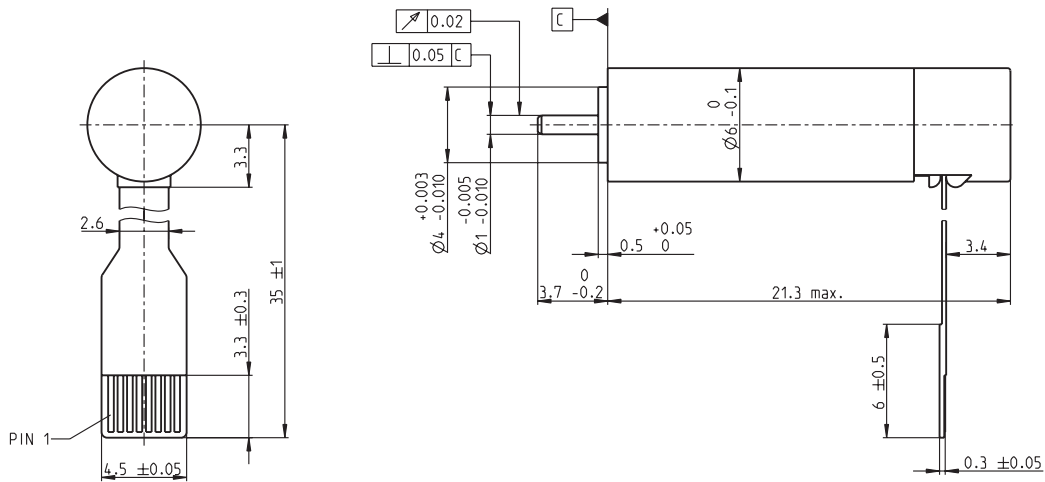


# EC 6 $\varnothing 6$ mm, brushless, 1.2 Watt



M 2.5:1

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

## Order Number

310599	250101
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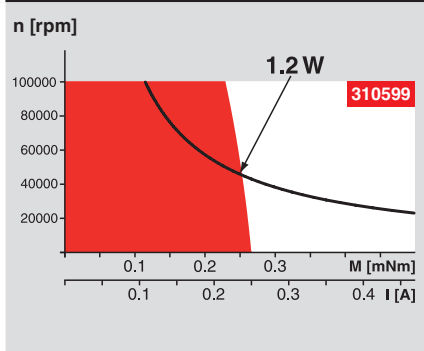
## Motor Data (provisional)

Values at nominal voltage			
1 Nominal voltage	V	6.0	12.0
2 No load speed	rpm	45100	34400
3 No load current	mA	53.1	19
4 Nominal speed	rpm	22400	11200
5 Nominal torque (max. continuous torque)	mNm	0.251	0.26
6 Nominal current (max. continuous current)	A	0.265	0.105
7 Stall torque	mNm	0.542	0.427
8 Starting current	A	0.480	0.147
9 Max. efficiency	%	45	41
Characteristics			
10 Terminal resistance phase to phase	$\Omega$	12.5	81.5
11 Terminal inductance phase to phase	mH	0.0911	0.602
12 Torque constant	mNm / A	1.13	2.9
13 Speed constant	rpm / V	8470	3290
14 Speed / torque gradient	rpm / mNm	93800	92500
15 Mechanical time constant	ms	4.91	4.84
16 Rotor inertia	gcm <sup>2</sup>	0.005	0.005

## Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 75 K / W
  - 18 Thermal resistance winding-housing 5.0 K / W
  - 19 Thermal time constant winding 0.467 s
  - 20 Thermal time constant motor 80.2 s
  - 21 Ambient temperature -20 ... +100°C
  - 22 Max. permissible winding temperature +125°C
- Mechanical data (preloaded ball bearings)**
- 23 Max. permissible speed 100000 rpm
  - 24 Axial play at axial load < 0.15 N 0 mm
  - > 0.15 N max. 0.06 mm preloaded
  - 25 Radial play
  - 26 Max. axial load (dynamic) 0.1 N
  - 27 Max. force for press fits (static) 10 N
  - 28 Max. radial loading, 2 mm from flange 2 N

## 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**

## Other specifications

- 29 Number of pole pairs 1
- 30 Number of phases 3
- 31 Weight of motor 2.8 g

Values listed in the table are nominal.

**Connection**

- Pin 1 Motor winding 3
- Pin 2 Motor winding 2
- Pin 3 Hall sensor 3
- Pin 4 V<sub>Hall</sub> 4.5 ... 18 VDC
- Pin 5 GND
- Pin 6 Hall sensor 1
- Pin 7 Hall sensor 2
- Pin 8 Motor winding 1

Connector for Flexprint, MOLEX 52745-0896, FPC, 8 pole, pitch 0.5 mm, top contact style.  
Wiring diagram for Hall sensors see page 27

## maxon Modular System

**Planetary**  
 $\varnothing 6$  mm  
0.002 - 0.03 Nm  
Page 202

**Mib**  
 $\varnothing 8$  mm  
0.006 - 0.016 Nm  
Page 203

Overview on page 16 - 21

**Encoder MILE**  
64 Imp.,  
3 channels  
Page 254

**Recommended Electronics:**  
DEC 24/1 318305 Page 289  
DEC Module 24/2 290  
EPOS 24/1 304  
EPOS2 Module 36/2 304  
EPOS 24/1 for MILE on request

**Notes 20**