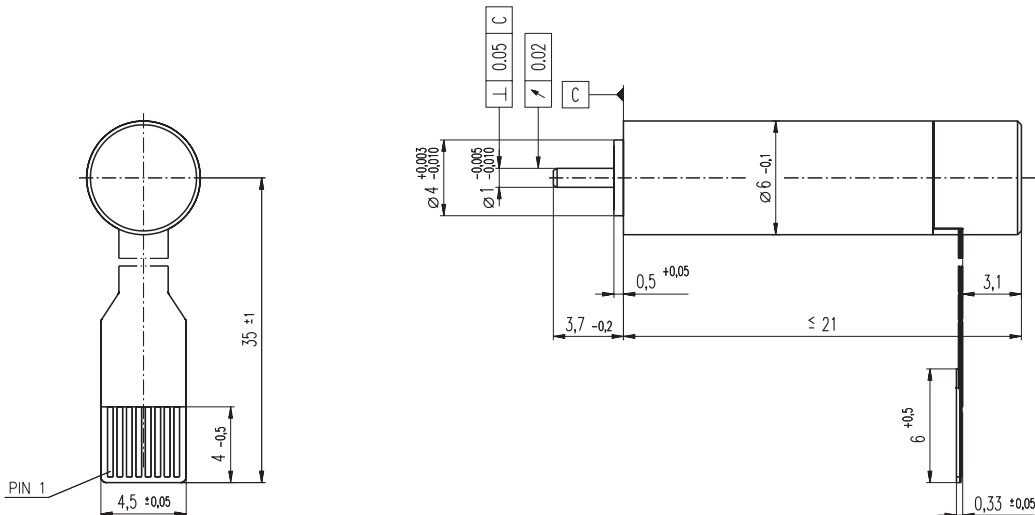


# EC 6 Ø6 mm, brushless, 1.2 Watt



M 2.5:1

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

## Order Number

310599      250101

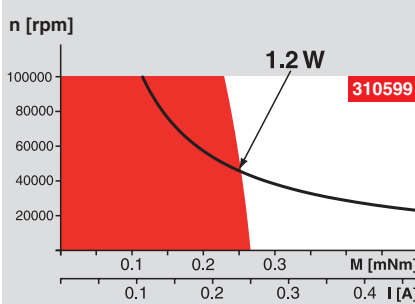
## Motor Data (provisional)

Values at nominal voltage		310599	250101	
1	Nominal voltage	V	6.0	12.0
2	No load speed	rpm	47500	36100
3	No load current	mA	57.4	20.5
4	Nominal speed	rpm	23800	11900
5	Nominal torque (max. continuous torque)	mNm	0.232	0.241
6	Nominal current (max. continuous current)	A	0.265	0.105
7	Stall torque	mNm	0.509	0.402
8	Starting current	A	0.480	0.147
9	Max. efficiency	%	43	39
<b>Characteristics</b>				
10	Terminal resistance phase to phase	Ω	12.5	81.5
11	Terminal inductance phase to phase	mH	0.0911	0.602
12	Torque constant	mNm / A	1.06	2.73
13	Speed constant	rpm / V	9010	3500
14	Speed / torque gradient	rpm / mNm	106000	105000
15	Mechanical time constant	ms	5.56	5.48
16	Rotor inertia	gcm <sup>2</sup>	0.00500	0.00500

## 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 0.464 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
  - 25 Radial play preloaded 0.1 N
  - 26 Max. axial load (dynamic) 10 N
  - 27 Max. force for press fits (static) 8 N
  - 28 Max. radial loading, 2 mm from flange

## 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 ... 12 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 26

## Option

- Sterilisable version

## maxon Modular System

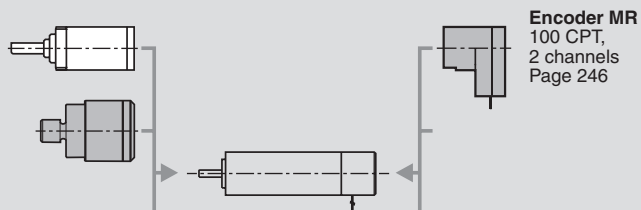
Overview on page 16 - 21

### Planetary Gearhead

- Ø6 mm
- 0.002 - 0.03 Nm
- Page 203

### Micro Harmonic Drive®

- Ø8 mm
- 0.006 - 0.016 Nm
- Page 204



## Recommended Electronics:

- DEC 24/1 Page 276
- EPOS 24/1 Page 286

Notes

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