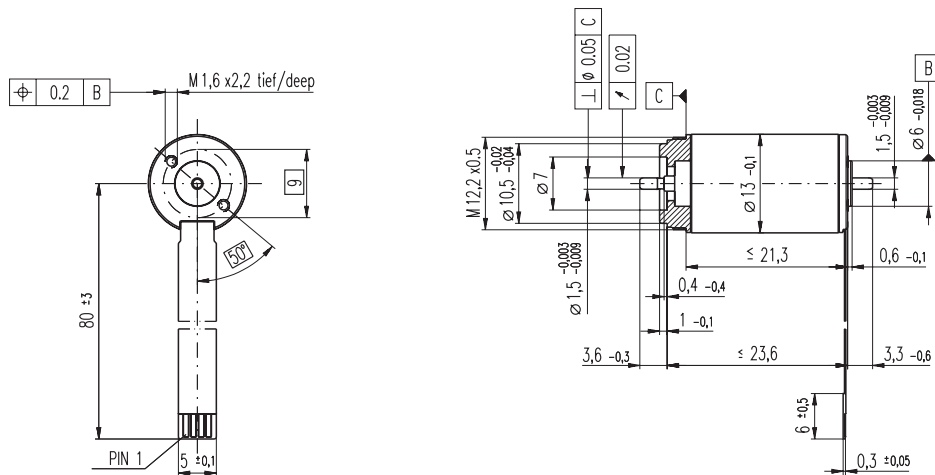


EC 13 \varnothing 13 mm, brushless, 6 Watt



M 1:1

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

Order Number

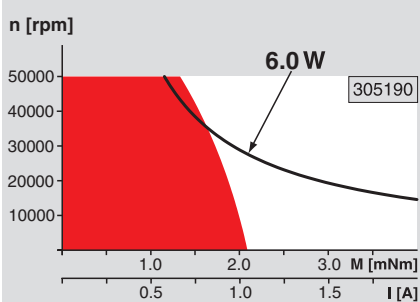
305190 305191 305192 305193 305194

Motor Data (provisional)		305190	305191	305192	305193	305194	
Values at nominal voltage							
1	Nominal voltage	V	6.0	9.0	12.0	18.0	24.0
2	No load speed	rpm	28000	29800	26800	27300	26900
3	No load current	mA	233	171	108	67.4	54.8
4	Nominal speed	rpm	20500	22800	19400	19600	19300
5	Nominal torque (max. continuous torque)	mNm	2.14	2.26	2.25	2.22	2.14
6	Nominal current (max. continuous current)	A	1.30	0.967	0.642	0.424	0.311
7	Stall torque	mNm	8.30	9.93	8.47	8.13	7.83
8	Starting current	A	4.30	3.62	2.09	1.36	0.976
9	Max. efficiency	%	60	63	61	62	60
Characteristics							
10	Terminal resistance phase to phase	Ω	1.40	2.48	5.74	13.2	24.6
11	Terminal inductance phase to phase	mH	0.0206	0.0416	0.0910	0.198	0.357
12	Torque constant	mNm / A	1.93	2.74	4.05	5.98	8.03
13	Speed constant	rpm / V	4950	3480	2360	1600	1190
14	Speed / torque gradient	rpm / mNm	3580	3160	3340	3530	3640
15	Mechanical time constant	ms	6.18	5.46	5.77	6.10	6.29
16	Rotor inertia	gcm ²	0.165	0.165	0.165	0.165	0.165

Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 32 K / W
 - 18 Thermal resistance winding-housing 2.46 K / W
 - 19 Thermal time constant winding 0.716 s
 - 20 Thermal time constant motor 188 s
 - 21 Ambient temperature -40 ... +100°C
 - 22 Max. permissible winding temperature +155°C
- Mechanical data (preloaded ball bearings)**
- 23 Max. permissible speed 50000 rpm
 - 24 Axial play at axial load < 1.5 N 0 mm
 - > 1.5 N max. 0.15 mm preloaded
 - 25 Radial play 1.5 N
 - 26 Max. axial load (dynamic) 40 N
 - 27 Max. force for press fits (static) (static, shaft supported) 250 N
 - 28 Max. radial loading, 5 mm from flange 5 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 15 g

Values listed in the table are nominal.

Connection

- Pin 1 Motor winding 1
- Pin 2 Motor winding 2
- Pin 3 Motor winding 3
- Pin 4 N.C.

Connector Article number

- TYCO 84953-4
- MOLEX 52207-0485
- MOLEX 52089-0419

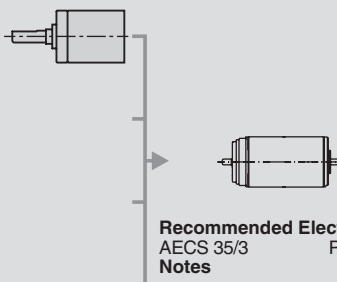
Option

- Hall sensors on request
- Encoder MR on request

maxon Modular System

Planetary Gearhead

- \varnothing 13 mm
- 0.2 - 0.35 Nm
- Page 210



Recommended Electronics:
AECS 35/3 Page 276
Notes 20

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