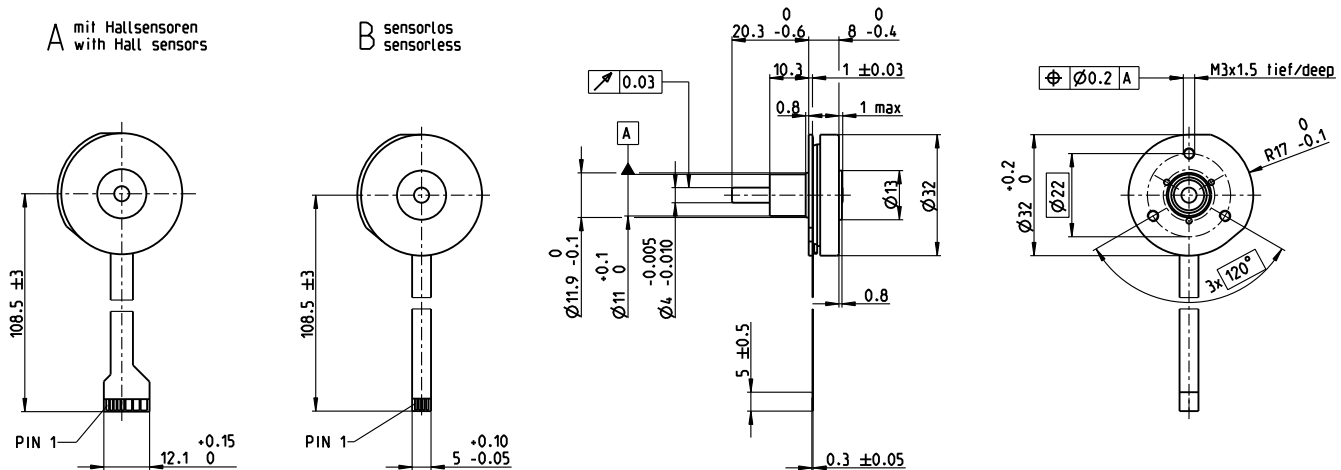


EC 32 flat Ø32 mm, brushless, 6 Watt



M 1:2

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

Part Numbers

A with Hall sensors	339259	200187	339260	339261
B sensorless	339263	200138	339264	339265

Motor Data

Values at nominal voltage		6	9	12	24
1 Nominal voltage	V	6	9	12	24
2 No load speed	rpm	9210	8380	7970	9310
3 No load current	mA	186	107	75.6	46.2
4 Nominal speed	rpm	3860	3640	3210	4480
5 Nominal torque (max. continuous torque)	mNm	7.61	8.89	7.98	9.42
6 Nominal current (max. continuous current)	A	1.37	0.929	0.614	0.401
7 Stall torque	mNm	15.5	19	15.7	22.8
8 Starting current	A	2.73	2	1.19	0.995
9 Max. efficiency	%	55	60	57	62
Characteristics		2.2	4.5	10.1	24.1
10 Terminal resistance phase to phase	Ω	2.2	4.5	10.1	24.1
11 Terminal inductance phase to phase	mH	0.378	1.06	2.04	6.19
12 Torque constant	mNm/A	5.67	9.5	13.2	23
13 Speed constant	rpm/V	1680	1010	724	416
14 Speed/torque gradient	rpm/mNm	651	476	551	437
15 Mechanical time constant	ms	94.8	69.3	80.3	63.6
16 Rotor inertia	gcm ²	13.9	13.9	13.9	13.9

Specifications

Thermal data	
17 Thermal resistance housing-ambient	8.25 K/W
18 Thermal resistance winding-housing	6.21 K/W
19 Thermal time constant winding	3.48 s
20 Thermal time constant motor	22.1 s
21 Ambient temperature	-40...+100°C
22 Max. winding temperature	+125°C

Mechanical data (preloaded ball bearings)	
23 Max. permissible speed	12000 rpm
24 Axial play at axial load < 5.0 N	0 mm
> 5.0 N	typ. 0.6 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	4.8 N
27 Max. force for press fits (static) (static, shaft supported)	45 N
28 Max. radial load, 7.5 mm from flange	1000 N
	5.5 N

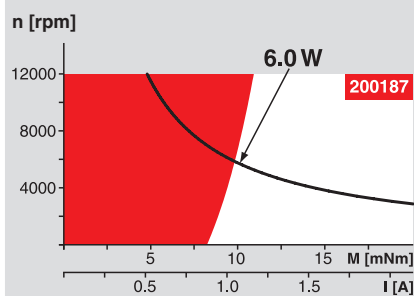
Other specifications

29 Number of pole pairs	4
30 Number of phases	3
31 Weight of motor	32 g

Values listed in the table are nominal.

Connection	with Hall sensors	sensorless
Pin 1	V _{Hall} 3.5...24 VDC	Motor winding 1
Pin 2	Hall sensor 3	Motor winding 2
Pin 3	Hall sensor 1	Motor winding 3
Pin 4	Hall sensor 2	neutral point
Pin 5	GND	
Pin 6	Motor winding 3	
Pin 7	Motor winding 2	
Pin 8	Motor winding 1	
Adapter	Part number	Part number
see p. 362	220300	220310
Connector	Part number	Part number
Tyco	1-84953-1	84953-4
Molex	52207-1133	52207-0433
Molex	52089-1119	52089-0419
Pin for design with Hall sensors:		
FPC, 11-pol, Pitch 1.0 mm, top contact style		
Wiring diagram for Hall sensors see p. 35		

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

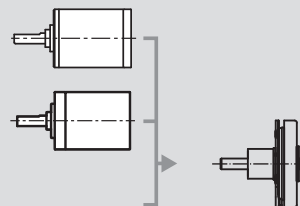
Overview on page 20–25

Planetary Gearhead

Ø22 mm
0.5 - 1.0 Nm
Page 262

Planetary Gearhead

Ø22 mm
0.5 - 2.0 Nm
Page 265



Recommended Electronics:

ESCON 36/3 EC	Page 342
ESCON Mod. 50/4 EC-S	343
ESCON Module 50/5	343
ESCON 50/5	344
DEC Module 24/2	346
DEC Module 50/5	346
EPOS2 24/2	350
EPOS2 Module 36/2	350
EPOS3 70/10 EtherCAT	357
MAXPOS 50/5	360
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