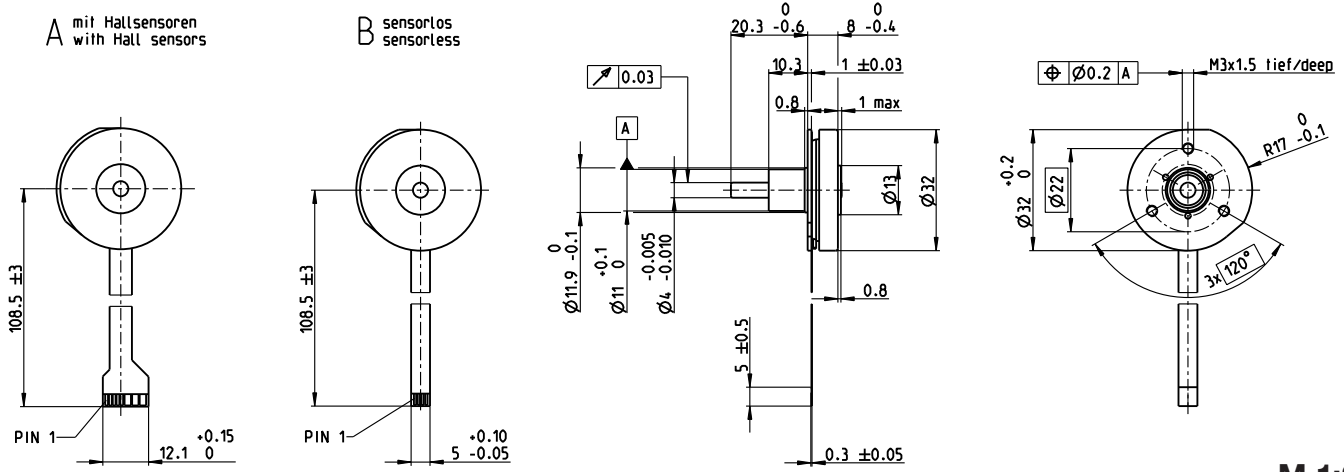


EC 32 flat Ø32 mm, brushless, 6 Watt



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 Stall current	A	2.73	2	1.19	0.995
9 Max. efficiency	%	55	60	57	62
Characteristics		6	9	12	24
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. 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, 15 mm from flange	1000 N	
	10.5 N	

Other specifications

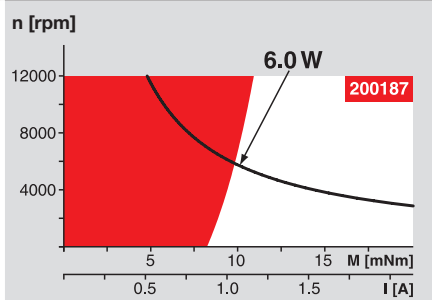
29 Number of pole pairs	4
30 Number of phases	3
31 Weight of motor	32 g

Values listed in the table are nominal.

Connection	with Hall sensors	sensorless	Part number
Pin 1	V _{Hall} 3.5...24 VDC	Motor winding 1	220300
Pin 2	Hall sensor 3	Motor winding 2	220310
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. 437	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. 37

Operating Range



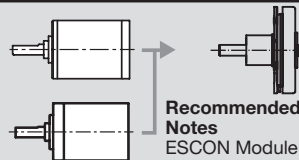
Comments

- 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 20–27

- Planetary Gearhead**
Ø22 mm
0.5 - 1.0 Nm
Page 329
- Planetary Gearhead**
Ø22 mm
0.5 - 2.0 Nm
Page 332



- Recommended Electronics:**
- | Notes | Page 26 |
|----------------------|---------|
| ESCON Module 24/2 | 416 |
| ESCON 36/3 EC | 417 |
| ESCON Mod. 50/4 EC-S | 417 |
| DEC Module 24/2 | 420 |
| EPOS2 24/2 | 424 |
| EPOS2 Module 36/2 | 424 |
| MAXPOS 50/5 | 435 |