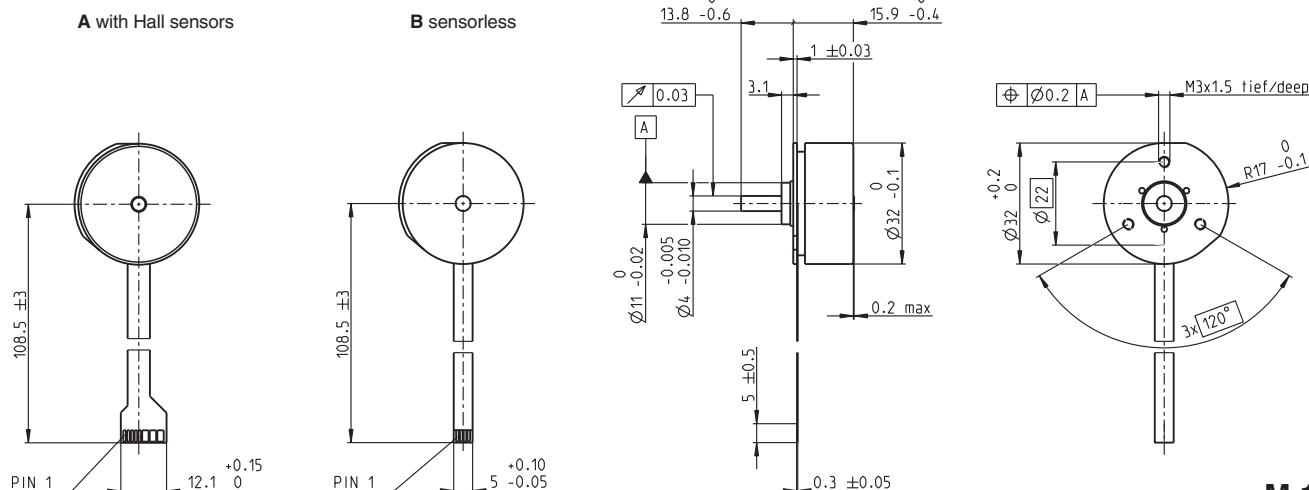


EC 32 flat Ø32 mm, brushless, 15 Watt



M 1:2

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

Part Numbers

A with Hall sensors	339267	339268	267121	339269
B sensorless	339271	339272	226006	339273

Motor Data

Values at nominal voltage					
1 Nominal voltage	V	9	12	24	48
2 No load speed	rpm	3720	4610	4530	4780
3 No load current	mA	74.7	75.7	36.9	19.9
4 Nominal speed	rpm	2090	2810	2760	2940
5 Nominal torque (max. continuous torque)	mNm	24.6	25.1	25.5	24.7
6 Nominal current (max. continuous current)	A	1.06	1	0.5	0.257
7 Stall torque	mNm	70	84.1	85.8	84.1
8 Starting current	A	3.13	3.49	1.75	0.906
9 Max. efficiency	%	72	73	74	73
Characteristics					
10 Terminal resistance phase to phase	Ω	2.87	3.43	13.7	53
11 Terminal inductance phase to phase	mH	1.61	1.87	7.73	27.8
12 Torque constant	mNm/A	22.4	24.1	49	92.8
13 Speed constant	rpm/V	427	397	195	103
14 Speed/torque gradient	rpm/mNm	54.9	56.6	54.5	58.7
15 Mechanical time constant	ms	20.1	20.7	20	21.5
16 Rotor inertia	gcm ²	35	35	35	35

Specifications

Thermal data		
17 Thermal resistance housing-ambient	9.04 K/W	
18 Thermal resistance winding-housing	4.99 K/W	
19 Thermal time constant winding	8.78 s	
20 Thermal time constant motor	100 s	
21 Ambient temperature	-40...+100°C	
22 Max. permissible winding temperature	+125°C	
Mechanical data (preloaded ball bearings)		
23 Max. permissible speed	10000 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)	45 N	
(static, shaft supported)	1000 N	
28 Max. radial loading, 7.5 mm from flange	5.5 N	

Other specifications

29 Number of pole pairs	4
30 Number of phases	3
31 Weight of motor	46 g

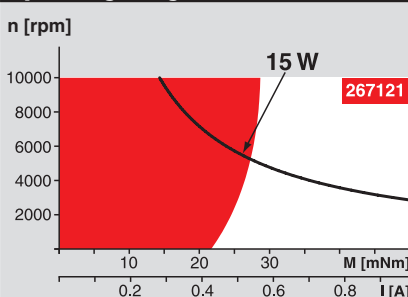
Values listed in the table are nominal.

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. 339	220300	220310
Connector	Part number	Part number
Tyco	1-84953-1	84953-4
Molex	52207-1185	52207-0485
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. 31

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

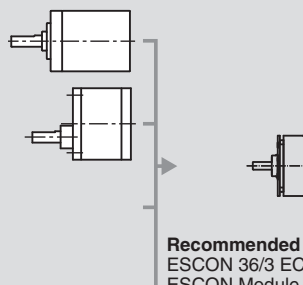
Overview on page 20 - 25

Planetary Gearhead

Ø32 mm
0.75 - 6 Nm
Page 261-265

Spur Gearhead

Ø38 mm
0.1 - 0.6 Nm
Page 269



Recommended Electronics:

ESCON 36/3 EC	Page 320
ESCON Module 50/5	321
ESCON 50/5	321
DECS 50/5	324
DEC Module 24/2	325
DEC Module 50/5	325
EPOS2 Module 36/2	330
EPOS2 24/2	330
EPOS3 70/10 EtherCAT	337
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