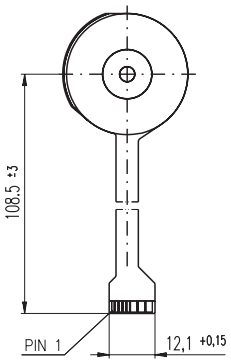
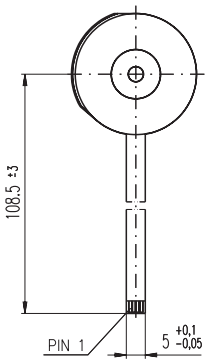
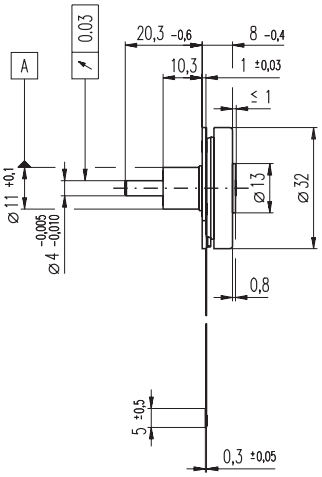
EC 32 flat ∅32 mm, brushless, 6 Watt

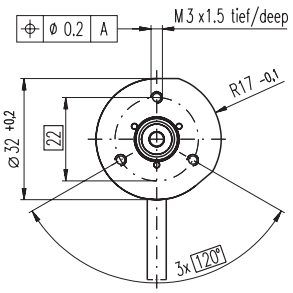
A with hall sensors



B sensorless







M 1:2

Stock program
Standard program
Special program (on request)

	Order Number			
A with hall sensors	339259	200187	339260	339261
B sensorless	339263	200138	339264	339265

Motor Data									
	Values at nominal voltage								
1	Nominal voltage	V	6.0	9.0	12.0	24.0			
2	No load speed	rpm	9210	8380	7970	9310			
3	No load current	mA	186	107	75.6	46.2			
4	Nominal speed	rpm	4030	3710	3240	4500			
5	Nominal torque (max. continuous torque)	mNm	7.35	8.74	7.92	9.38			
6	Nominal current (max. continuous current)	A	1.33	0.915	0.609	0.399			
7	Stall torque	mNm	15.5	19.0	15.7	22.8			
8	Starting current	A	2.73	2.00	1.19	0.995			
9	Max. efficiency	%	55	60	57	62			
	Characteristics								
10	Terminal resistance phase to phase	Ω	2.20	4.50	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	9.50	13.2	23.0			
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	gcm²	13.9	13.9	13.9	13.9			

Specifications

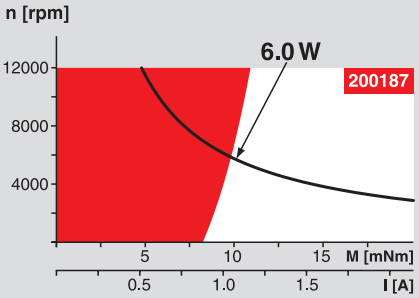
	Thermal data		
17	Thermal resistance housing-ambient		6.28 K / W
18	Thermal resistance winding-housing		5.83 K / W
19	Thermal time constant winding		3.35 s
20	Thermal time constant motor		16.8 s
21	Ambient temperature		-40 ... +100°C
22	Max. permissible winding temperature		+125°C
	Mechanical data (preloaded 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)		50 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		32 g

Values listed in the table are nominal.

Connection	**with hall sensors**	**sensorless**
Pin 1	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	**Order number**	**Order number**
see p. 299	220300	220310
Connector	**Article number**	**Article number**
AMP	1-487951-1	487951-4
MOLEX	52207-1190	52207-0490
MOLEX	52089-1110	52089-0410

Pin for design with Hall sensors:
FPC, 11 pole, pitch 1.0 mm, top contact style
Wiring diagram for Hall sensors see page 29

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.

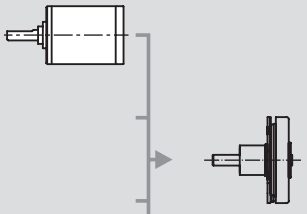
Short term operation
The motor may be briefly overloaded (recurring).

Assigned power rating

maxon Modular System

Overview on page 16 - 21

Planetary Gearhead
∅22 mm
0.5 - 1.0 Nm
Page 230



Recommended Electronics:

DECS 50/5	Page 284
DEC 24/1	284
DEC 24/3	285
DEC 50/5	285
DECV 50/5	286
EPOS 24/1	294
Notes	**20**