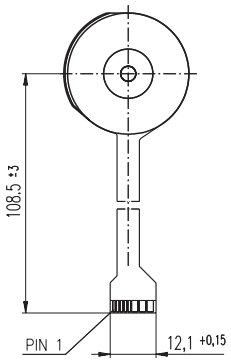
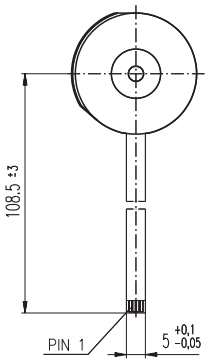
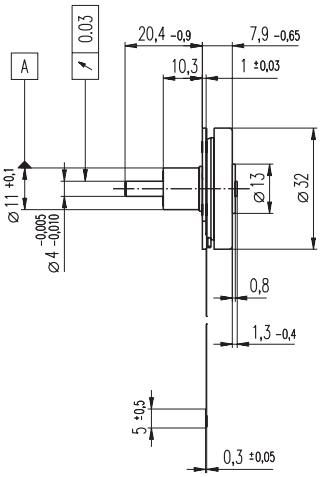
EC 32 Flat motor ∅32 mm, brushless, 3 Watt

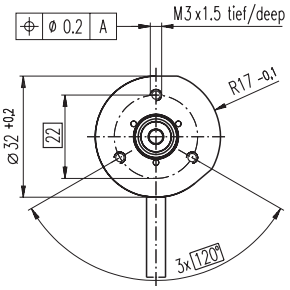
A with Hall sensors



B sensorless







Stock program
Standard program
Special program (on request!)

			Order Number							
		with Hall sensors	200187							
		sensorless		200138						
Motor Data										
1	Assigned power rating	W	3	3						
2	Nominal voltage	Volt	9.0	9.0						
3	No load speed	rpm	8600	8600						
4	Stall torque	mNm	20	20						
5	Speed/torque gradient	rpm/mNm	478.6	478.6						
6	No load current	mA	110	110						
7	Terminal resistance phase to phase	Ohm	4.50	4.50						
8	Max. permissible speed	rpm	12000	12000						
9	Max. continuous current at 5'000 rpm	A	0.94	0.94						
10	Max. continuous torque at 5'000 rpm	mNm	3.7	3.7						
11	Max. efficiency	%	60.2	60.2						
12	Torque constant	mNm/A	9.5	9.5						
13	Speed constant	rpm/V	1007	1007						
14	Mechanical time constant	ms	70.0	70.0						
15	Rotor inertia	gcm²	13.9	13.9						
16	Terminal inductance phase to phase	mH	1.070	1.070						
17	Thermal resistance housing-ambient	K/W	6.5	6.5						
18	Thermal resistance winding-housing	K/W	10.8	10.8						
19	Thermal time constant winding	s								
20	Thermal time constant stator	s								

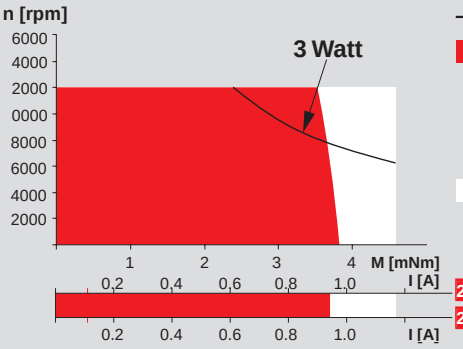
Specifications

- Axial preload > 5 N
- Max. **ball bearing** loads
  axial (dynamic) 2.8 N
  radial (7.5 mm from flange) 5.5 N
  Press-fit force (static) 50 N
- Ambient temperature range -40/+85°C
- Max. rotor temperature +85°C
- Weight of motor 32 g
- Version with and without Hall sensors
- 8-pole permanent magnet
- 3-phased coil stator with 2 pole shoes each
- Values listed in the table are nominal.

Connection	with Hall sensors	sensorless
Pin 1	4.5 ... 24V DC	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	

Connector	Article number	Article number
AMP	1-487952-1	487952-4
MOLEX	52271-1190	52207-0490
MOLEX	52089-1110	52089-0410

Operating Range



200187 Motor
200138 Motor

Comments

Details on page 150

Curve with constant output power

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).