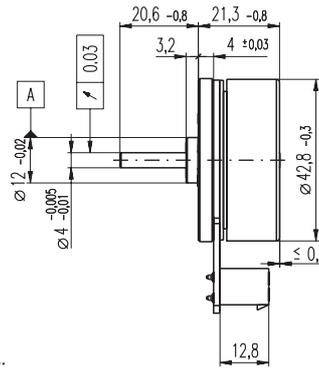
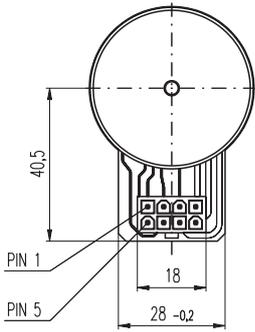
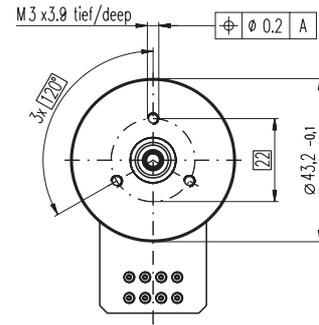


EC 45 flat $\varnothing 45$ mm, brushless, 50 Watt



Connector:
39-28-1083
MOLEX



M 1:2

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

Order Number

with Hall sensors **251601**

Motor Data

Values at nominal voltage			
1	Nominal voltage	V	24.0
2	No load speed	rpm	6700
3	No load current	mA	201
4	Nominal speed	rpm	5260
5	Nominal torque (max. continuous torque)	mNm	84.3
6	Nominal current (max. continuous current)	A	2.36
7	Stall torque	mNm	822
8	Starting current	A	24.5
9	Max. efficiency	%	83
Characteristics			
10	Terminal resistance phase to phase	Ω	0.978
11	Terminal inductance phase to phase	mH	0.573
12	Torque constant	mNm / A	33.5
13	Speed constant	rpm / V	285
14	Speed / torque gradient	rpm / mNm	8.32
15	Mechanical time constant	ms	11.8
16	Rotor inertia	gcm ²	135

Specifications

Thermal data		
17	Thermal resistance housing-ambient	4.25 K / W
18	Thermal resistance winding-housing	4.5 K / W
19	Thermal time constant windings	16.6 s
20	Thermal time constant motor	212 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 < 4.0 N	0 mm
	> 4.0 N	0.14 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	3.8 N
27	Max. force for press fits (static) (static, shaft supported)	50 N
28	Max. radial loading, 7.5 mm from flange	5.5 N
Other specifications		
29	Number of pole pairs	8
30	Number of phases	3
31	Weight of motor	110 g

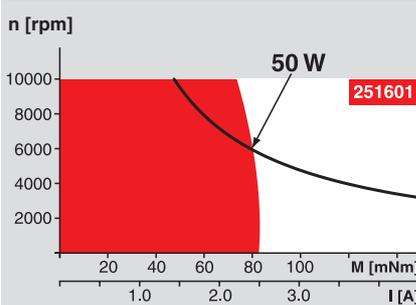
Values listed in the table are nominal.

Connection

Pin 1	Hall sensor 1*
Pin 2	Hall sensor 2*
Pin 3	4.5 ... 18 VDC
Pin 4	Motor winding 3
Pin 5	Hall sensor 3*
Pin 6	GND
Pin 7	Motor winding 1
Pin 8	Motor winding 2

*Internal pull-up (7 ... 13 k Ω) on pin 3
Wiring diagram for Hall sensors see p. 26

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).

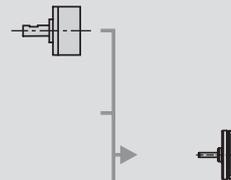
— Assigned power rating

maxon Modular System

Overview on page 17 - 21

Spur Gearhead

$\varnothing 45$ mm
0.5 - 2.0 Nm
Page 234



Recommended Electronics:

AECS 35/3	page 270
DEC 50/5	271
DECV 50/5	271
EPOS 24/1	278
EPOS 24/5	278
EPOS P 24/5	279
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