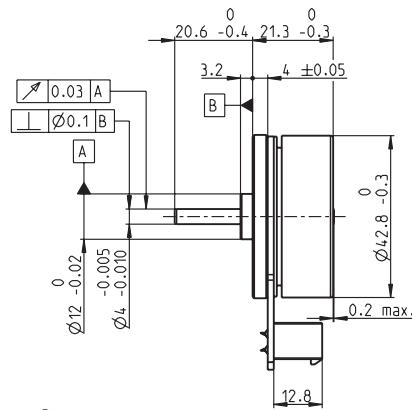
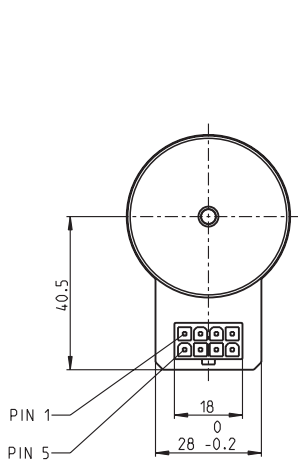
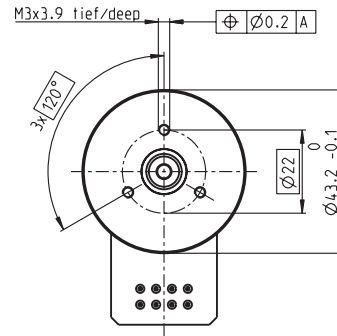


EC 45 flat $\varnothing 45$ mm, brushless, 50 Watt



Connector:
39-28-1083
MOLEX



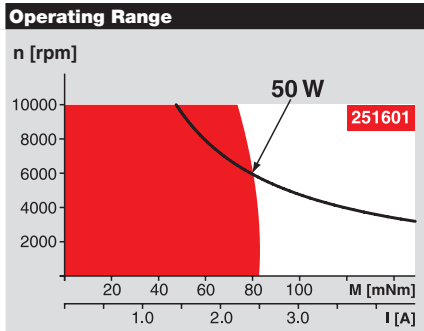
M 1:2

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

Order Number
with Hall sensors
339285 251601 339286 339287

Motor Data	with Hall sensors	339285	251601	339286	339287
Values at nominal voltage					
1 Nominal voltage	V	18.0	24.0	24.0	36.0
2 No load speed	rpm	6710	6700	4700	3360
3 No load current	mA	294	201	116	46.9
4 Nominal speed	rpm	5250	5260	3410	2320
5 Nominal torque (max. continuous torque)	mNm	96.9	84.3	64.2	94.3
6 Nominal current (max. continuous current)	A	3.54	2.36	1.32	0.861
7 Stall torque	mNm	1100	822	337	488
8 Starting current	A	43.6	24.5	7.10	4.86
9 Max. efficiency	%	85	83	77	82
Characteristics					
10 Terminal resistance phase to phase	Ω	0.413	0.978	3.38	7.41
11 Terminal inductance phase to phase	mH	0.322	0.573	1.15	5.15
12 Torque constant	mNm / A	25.1	33.5	47.5	101
13 Speed constant	rpm / V	380	285	201	95.0
14 Speed / torque gradient	rpm / mNm	6.24	8.32	14.3	7.00
15 Mechanical time constant	ms	8.82	11.8	20.3	9.90
16 Rotor inertia	gcm ²	135	135	135	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 winding	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	1000 N
	21 N



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**

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

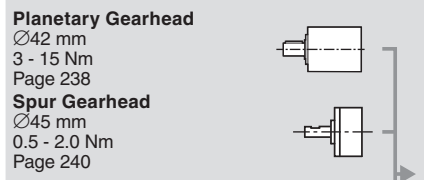
Pin 1	Hall sensor 1*
Pin 2	Hall sensor 2*
Pin 3	4.5 ... 18 VDC
Pin 4	Motor winding 3
Pin 5	Hall sensor 3*
Pin 6	GND
Pin 7	Motor winding 1
Pin 8	Motor winding 2

*Internal pull-up (7 ... 13 k Ω) on pin 3
Wiring diagram for Hall sensors see p. 29

Cable

Connection cable Universal, L = 500 mm	339380
Connection cable to EPOS, L = 500 mm	354045

maxon Modular System Overview on page 16 - 21



Recommended Electronics:

DECS 50/5	Page 289
DEC 24/3	290
DEC 50/5	291
DEC Module 50/5	291
DECV 50/5	297
EPOS2 Module 36/2	304
EPOS 24/1	304
EPOS2 24/5	305
EPOS P 24/5	308
Notes	20