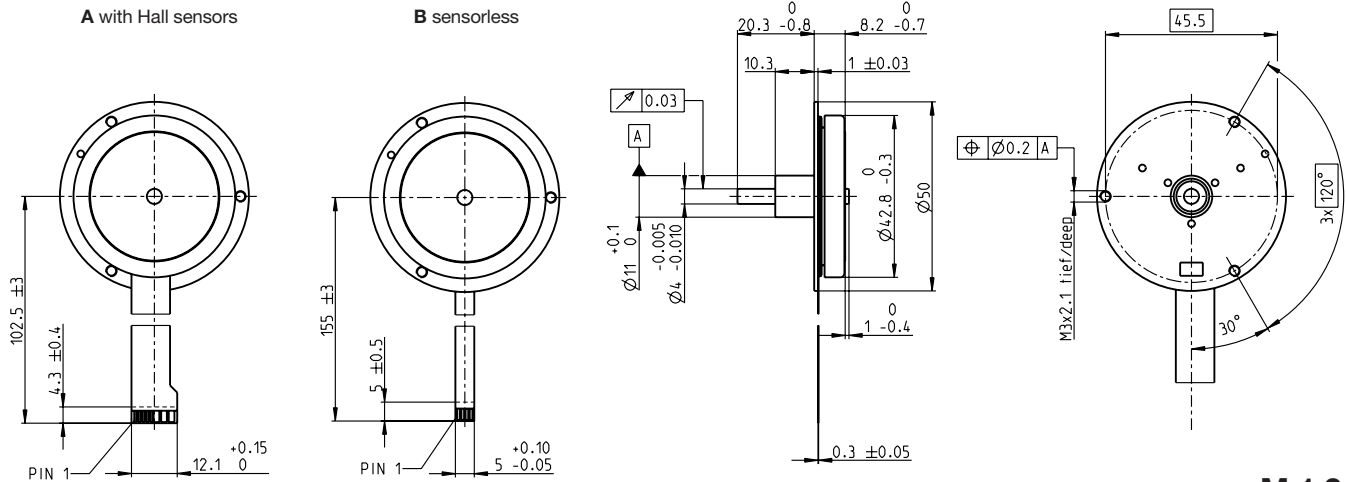


EC 45 flat $\varnothing 42.8$ mm, brushless, 12 Watt



M 1:2

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

		Part Numbers					
A with Hall sensors		200188		339275		339276	
B sensorless			200141		339277		339278

Motor Data

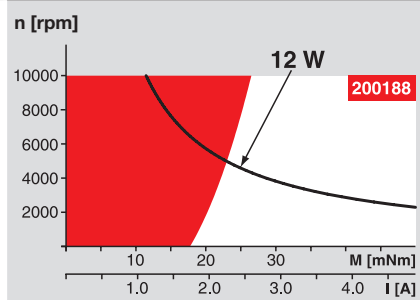
Values at nominal voltage		200188		200141		339275		339277		339276		339278	
1 Nominal voltage	V	9	9	12	12	24	24						
2 No load speed	rpm	8000	7980	8160	8150	7310	7300						
3 No load current	mA	147	147	115	115	47.6	47.6						
4 Nominal speed	rpm	4780	4540	4840	4720	4390	4360						
5 Nominal torque (max. continuous torque)	mNm	23.8	23.6	20.1	20	27	27.1						
6 Nominal current (max. continuous current)	A	2.04	2.04	1.37	1.37	0.766	0.768						
7 Stall torque	mNm	92.6	80.6	70.8	66.5	114	112						
8 Stall current	A	8.9	7.75	5.24	4.92	3.74	3.67						
9 Max. efficiency	%	77	75	73	73	79	79						
Characteristics													
10 Terminal resistance phase to phase	Ω	1.01	1.16	2.29	2.44	6.42	6.54						
11 Terminal inductance phase to phase	mH	0.32	0.32	0.541	0.541	2.75	2.75						
12 Torque constant	mNm/A	10.4	10.4	13.5	13.5	30.5	30.5						
13 Speed constant	rpm/V	918	918	706	706	313	313						
14 Speed/torque gradient	rpm/mNm	89.3	103	120	128	65.9	67.1						
15 Mechanical time constant	ms	48.9	56.1	65.5	69.8	36.1	36.8						
16 Rotor inertia	gcm ²	52.3	52.3	52.3	52.3	52.3	52.3						

Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 6.59 K/W
 - 18 Thermal resistance winding-housing 5.56 K/W
 - 19 Thermal time constant winding 8.36 s
 - 20 Thermal time constant motor 188 s
 - 21 Ambient temperature -40...+100°C
 - 22 Max. winding temperature +125°C
- Mechanical data (preloaded ball bearings)**
- 23 Max. 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 load, 15 mm from flange 12.5 N
- Other specifications**
- 29 Number of pole pairs 8
 - 30 Number of phases 3
 - 31 Weight of motor 57 g

Values listed in the table are nominal.

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 20–27

Recommended Electronics:	
Notes	Page 26
ESCON Module 24/2	416
ESCON 36/3 EC	417
ESCON Mod. 50/4 EC-S	417
DEC Module 24/2	420
EPOS2 24/2	424
EPOS2 Module 36/2	424
MAXPOS 50/5	435