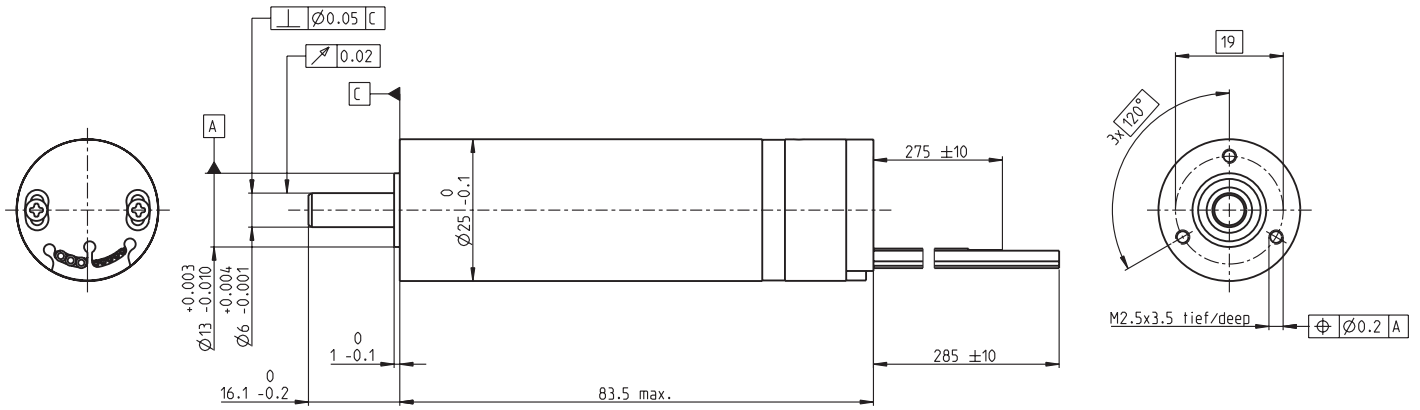
EC 25 ∅25 mm, brushless, 250 Watt

High Speed



M 3:2

Stock program
Standard program
Special program (on request)

Order Number

		351144
Motor Data (provisional)		
Values at nominal voltage		
1 Nominal voltage	V	36.0
2 No load speed	rpm	64100
3 No load current	mA	279
4 Nominal speed	rpm	62000
5 Nominal torque (max. continuous torque)	mNm	38.1
6 Nominal current (max. continuous current)	A	7.32
7 Stall torque	mNm	1580
8 Starting current	A	294
9 Max. efficiency	%	94
Characteristics		
10 Terminal resistance phase to phase	Ω	0.122
11 Terminal inductance phase to phase	mH	0.0137
12 Torque constant	mNm / A	5.36
13 Speed constant	rpm / V	1780
14 Speed / torque gradient	rpm / mNm	40.6
15 Mechanical time constant	ms	2.32
16 Rotor inertia	gcm²	5.45

Specifications

Thermal data		
17 Thermal resistance housing-ambient		6.52 K / W
18 Thermal resistance winding-housing		0.331 K / W
19 Thermal time constant winding		1.61 s
20 Thermal time constant motor		331 s
21 Ambient temperature		-20 ... +100°C
22 Max. permissible winding temperature		+125°C
Mechanical data (preloaded ball bearings)		
23 Max. permissible speed		70000 rpm
24 Axial play at axial load	< 9 N	0 mm
	> 9 N	max. 0.14 mm
25 Radial play		0.025 mm
26 Max. axial load (dynamic)		7 N
27 Max. force for press fits (static)		87 N
(static, shaft supported)		5080 N
28 Max. radial loading, 5 mm from flange		20 N
Other specifications		
29 Number of pole pairs		1
30 Number of phases		3
31 Weight of motor		240 g

Values listed in the table are nominal.

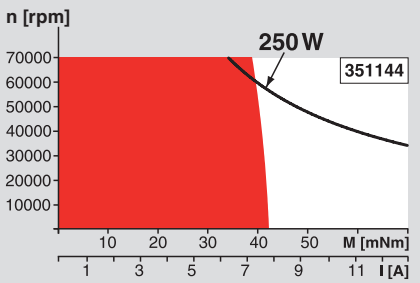
Connection, Motor (Cable AWG 18)

red	Motor winding 1
black	Motor winding 2
white	Motor winding 3

Connection, sensors (Cable AWG 26)

green	V_{Hall} 4.5 ... 24 VDC
blue	GND
red / grey	Hall sensor 1
black / grey	Hall sensor 2
white / grey	Hall sensor 3

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

Recommended Electronics:
DEC 70/10 Page **297**
Notes **20**