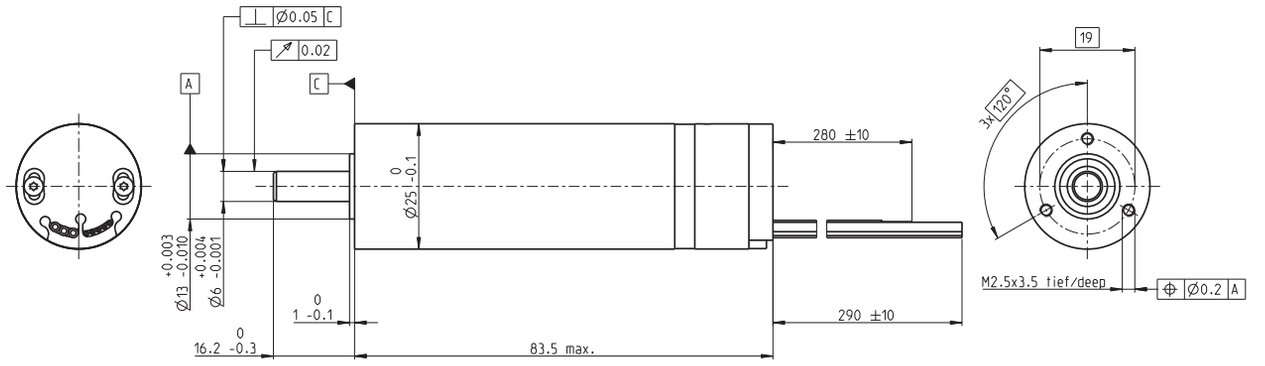
EC 25 ∅25 mm, brushless, 250 Watt

High Speed



M 3:2

Stock program
Standard program
Special program (on request)

Part Numbers

			351144							
Motor Data										
	Values at nominal voltage									
1	Nominal voltage	V	36							
2	No load speed	rpm	64100							
3	No load current	mA	242							
4	Nominal speed	rpm	62200							
5	Nominal torque (max. continuous torque)	mNm	35.1							
6	Nominal current (max. continuous current)	A	6.74							
7	Stall torque	mNm	1580							
8	Stall current	A	294							
9	Max. efficiency	%	94							
	Characteristics									
10	Terminal resistance phase to phase	Ω	0.122							
11	Terminal inductance phase to phase	mH	0.014							
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	6.54 K/W
18	Thermal resistance winding-housing	0.1 K/W
19	Thermal time constant winding	0.509 s
20	Thermal time constant motor	332 s
21	Ambient temperature	-20…+100°C
22	Max. winding temperature	+125°C

Mechanical data (preloaded ball bearings)

23	Max. 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)		5000 N
28	Max. radial load, 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)

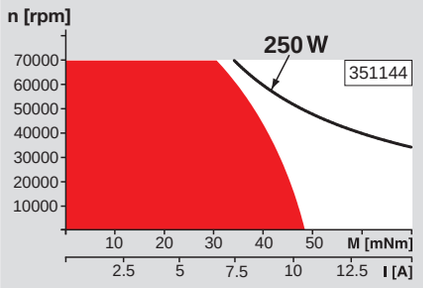
red	Motor winding 1
black	Motor winding 2
white	Motor winding 3

Connection sensors (Cable AWG 26)

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

Wiring diagram for Hall sensors see p. 35

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 Mod. 50/5	417
ESCON 50/5	418
ESCON 70/10	418
DEC Module 50/5	420