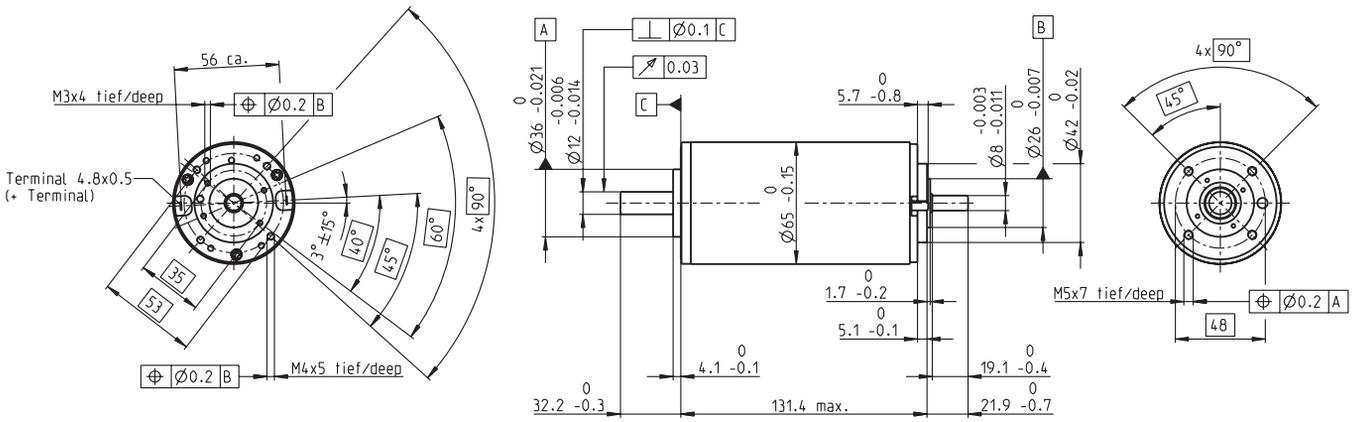
RE 65 ∅65 mm, Graphite Brushes, 250 Watt



M 1:4

Stock program
Standard program
Special program (on request)

Part Numbers

	353294	353295	353296	353297	353298	353299	353300	353301
Industrial Version IP54*	388984	388985	388986	388987	388988	388989	388990	388991

Motor Data

	Values at nominal voltage								
1	Nominal voltage	V	18	24	36	48	60	70	70	70
2	No load speed	rpm	3420	3960	3850	3560	3570	3340	3090	2610
3	No load current	mA	721	665	417	276	221	171	153	120
4	Nominal speed	rpm	3150	3710	3630	3340	3360	3130	2880	2410
5	Nominal torque (max. continuous torque)	mNm	442	485	628	722	758	796	809	865
6	Nominal current (max. continuous current)	A	10	9.4	7.62	5.97	5.01	4.19	3.93	3.54
7	Stall torque	mNm	14000	16200	18000	16600	16700	15500	14100	12600
8	Starting current	A	296	292	207	131	106	78.6	66.1	49.7
9	Max. efficiency	%	80	83	87	88	89	89	89	89
	Characteristics								
10	Terminal resistance	Ω	0.0609	0.0821	0.174	0.365	0.568	0.891	1.06	1.41
11	Terminal inductance	mH	0.0226	0.0308	0.076	0.161	0.251	0.393	0.458	0.643
12	Torque constant	mNm/A	47.5	55.4	87	127	158	198	214	253
13	Speed constant	rpm/V	201	172	110	75.4	60.4	48.3	44.7	37.7
14	Speed / torque gradient	rpm/mNm	0.258	0.256	0.22	0.218	0.217	0.218	0.222	0.21
15	Mechanical time constant	ms	3.74	3.46	3.18	3.05	3	2.97	2.97	2.94
16	Rotor inertia	gcm²	1380	1290	1380	1340	1320	1310	1280	1340

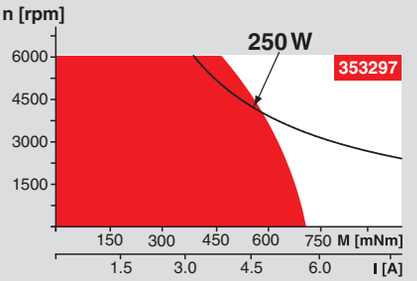
Specifications

	Thermal data	
17	Thermal resistance housing-ambient	1.3 K/W
18	Thermal resistance winding-housing	1.9 K/W
19	Thermal time constant winding	123 s
20	Thermal time constant motor	960 s
21	Ambient temperature	-30…+100°C
22	Max. permissible winding temperature	+125°C
	Mechanical data (preloaded ball bearings)	
23	Max. permissible speed	5500 rpm
24	Axial play at axial load < 25 N	0 mm
	> 25 N	0.1 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	70 N
27	Max. force for press fits (static)	420 N
	(static, shaft supported)	12000 N
28	Max. radial load, 15 mm from flange	350 N
	Other specifications	
29	Number of pole pairs	2
30	Number of commutator segments	26
31	Weight of motor	2100 g

Values listed in the table are nominal.
Explanation of the figures on page 79.

* Industrial version with radial shaft seal ring (resulting in increased no load current). IP54 protection only if mounted on brush side, in compliance with maxon modular system.

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.

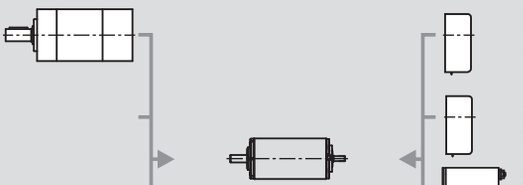
Short term operation
The motor may be briefly overloaded (recurring).

Assigned power rating

maxon Modular System

Overview on page 20–25

Planetary Gearhead
∅81 mm
20 - 120 Nm
Page 290



Recommended Electronics:

ESCON Mod. 50/5	Page 343
ESCON 50/5	344
ESCON 70/10	344
EPOS2 50/5	351
EPOS2 70/10	351
EPOS3 70/10 EtherCAT	357
MAXPOS 50/5	360
Notes	**22**

Encoder HEDS 5540
500 CPT,
3 channels
Page 326

Encoder HEDL 5540
500 CPT,
3 channels
Page 328

Industrial Version IP54*

Encoder HEDL 9140
Page 332

Brake AB 44
Page 376

End cap
Page 377