

M 1:4

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

Order Number

353294	353295	353296	353297	353298	353299	353300	353301
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Motor Data (provisional)

Values at nominal voltage		353294	353295	353296	353297	353298	353299	353300	353301
1	Nominal voltage	V	18.0	24	36	48	60	70	70
2	No load speed	rpm	3400	3950	3840	3550	3570	3340	3090
3	No load current	mA	853	797	499	328	263	181	148
4	Nominal speed	rpm	3170	3700	3620	3340	3360	3130	2880
5	Nominal torque (max. continuous torque)	mNm	423	440	581	679	718	774	776
6	Nominal current (max. continuous current)	A	9.72	8.72	7.16	5.68	4.79	4.09	3.81
7	Stall torque	mNm	14000	16200	18000	16600	16700	15500	14100
8	Starting current	A	296	292	207	131	106	78.6	66.1
9	Max. efficiency	%	79	82	86	87	88	89	88
Characteristics									
10	Terminal resistance	Ω	0.0609	0.0821	0.174	0.365	0.568	0.891	1.06
11	Terminal inductance	mH	0.0226	0.0308	0.076	0.161	0.251	0.393	0.458
12	Torque constant	mNm / A	47.5	55.4	87	127	158	198	214
13	Speed constant	rpm / V	201	172	110	75.4	60.4	48.3	44.7
14	Speed / torque gradient	rpm / mNm	0.258	0.256	0.22	0.218	0.217	0.218	0.222
15	Mechanical time constant	ms	3.74	3.46	3.18	3.05	3	2.97	2.94
16	Rotor inertia	gcm ²	1380	1290	1380	1340	1320	1310	1280

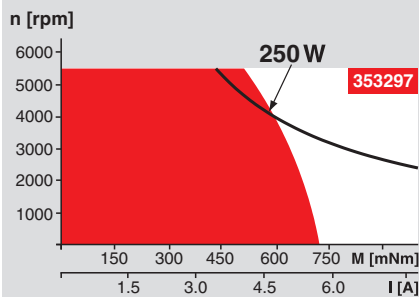
Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 1.3 K / W
 - 18 Thermal resistance winding-housing 1.85 K / W
 - 19 Thermal time constant winding 127 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 0.03 mm
 - 26 Max. axial load (dynamic) 70 N
 - 27 Max. force for press fits (static) 420 N
 - (static, shaft supported) 12000 N
 - 28 Max. radial loading, 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 49.

Industrial version with radial shaft seal ring
(resulting in increased no-load current)

Operating Range



Comments

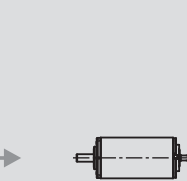
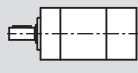
- Continuous operation**
In observation of above listed thermal resistance (lines 17 and 18) the maximum permissible winding temperature will be reached during continuous operation at 25°C ambient.
= Thermal limit.
- Short term operation**
The motor may be briefly overloaded (recurring).
- Assigned power rating**

maxon Modular System

Overview on page 16 - 21

Planetary Gearhead

- Ø81 mm
- 20 - 120 Nm
- Page 244



- Recommended Electronics:**
- ADS 50/5 Page 282
 - ADS 50/10 283
 - ADS_E 50/5 283
 - ADS_E 50/10 283
 - EPOS2 50/5 305
 - EPOS2 70/10 305
 - Notes 18

- Encoder HEDS 5540**
500 Imp.,
3 channels
Page 267
- Encoder HEDL 5540**
500 Imp.,
3 channels
Page 269
- Industrial Version IP54**
Encoder HEDL 9140
Page 272
- Brake AB 44**
Page 321
- End cap**
Page 322