maxon motor
driven by precision

Please find our works drawings for the parts supplied to Farnell. The parts are modified motors from the base motors (i.e. reduced shaft ready for use with the Gearheads or back shaft reduced ready for the encoder)

I have enclosed the Maxon base part number and the catalogue PDF that gives the electrical specifications

121391 MOTOR, 26MMDIA, 12VDC, 11W – Farnell Order Code 176-1305.
Maxon base part no 110937

121394 MOTOR, 26MMDIA, 24VDC, 11W – Farnell Order Code 176-1306.
Maxon base part no 110940

243066 MOTOR, 32MMDIA, 12VDC, 15W, THRO S – Farnell Order Code1761307
Maxon base part no 236653

240987 MOTOR, 32MMDIA, 24VDC, 15W, THRO S – Farnell Order Code1761308
Maxon base part no 236655

137576 MOTOR, 36MMDIA, 24VDC, 70W – Farnell Order Code 1761309
Maxon base no 118798

Maxon motor UK Ltd
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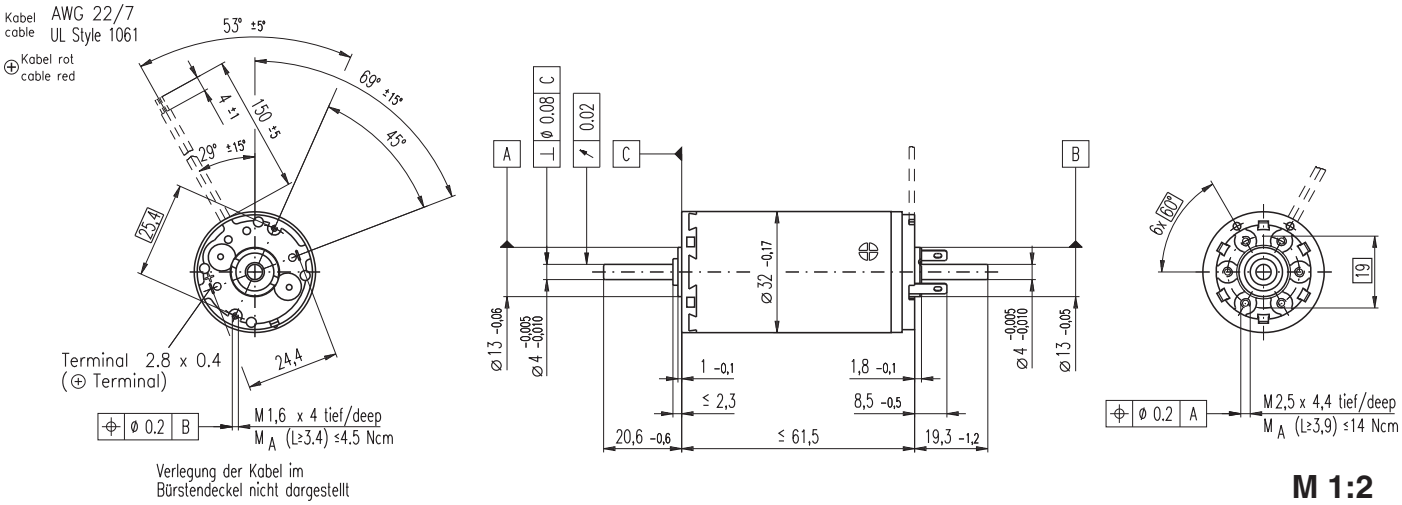
A-max 32 ∅32 mm, Graphite Brushes, 15 Watt



M 1:2

Stock program
Standard program
Special program (on request)

Order Number

with terminals	236651	236652	236653	236654	236655	236656	236657	236658	
with cables	353220	353221	353222	353223	353224	353225	353226	353227	
Motor Data									
	Values at nominal voltage								
1	Nominal voltage V	6.0	9.0	12.0	18.0	24.0	30.0	36.0	48.0
2	No load speed rpm	5830	4930	4670	5270	5930	5870	5830	3870
3	No load current mA	153	83.2	58.4	44.8	38.6	30.5	25.2	11.7
4	Nominal speed rpm	3800	2980	2860	3550	4180	4140	4090	2080
5	Nominal torque (max. continuous torque) mNm	31.4	33.1	36.0	37.5	36.7	37.1	36.8	36.9
6	Nominal current (max. continuous current) A	3.42	2.02	1.55	1.21	0.998	0.798	0.656	0.328
7	Stall torque mNm	99.7	87.4	95.9	118	127	128	125	81.3
8	Starting current A	10.4	5.12	3.98	3.66	3.34	2.66	2.15	0.698
9	Max. efficiency %	75	75	77	79	80	80	80	76
	Characteristics								
10	Terminal resistance Ω	0.577	1.76	3.02	4.92	7.19	11.3	16.7	68.8
11	Terminal inductance mH	0.0657	0.209	0.416	0.739	1.04	1.66	2.43	9.71
12	Torque constant mNm / A	9.58	17.1	24.1	32.2	38.2	48.2	58.3	117
13	Speed constant rpm / V	996	559	396	297	250	198	164	81.9
14	Speed / torque gradient rpm / mNm	59.9	57.6	49.5	45.5	47.1	46.3	47.1	48.4
15	Mechanical time constant ms	27.6	23.5	22.4	21.8	21.7	21.5	21.5	21.5
16	Rotor inertia gcm²	43.9	39.0	43.3	45.9	44.0	44.4	43.6	42.4

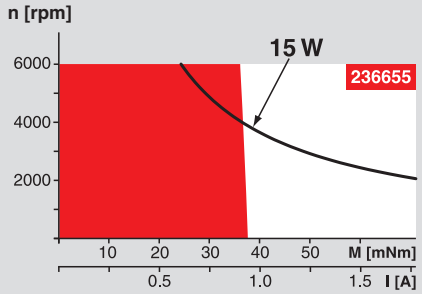
Specifications

	Thermal data	
17	Thermal resistance housing-ambient	7.5 K / W
18	Thermal resistance winding-housing	2.1 K / W
19	Thermal time constant winding	17.7 s
20	Thermal time constant motor	791 s
21	Ambient temperature	-20 ... +85°C
22	Max. permissible winding temperature	+125°C
	Mechanical data (ball bearings)	
23	Max. permissible speed	6000 rpm
24	Axial play	0.12 - 0.22 mm
25	Radial play	0.025 mm
26	Max. axial load (dynamic)	7.6 N
27	Max. force for press fits (static)	110 N
	(static, shaft supported)	2000 N
28	Max. radial loading, 5 mm from flange	32 N
	Mechanical data (sleeve bearings)	
23	Max. permissible speed	6000 rpm
24	Axial play	0.12 - 0.22 mm
25	Radial play	0.012 mm
26	Max. axial load (dynamic)	5.0 N
27	Max. force for press fits (static)	110 N
	(static, shaft supported)	2000 N
28	Max. radial loading, 5 mm from flange	10.5 N
	Other specifications	
29	Number of pole pairs	1
30	Number of commutator segments	13
31	Weight of motor	211 g

Values listed in the table are nominal.
Explanation of the figures on page 49.

Option
Sleeve bearings in place of ball bearings

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

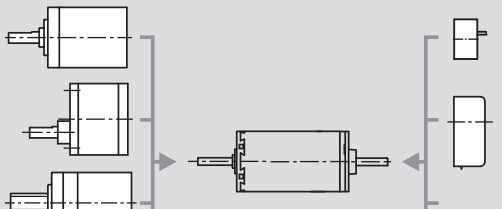
maxon Modular System

Overview on page 16 - 21

Planetary Gearhead
∅32 mm
0.75 - 6.0 Nm
Page 232 / 234 / 235

Spur Gearhead
∅38 mm
0.1 - 0.6 Nm
Page 239

Spindle Drive
∅32 mm
Page 251 / 252 / 253

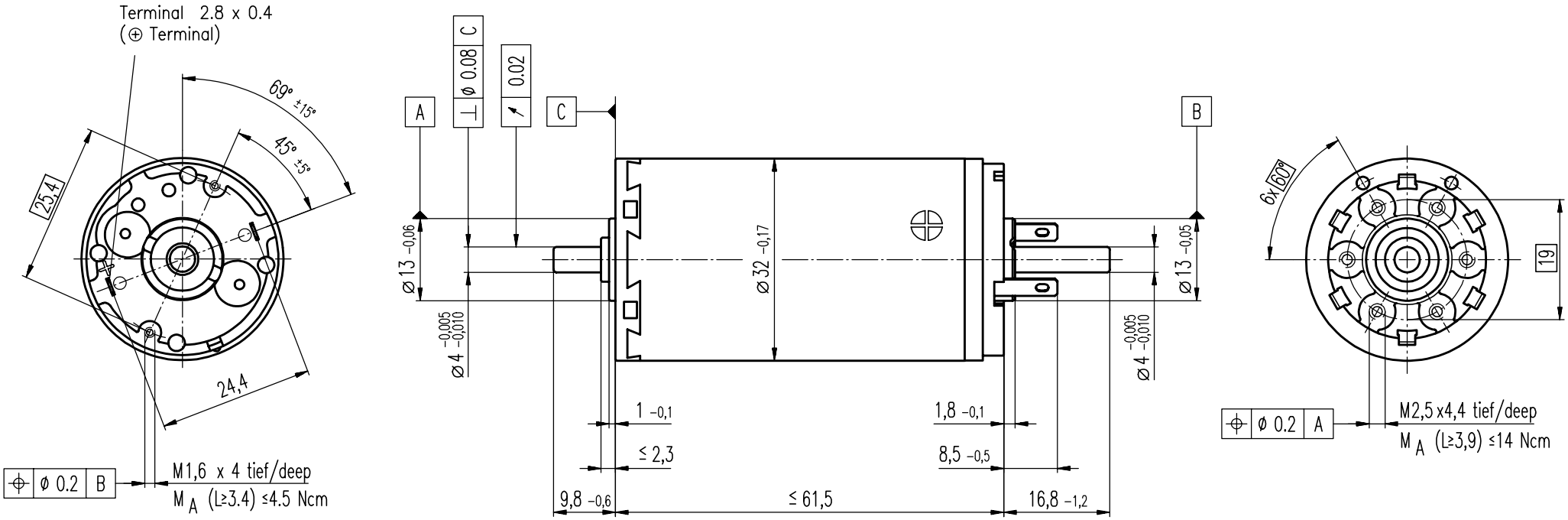


Encoder MR
256 - 1024 CPT,
3 channels
Page 265

Encoder HED_5540
500 CPT,
3 channels
Page 269 / 271

Recommended Electronics:

LSC 30/2	Page 282
ADS 50/5	282
ADS_E 50/5	283
EPOS2 Module 36/2	302
EPOS2 24/5	303
EPOS2 50/5	303
EPOS P 24/5	306
Notes	**18**



Axialspiel
axial play 0.12 ... 0.22

	maxon A-max32 GB 20W KL 2WE	
	maxon A-max32 GB 15W KL 2WE	
Artikelnummer	Fertigprodukt	Basisnummer

Artikel-Nr. / part no	Index/rev.	AFD-Nr/change	Werkstoff / material	Massstab scale
		960137-2 27.08.2001 KOM		A3 1.5:1

Änderungen in der Herstelltechnologie, Geometrie und Material nur in Absprache mit maxon motor ag Sachseln

Modification in production technology geometry and materials only by agreement with maxon motor ag Sachseln

Masse ohne Toleranzangabe: dimensions without tolerance: ISO 2768-m

	Datum/date	Name
Gezeichnet	27.08.2001	KOM
Geprüft	27.08.2001	NF
EDV	8:00044073.SZN	
Freigabe:	960137-2	

maxon motor ag
CH-6072 Sachseln

Benennung / title
Massbild
Motor

Dokument-Nr. / dwg no	Index/rev.	Blatt/sheet
549302	01	1 / 1

Ers.f. | Ers.d.