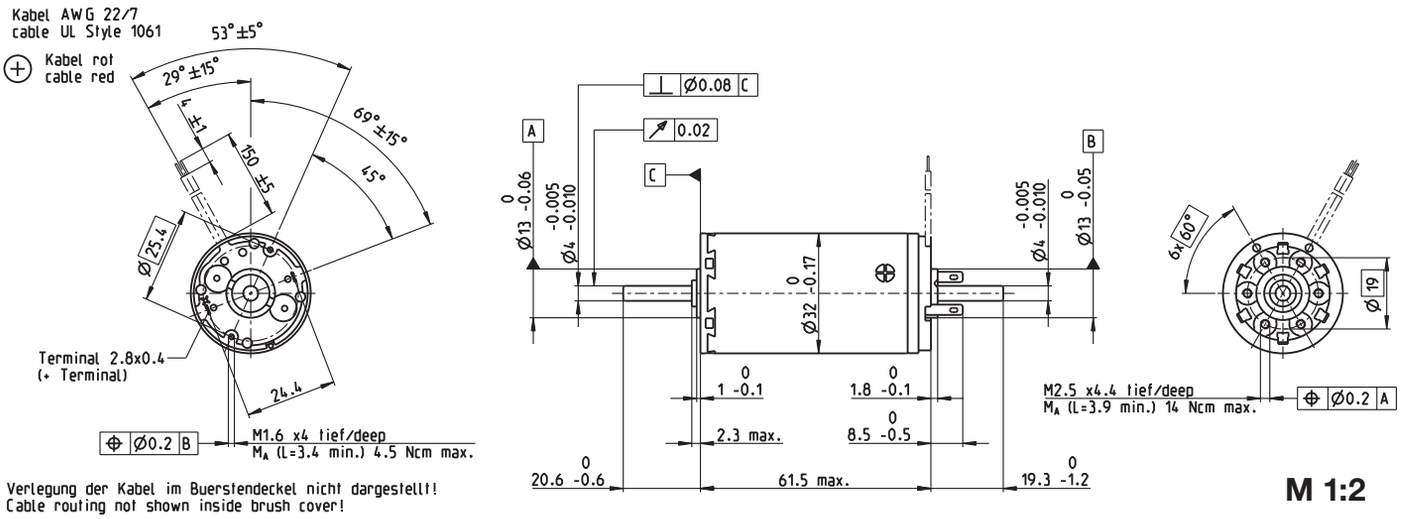
A-max 32 ∅32 mm, Graphite Brushes, 15 Watt



Stock program
Standard program
Special program (on request)

Part Numbers

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	9	12	18	24	30	36	48
2	No load speed	rpm	5870	4940	4680	5280	5930	5870	5830	3870
3	No load current	mA	154	83.5	58.6	44.9	38.7	30.6	25.3	11.8
4	Nominal speed	rpm	4110	3090	2920	3590	4210	4160	4100	2090
5	Nominal torque (max. continuous torque)	mNm	36.5	35	37.2	38.3	37.3	37.5	37.1	37
6	Nominal current (max. continuous current)	A	3.95	2.12	1.6	1.23	1.01	0.806	0.66	0.328
7	Stall torque	mNm	127	95.3	101	122	130	130	127	81.6
8	Stall current	A	13.2	5.58	4.19	3.78	3.42	2.7	2.17	0.7
9	Max. efficiency	%	78	76	77	79	80	80	80	76
	Characteristics									
10	Terminal resistance	Ω	0.454	1.61	2.86	4.76	7.03	11.1	16.6	68.6
11	Terminal inductance	mH	0.066	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	47.2	52.8	47	44	46	45.6	46.6	48.2
15	Mechanical time constant	ms	21.9	21.7	21.4	21.3	21.3	21.3	21.4	21.5
16	Rotor inertia	gcm²	44.2	39.2	43.5	46.2	44.2	44.6	43.8	42.6

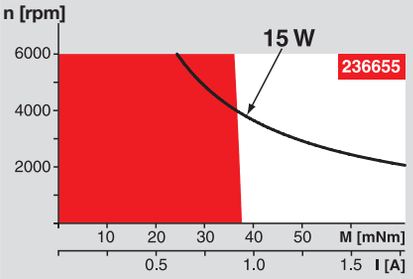
Specifications

	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	17.8 s
20	Thermal time constant motor	791 s
21	Ambient temperature	-20…+85°C
22	Max. winding temperature	+125°C
	Mechanical data (ball bearings)	
23	Max. 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 load, 5 mm from flange	32 N
	Mechanical data (sleeve bearings)	
23	Max. 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 load, 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	210 g

Values listed in the table are nominal.
Explanation of the figures on page 151.

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

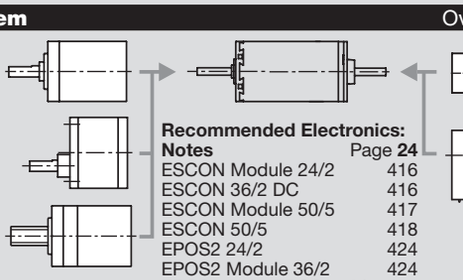
maxon Modular System

Overview on page 20–27

Planetary Gearhead
∅32 mm
0.75 - 6.0 Nm
Page 338–343

Spur Gearhead
∅38 mm
0.1 - 0.6 Nm
Page 348

Spindle Drive
∅32 mm
Page 370–372



Recommended Electronics:

Notes	Page **24**
ESCON Module 24/2	416
ESCON 36/2 DC	416
ESCON Module 50/5	417
ESCON 50/5	418
EPOS2 24/2	424
EPOS2 Module 36/2	424
EPOS2 24/5, EPOS2 50/5	425
EPOS2 P 24/5	428
MAXPOS 50/5	435

Encoder MR
256 - 1024 CPT,
3 channels
Page 393

Encoder HED_ 5540
500 CPT,
3 channels
Page 400/402