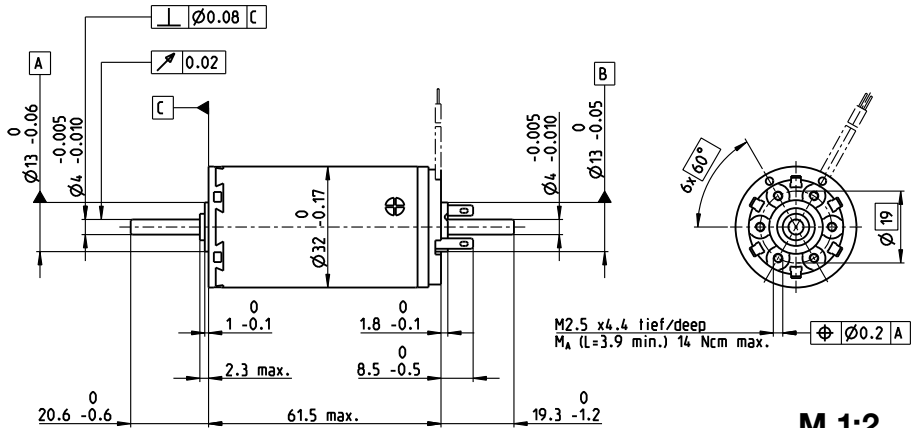
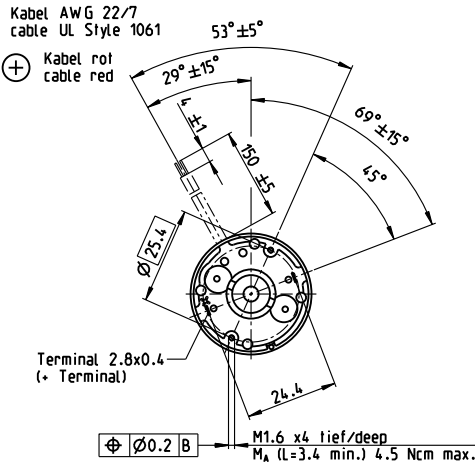


# A-max 32 Ø32 mm, Graphite Brushes, 15 Watt



Verlegung der Kabel im Buerstendeckel nicht dargestellt!  
Cable routing not shown inside brush cover!

- 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		6	9	12	18	24	30	36	48	
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	gcm <sup>2</sup>	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) (static, shaft supported)	110 N
28	Max. radial load, 5 mm from flange	2000 N
		32 N

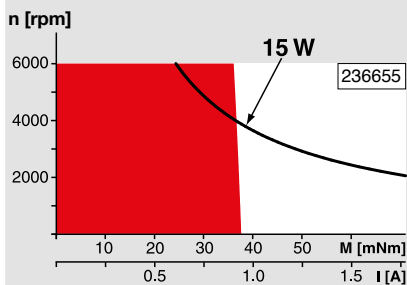
Mechanical data (sleeve bearings)		
23	Max. speed	6000 rpm
24	Axial play	0.12 - 0.22 mm
25	Radial play	0.012 mm
26	Max. axial load (dynamic)	5.0 N
27	Max. force for press fits (static) (static, shaft supported)	110 N
28	Max. radial load, 5 mm from flange	2000 N
		10.5 N

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 64.

**Option**  
Sleeve bearings in place of ball bearings

## Operating Range

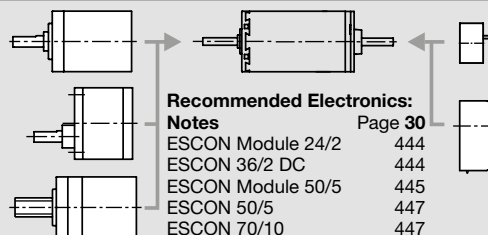


## Comments

- 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

- Planetary Gearhead**  
Ø32 mm  
0.75 - 6.0 Nm  
Page 342-344/346-347
- Spur Gearhead**  
Ø38 mm  
0.1 - 0.6 Nm  
Page 353
- Screw Drive**  
Ø32 mm  
Page 374-379



## Recommended Electronics:

Notes	Page 30
ESCON Module 24/2	444
ESCON 36/2 DC	444
ESCON Module 50/5	445
ESCON 50/5	447
ESCON 70/10	447
EPOS4 Mod./Comp. 24/1.5	452
EPOS4 50/5	453
EPOS4 Mod./Comp. 50/5	453
EPOS2 P 24/5	464
MAXPOS 50/5	468

## Overview on page 28-36

- Encoder MR**  
256 - 1024 CPT,  
3 channels  
Page 420
- Encoder HED\_ 5540**  
500 CPT,  
3 channels  
Page 430/432