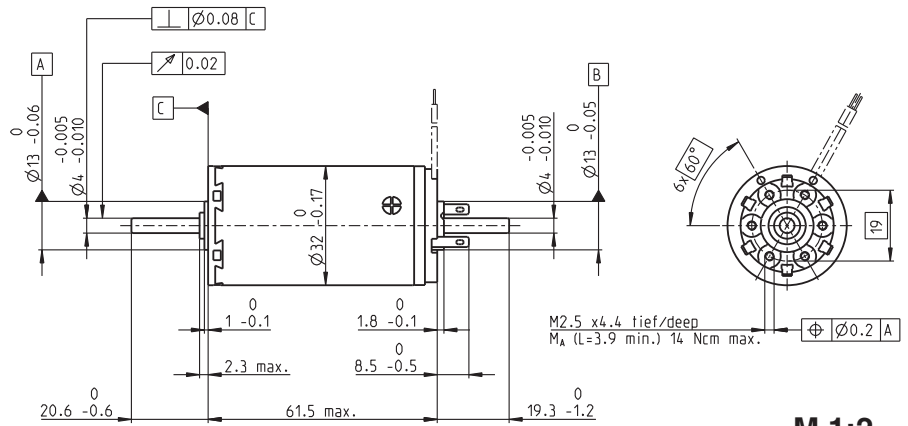
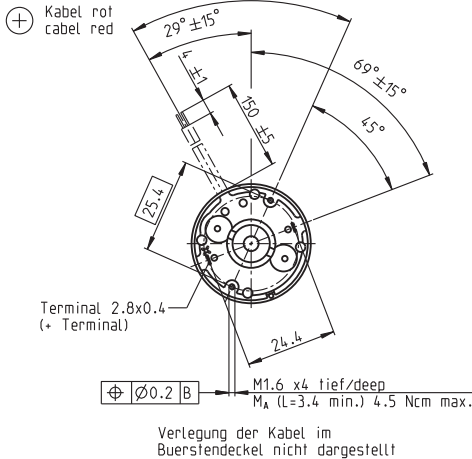


# maxon A-max 32 $\varnothing 32$ mm, Graphite Brushes, 15 Watt

Kabel AWG 22/7  
 kabel UL Style 1061  $53^\circ \pm 5^\circ$



M 1:2

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

## Order Number

	236651	236652	236653	236654	236655	236656	236657	236658
with terminals	353220	353221	353222	353223	353224	353225	353226	353227
with cables								

## Motor Data

Values at nominal voltage		V	6.0	9.0	12.0	18.0	24.0	30.0	36.0	48.0
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			0.577	1.76	3.02	4.92	7.19	11.3	16.7	68.8
10	Terminal resistance	$\Omega$	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	gcm <sup>2</sup>	43.9	39.0	43.3	45.9	44.0	44.4	43.6	42.4

## Specifications

Thermal data			7.5 K / W	2.1 K / W	17.7 s	791 s	-20 ... +85°C	+125°C
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)			6000 rpm	0.12 - 0.22 mm	0.025 mm	7.6 N	110 N	2000 N
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) (static, shaft supported)						110 N	
28	Max. radial loading, 5 mm from flange							2000 N
								32 N

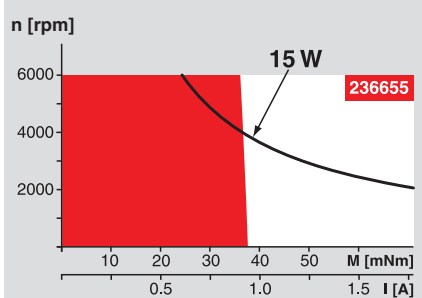
Mechanical data (sleeve bearings)			6000 rpm	0.12 - 0.22 mm	0.012 mm	5.0 N	110 N	2000 N
23	Max. permissible speed		6000 rpm					
24	Axial play			0.12 - 0.22 mm				
25	Radial play				0.012 mm			
26	Max. axial load (dynamic)					5.0 N		
27	Max. force for press fits (static) (static, shaft supported)						110 N	
28	Max. radial loading, 5 mm from flange							2000 N
								10.5 N
Other specifications			1	13	211 g			
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.

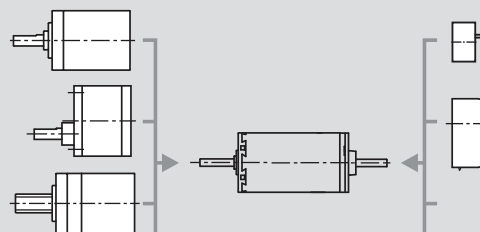
**Short term operation**  
 The motor may be briefly overloaded (recurring).

— Assigned power rating

## maxon Modular System

Overview on page 16 - 21

- Planetary Gearhead**  
 $\varnothing 32$  mm  
 0.75 - 6.0 Nm  
 Page 229 / 231 / 232
- Spur Gearhead**  
 $\varnothing 38$  mm  
 0.1 - 0.6 Nm  
 Page 236
- Spindle Drive**  
 $\varnothing 32$  mm  
 Page 249 / 250 / 251



- Encoder MR**  
 256 - 1024 CPT,  
 3 channels  
 Page 263
- Encoder HED\_5540**  
 500 CPT,  
 3 channels  
 Page 267 / 268

- Recommended Electronics:**
- LSC 30/2 Page 282
  - ADS 50/5 282
  - ADS\_E 50/5 283
  - EPOS2 Module 36/2 304
  - EPOS2 24/5 305
  - EPOS2 50/5 305
  - EPOS2 P 24/5 308
  - Notes 18