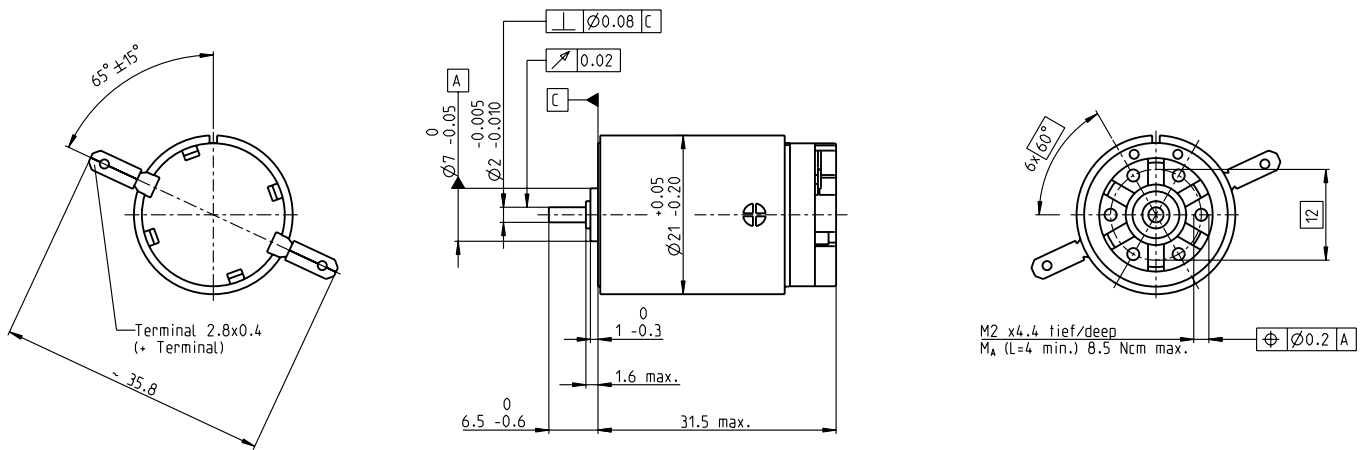


# RE-max 21 Ø21 mm, Graphite Brushes, 6 Watt



M 1:1

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

## Part Numbers

250000 | 250001 | **250002** | 250003 | 250004 | 250005 | 250006 | 250007 | 250008

## Motor Data

Values at nominal voltage		4	6	9	15	18	21	24	36	48	
1	Nominal voltage	V	4	6	9	15	18	21	24	36	48
2	No load speed	rpm	11200	9440	9880	10200	9680	9470	8650	9780	9320
3	No load current	mA	150	81	56.9	35.7	27.7	23.2	18.2	14	9.95
4	Nominal speed	rpm	10700	8230	8230	8140	7580	7320	6480	7580	7090
5	Nominal torque (max. continuous torque)	mNm	1.91	3.81	5.69	7.13	7.23	7.09	7.14	6.9	6.86
6	Nominal current (max. continuous current)	A	0.72	0.72	0.72	0.552	0.44	0.362	0.292	0.213	0.151
7	Stall torque	mNm	45.4	30.9	34.8	35.2	33.7	31.6	28.8	31.1	29.1
8	Stall current	A	13.6	5.19	4.07	2.56	1.93	1.52	1.11	0.9	0.602
9	Max. efficiency	%	79	76	78	78	78	77	76	77	76
<b>Characteristics</b>											
10	Terminal resistance	Ω	0.295	1.16	2.21	5.86	9.32	13.8	21.7	40	79.7
11	Terminal inductance	mH	0.013	0.041	0.085	0.22	0.354	0.503	0.786	1.39	2.71
12	Torque constant	mNm/A	3.35	5.95	8.55	13.8	17.5	20.8	26	34.6	48.3
13	Speed constant	rpm/V	2850	1600	1120	694	546	459	367	276	198
14	Speed / torque gradient	rpm/mNm	252	312	289	295	291	305	305	319	326
15	Mechanical time constant	ms	6.77	6.87	6.68	6.72	6.7	6.76	6.78	6.98	6.88
16	Rotor inertia	gcm <sup>2</sup>	2.57	2.1	2.21	2.17	2.2	2.12	2.12	2.09	2.02

## Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 28 K/W
  - 18 Thermal resistance winding-housing 8.0 K/W
  - 19 Thermal time constant winding 8.75 s
  - 20 Thermal time constant motor 501 s
  - 21 Ambient temperature -30...+85°C
  - 22 Max. winding temperature +125°C
- Mechanical data (sleeve bearings)**
- 23 Max. speed 12000 rpm
  - 24 Axial play 0.05 - 0.15 mm
  - 25 Radial play 0.012 mm
  - 26 Max. axial load (dynamic) 1 N
  - 27 Max. force for press fits (static) 80 N
  - 28 Max. radial load, 5 mm from flange 2.7 N

- Mechanical data (ball bearings)**
- 23 Max. speed 12000 rpm
  - 24 Axial play 0.05 - 0.15 mm
  - 25 Radial play 0.025 mm
  - 26 Max. axial load (dynamic) 3.3 N
  - 27 Max. force for press fits (static) 45 N
  - 28 Max. radial load, 5 mm from flange 11.9 N

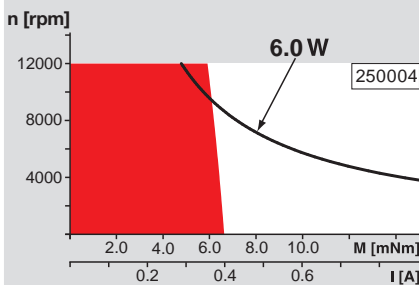
- Other specifications**
- 29 Number of pole pairs 1
  - 30 Number of commutator segments 9
  - 31 Weight of motor 42 g

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

### Option

- Ball bearings in place of sleeve bearings
- Pigtails in place of terminals

## 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

Ø22 mm  
0.5 - 1.0 Nm  
Page 329

### Planetary Gearhead

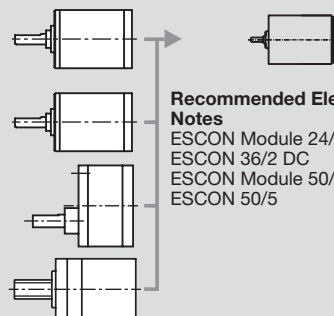
Ø22 mm  
0.5 - 2.0 Nm  
Page 331

### Spur Gearhead

Ø38 mm  
0.1 - 0.6 Nm  
Page 348

### Spindle Drive

Ø22 mm  
Page 368/369



### Recommended Electronics:

Notes	Page 24
ESCON Module 24/2	416
ESCON 36/2 DC	416
ESCON Module 50/5	417
ESCON 50/5	418