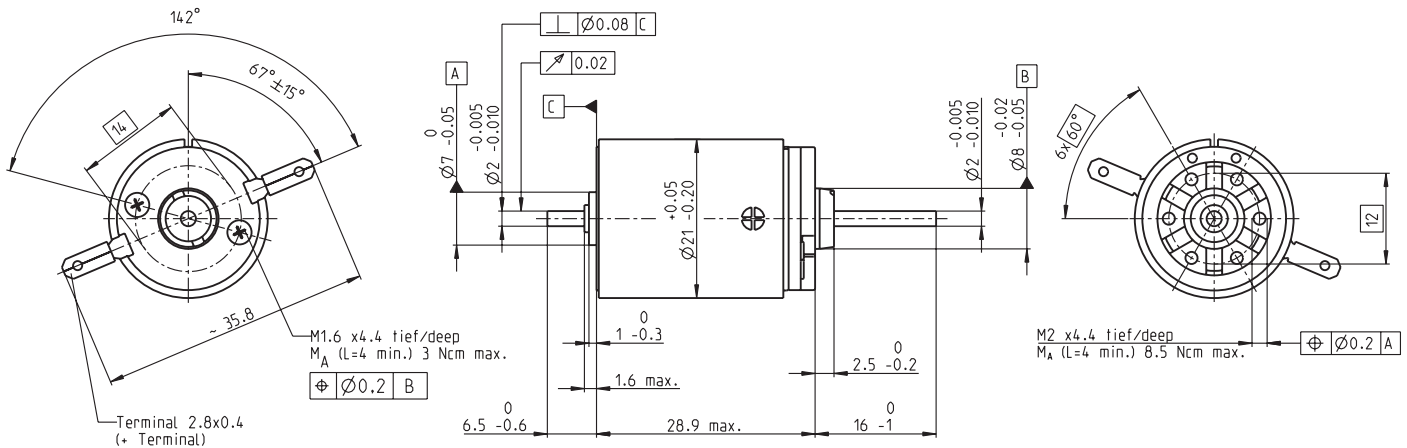


RE-max 21 Ø21 mm, Precious Metal Brushes CLL, 3.5 Watt



M 1:1

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

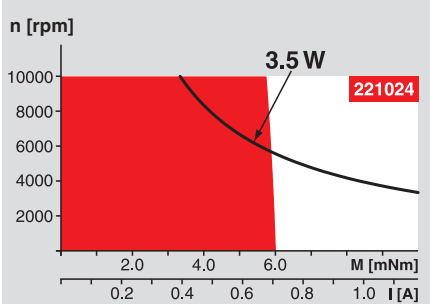
Order Number

221020 221023 **221024** 221025 221026 221028 221030 221031 221032

Motor Data		221020	221023	221024	221025	221026	221028	221030	221031	221032	
Values at nominal voltage											
1	Nominal voltage	V	2.0	3.6	5.0	8.4	10.0	12.0	15.0	21.0	30.0
2	No load speed	rpm	5870	5940	5740	6000	5620	5660	5660	5960	6090
3	No load current	mA	54.4	30.8	21.1	13.4	10.2	8.59	6.87	5.3	3.83
4	Nominal speed	rpm	5120	4390	3810	4060	3690	3690	3690	3980	4060
5	Nominal torque (max. continuous torque)	mNm	2.54	4.66	6.25	6.20	6.27	6.13	6.12	6.06	5.91
6	Nominal current (max. continuous current)	A	0.840	0.840	0.777	0.480	0.381	0.313	0.250	0.187	0.130
7	Stall torque	mNm	19.8	17.9	18.7	19.3	18.4	17.7	17.7	18.3	17.9
8	Starting current	A	6.16	3.13	2.27	1.46	1.09	0.884	0.705	0.550	0.384
9	Max. efficiency	%	82	81	82	82	82	82	82	82	81
Characteristics											
10	Terminal resistance	Ω	0.325	1.15	2.20	5.77	9.17	13.6	21.3	38.2	78.2
11	Terminal inductance	mH	0.0130	0.0410	0.0846	0.219	0.353	0.502	0.784	1.38	2.70
12	Torque constant	mNm / A	3.22	5.73	8.23	13.2	16.8	20.0	25.1	33.3	46.5
13	Speed constant	rpm / V	2960	1670	1160	721	567	476	381	287	205
14	Speed / torque gradient	rpm / mNm	299	335	310	314	309	323	323	329	345
15	Mechanical time constant	ms	7.94	7.26	7.08	7.04	7.00	7.05	7.07	7.08	7.17
16	Rotor inertia	gcm ²	2.54	2.07	2.18	2.14	2.16	2.09	2.09	2.06	1.99

Specifications Operating Range Comments

- Thermal data**
- 17 Thermal resistance housing-ambient 28 K / W
 - 18 Thermal resistance winding-housing 8.0 K / W
 - 19 Thermal time constant winding 8.77 s
 - 20 Thermal time constant motor 602 s
 - 21 Ambient temperature -30 ... +65°C
 - 22 Max. permissible winding temperature +85°C
- Mechanical data (sleeve bearings)**
- 23 Max. permissible speed 10000 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
 - (static, shaft supported) 480 N
 - 28 Max. radial loading, 5 mm from flange 2.7 N



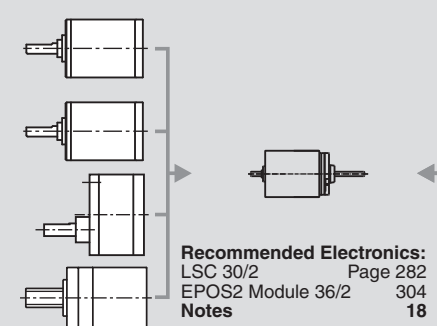
- Continuous operation**
In observation of above listed thermal resistance (lines 17 and 18) the maximum permissible winding temperature will be reached during continuous operation at 25°C ambient.
= Thermal limit.
- Short term operation**
The motor may be briefly overloaded (recurring).
- Assigned power rating**

- Mechanical data (ball bearings)**
- 23 Max. permissible speed 10000 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
 - (static, shaft supported) 480 N
 - 28 Max. radial loading, 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 43 g
 - CLL = Capacitor Long Life
- Values listed in the table are nominal.
Explanation of the figures on page 49.
- Option**
- Ball bearings in place of sleeve bearings
 - Pigtails in place of terminals
 - Without CLL

maxon Modular System

Overview on page 16 - 21

- Planetary Gearhead**
Ø22 mm
0.5 - 1.0 Nm
Page 222
- Planetary Gearhead**
Ø22 mm
0.5 - 2.0 Nm
Page 223
- Spur Gearhead**
Ø38 mm
0.1 - 0.6 Nm
Page 237
- Spindle Drive**
Ø22 mm
Page 247 / 248



- Encoder MR**
32 Imp.,
2 / 3 channels
Page 259
 - Encoder MR**
128 / 256 / 512 Imp.,
2 / 3 channels
Page 261
- Recommended Electronics:**
LSC 30/2 Page 282
EPOS2 Module 36/2 Page 304
Notes 18