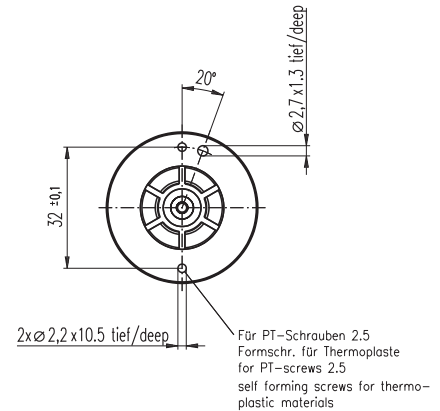
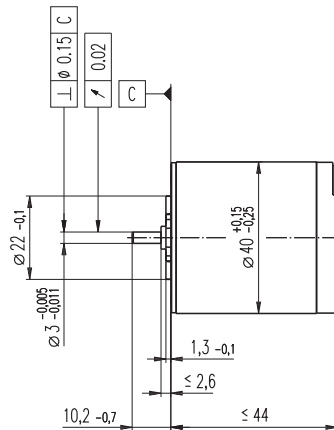
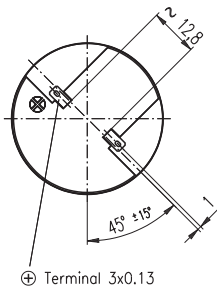


F 2140 Ø40 mm, Precious Metal Brushes CLL, 4 Watt

NRND See page 13
Not recommended for New Design



M 1:2

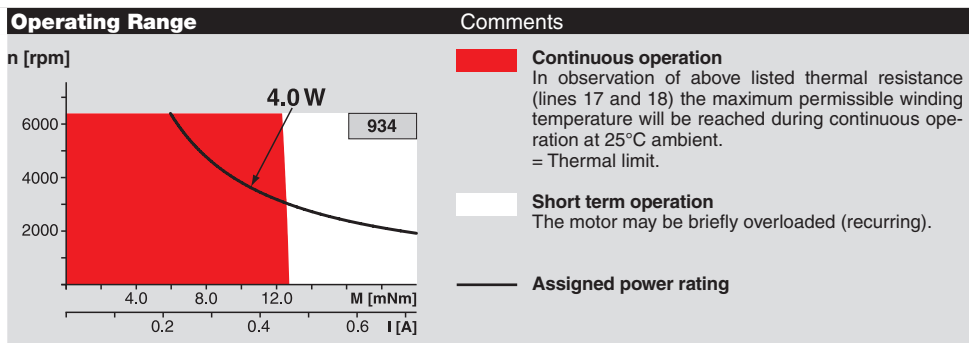
- Stock program
- Standard program
- Special program (on request)

Part Numbers	
2140. ... -22.112-050 (Insert winding number)	
Winding number	931 932 933 934 935 936 937 939

Motor Data		Winding number							
Values at nominal voltage									
1 Nominal voltage	V	6	9	9	12	15	18	24	36
2 No load speed	rpm	3940	4630	3740	4090	4080	3850	4110	4130
3 No load current	mA	23.1	20.1	14.2	12.3	9.77	7.43	6.19	4.17
4 Nominal speed	rpm	2270	2990	2080	2430	2410	2160	2420	2400
5 Nominal torque (max. continuous torque)	mNm	13.8	13.9	13.9	13.9	13.8	13.6	13.6	13.3
6 Nominal current (max. continuous current)	A	0.974	0.773	0.624	0.508	0.404	0.314	0.251	0.164
7 Stall torque	mNm	32.6	39.5	31.6	34.2	33.9	31.2	33.1	31.8
8 Starting current	A	2.26	2.15	1.39	1.23	0.974	0.706	0.601	0.387
9 Max. efficiency	%	81	82	81	82	81	81	81	81
Characteristics									
10 Terminal resistance	Ω	2.65	4.19	6.47	9.73	15.4	25.5	40.0	93.0
11 Terminal inductance	mH	0.341	0.558	0.853	1.27	1.99	3.21	5.02	11.2
12 Torque constant	mNm/A	14.4	18.4	22.7	27.8	34.8	44.1	55.2	82.3
13 Speed constant	rpm/V	664	519	420	344	275	216	173	116
14 Speed/torque gradient	rpm/mNm	122	118	120	121	122	125	125	131
15 Mechanical time constant	ms	32.2	31.9	31.9	31.9	32.0	32.1	32.1	32.5
16 Rotor inertia	gcm ²	25.1	25.7	25.5	25.3	25.1	24.6	24.5	23.6

Specifications	
Thermal data	
17 Thermal resistance housing-ambient	10.4 K/W
18 Thermal resistance winding-housing	8.8 K/W
19 Thermal time constant winding	45.5 s
20 Thermal time constant motor	988 s
21 Ambient temperature	-20...+65°C
22 Max. permissible winding temperature	+85°C
Mechanical data (sleeve bearings)	
23 Max. permissible speed	6400 rpm
24 Axial play	0.2 - 0.3 mm
25 Radial play	0.025 mm
26 Max. axial load (dynamic)	0.5 N
27 Max. force for press fits (static)	50 N
28 Max. radial loading, 5 mm from flange	2.5 N

Other specifications	
29 Number of pole pairs	1
30 Number of commutator segments	7
31 Weight of motor	190 g
CLL = Capacitor Long Life	
Values listed in the table are nominal. Explanation of the figures on page 71.	
Option	
Ball bearings in place of sleeve bearings	



maxon Modular System Overview on page 20 - 25

Spur Gearhead
Ø38 mm
0.1 - 0.6 Nm
Page 269

Recommended Electronics:
 ESCON 36/2 DC Page 320
 ESCON 50/5 321
Notes 22