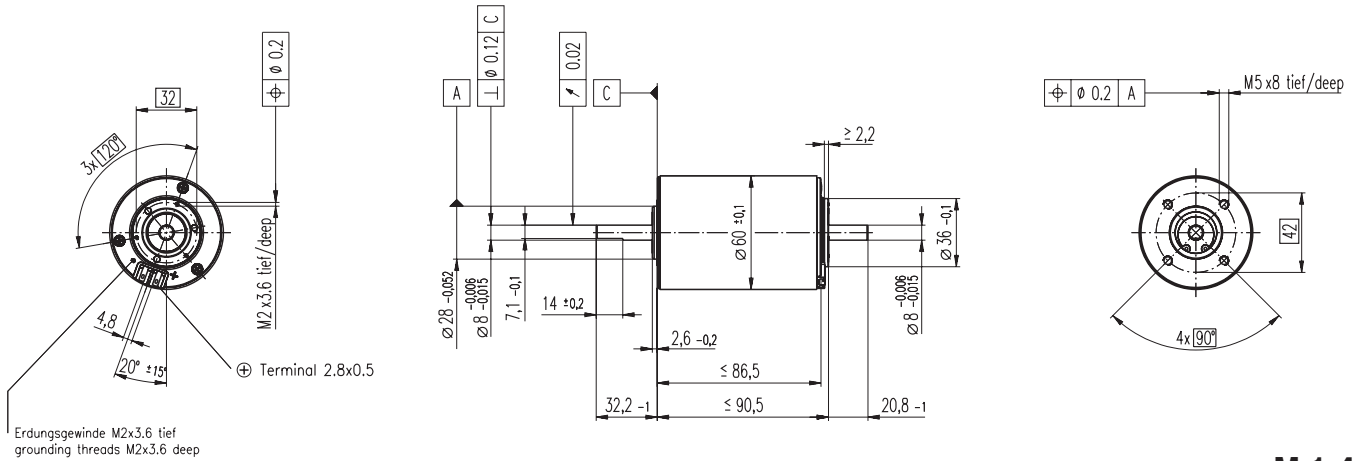


F 2260 Ø60 mm, Graphite Brushes, 40 Watt



M 1:4

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

Order Number

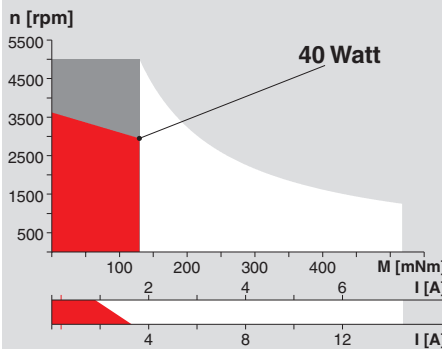
2260. ... -51.216-200 (Insert winding number)

Winding number		811	812	813	814	815	816	817	818	810	819	820							
Motor Data																			
1	Assigned power rating	W	40	40	40	40	40	40	40	40	40	40							
2	Nominal voltage	Volt	18.0	18.0	24.0	30.0	36.0	36.0	48.0	48.0	48.0	48.0							
3	No load speed	rpm	4500	3450	3660	4270	4580	3630	2950	3190	2590	2090	1630						
4	Stall torque	Nm	0.870	0.707	0.758	0.868	0.916	0.733	0.591	0.633	0.514	0.407	0.312						
5	Speed / torque gradient	rpm / mNm	5.41	5.11	5.01	5.07	5.14	5.10	5.17	5.19	5.21	5.34	5.48						
6	No load current	mA	387	283	225	215	194	147	117	95	75	60	46						
7	Starting current	A	23.8	14.8	12.6	13.4	12.6	7.97	5.24	4.53	3.00	1.93	1.16						
8	Terminal resistance	Ohm	0.755	1.21	1.91	2.25	2.87	4.52	6.87	10.6	16.0	24.9	41.2						
9	Max. permissible speed	rpm	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000	5000						
10	Max. continuous current	A	3.30	2.67	2.16	1.99	1.77	1.43	1.17	0.945	0.771	0.621	0.484						
11	Max. continuous torque	mNm	120	127	130	130	129	132	132	132	132	131	130						
12	Max. power output at nominal voltage	W	98.2	61.2	70.4	94.4	107	67.8	44.4	51.6	33.9	21.5	12.8						
13	Max. efficiency	%	73	72	73	75	75	74	71	73	70	67	64						
14	Torque constant	mNm / A	36.5	47.6	60.3	65.0	73.0	92.0	113	140	171	211	268						
15	Speed constant	rpm / V	262	201	158	147	131	104	84.8	68.4	55.7	45.3	35.6						
16	Mechanical time constant	ms	36	36	35	35	34	34	34	34	34	34	34						
17	Rotor inertia	gcm ²	638	666	665	651	638	641	630	623	620	604	589						
18	Terminal inductance	mH	0.23	0.39	0.63	0.73	0.92	1.46	2.18	3.36	5.05	7.66	12.40						
19	Thermal resistance housing-ambient	K / W	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0						
20	Thermal resistance rotor-housing	K / W	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4						
21	Thermal time constant winding	s	73	76	76	74	73	73	72	71	71	69	67						

Specifications

- Axial play at axial load < 15 N ≤ 0.1 mm
- Axial play at axial load > 15 N 0.1 - 0.5 mm
- Axial play for motor combinations with encoder is limited to max. 0.15 mm
- Preloaded **ball bearing** Preload strength min. 15 N
- Max. **ball bearing** loads axial (dynamic) 15 N
- radial (5 mm from flange) 100 N
- Force for press fits (static) (static, shaft supported) 400 N
- 10 000 N
- Radial play **ball bearing** 0.05 mm
- Ambient temperature range -20 ... +100°C
- Max. rotor temperature +125°C
- Number of commutator segments 26
- Weight of motor 790 g
- 2 pole permanent magnet
- Values listed in the table are nominal. For applicable tolerances see page 43. For additional details please use the maxon selection program on the enclosed CD-Rom.

Operating Range



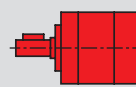
Comments

- Recommended operating range**
- Continuous operation**
In observation of above listed thermal resistances (lines 19 and 20) the maximum permissible rotor temperature will be reached during continuous operation at 25°C ambient.
= Thermal limit.
- Short term operation**
The motor may be briefly overloaded (recurring).
- 818** Motor with high resistance winding
- 811** Motor with low resistance winding

Details on page 49

maxon Modular System

Planetary Gearhead
Ø62 mm
8 - 50 Nm
Details page 223



Recommended Electronics:
page 253
ADS 50/5 254
ADS_E 50/5 263
EPOS 24/5 265
MIP 10 265
MIP 50 265
Notes 17

Overview on page 17 - 21

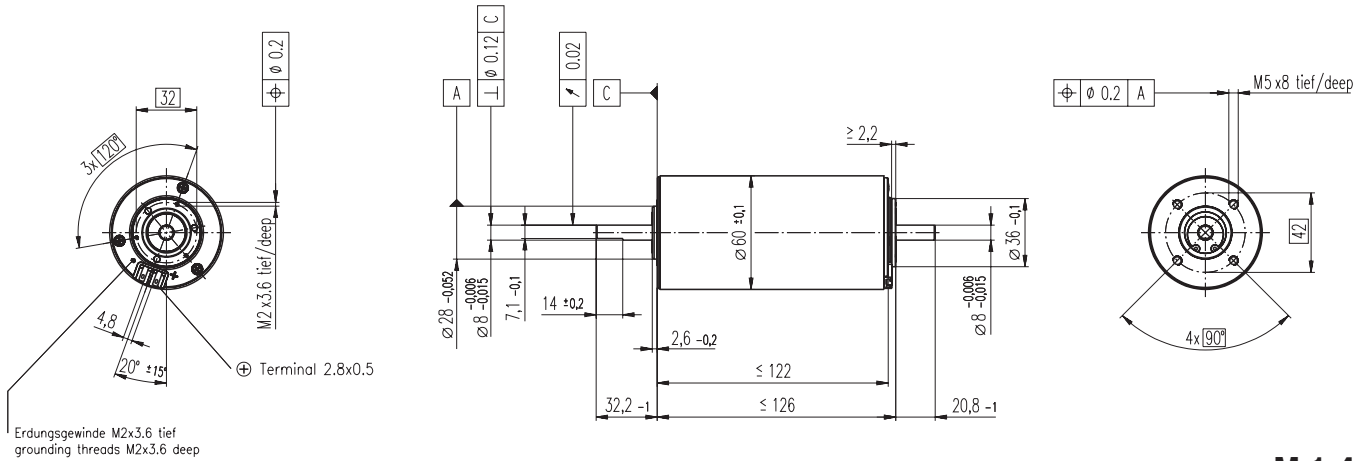
Digital Encoder
HP HEDS 5540
500 CPT, 3 channels
Details page 237

Digital Encoder
HP HEDL 5540
500 CPT, 3 channels
Details page 239

Digital Encoder
HP HEDS 6540
1000 CPT, 3 channels
Details page 242

Brake
Ø40 mm
24 VDC, 0.4 Nm
Details page 269

F 2260 Ø60 mm, Graphite Brushes, 80 Watt



M 1:4

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

Order Number

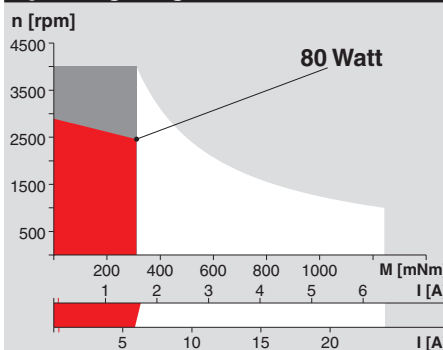
2260. ... -51.216-200 (Insert winding number)

		Winding number																		
		880	881	882	883	884	885	886	887	888	889	890								
Motor Data																				
1	Assigned power rating	W	80	80	80	80	80	80	80	80	80	80								
2	Nominal voltage	Volt	15.0	15.0	18.0	24.0	24.0	24.0	36.0	36.0	48.0	48.0	48.0							
3	No load speed	rpm	3980	2740	2650	2850	2640	2230	2690	2200	2670	2360	1800							
4	Stall torque	Nm	2.88	1.97	1.91	2.06	1.87	1.67	2.01	1.59	1.94	1.69	1.35							
5	Speed / torque gradient	rpm / mNm	1.44	1.45	1.43	1.42	1.45	1.37	1.36	1.41	1.40	1.42	1.35							
6	No load current	mA	563	351	278	226	206	168	140	109	103	89	65							
7	Starting current	A	83.8	39.4	30.6	26.3	22.2	16.7	16.1	10.4	11.5	8.87	5.41							
8	Terminal resistance	Ohm	0.179	0.381	0.589	0.911	1.08	1.44	2.24	3.47	4.18	5.41	8.88							
9	Max. permissible speed	rpm	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000	4000							
10	Max. continuous current	A	7.50	5.87	4.84	3.95	3.66	3.21	2.59	2.10	1.91	1.69	1.33							
11	Max. continuous torque	mNm	258	294	303	309	309	321	324	322	324	323	332							
12	Max. power output at nominal voltage	W	283	135	128	149	126	94.8	139	89.7	133	103	62.6							
13	Max. efficiency	%	79	78	79	80	79	79	81	79	81	80	79							
14	Torque constant	mNm / A	34.4	50.1	62.6	78.3	84.5	100.0	125	153	169	191	250							
15	Speed constant	rpm / V	277	191	153	122	113	95.3	76.3	62.3	56.5	50.0	38.1							
16	Mechanical time constant	ms	20	20	19	19	19	19	18	18	18	18	18							
17	Rotor inertia	gcm ²	1330	1290	1270	1250	1230	1290	1270	1230	1230	1210	1260							
18	Terminal inductance	mH	0.07	0.14	0.22	0.34	0.40	0.56	0.88	1.31	1.59	2.03	3.50							
19	Thermal resistance housing-ambient	K / W	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4							
20	Thermal resistance rotor-housing	K / W	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1							
21	Thermal time constant winding	s	72	70	69	68	67	70	69	67	67	66	69							

Specifications

- Axial play at axial load < 15 N ≤ 0.1 mm
- Axial play at axial load > 15 N 0.1 - 0.5 mm
- Axial play for motor combinations with encoder is limited to max. 0.15 mm
- Preloaded **ball bearing** preload strength min. 15 N
- Max. **ball bearing** loads axial (dynamic) 15 N
- radial (5 mm from flange) 100 N
- Force for press fits (static) 400 N
- (static, shaft supported) 10 000 N
- Radial play **ball bearing** 0.05 mm
- Ambient temperature range -20 ... +100°C
- Max. rotor temperature +125°C
- Number of commutator segments 26
- Weight of motor 1300 g
- 2 pole permanent magnet
- Values listed in the table are nominal. For applicable tolerances see page 43. For additional details please use the maxon selection program on the enclosed CD-Rom.

Operating Range



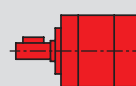
Comments

- Recommended operating range**
 - Continuous operation**
In observation of above listed thermal resistances (lines 19 and 20) the maximum permissible rotor temperature will be reached during continuous operation at 25°C ambient.
= Thermal limit.
 - Short term operation**
The motor may be briefly overloaded (recurring).
- 889 Motor with high resistance winding
- 881 Motor with low resistance winding

Details on page 49

maxon Modular System

Planetary Gearhead
Ø62 mm
8 - 50 Nm
Details page 223



Recommended Electronics:
ADS 50/5 page 253
ADS 50/10 253
ADS_E 50/5, 50/10 254
EPOS 24/5 263
MIP 50 / MIP 100 265
Notes 17

Overview on page 17 - 21

- Digital Encoder**
HP HEDS 5540
500 CPT, 3 channels
Details page 237
- Digital Encoder**
HP HEDL 5540
500 CPT, 3 channels
Details page 239
- Digital Encoder**
HP HEDS 6540
1000 CPT, 3 channels
Details page 242
- Brake**
Ø40 mm
24 VDC, 0.4 Nm
Details page 269