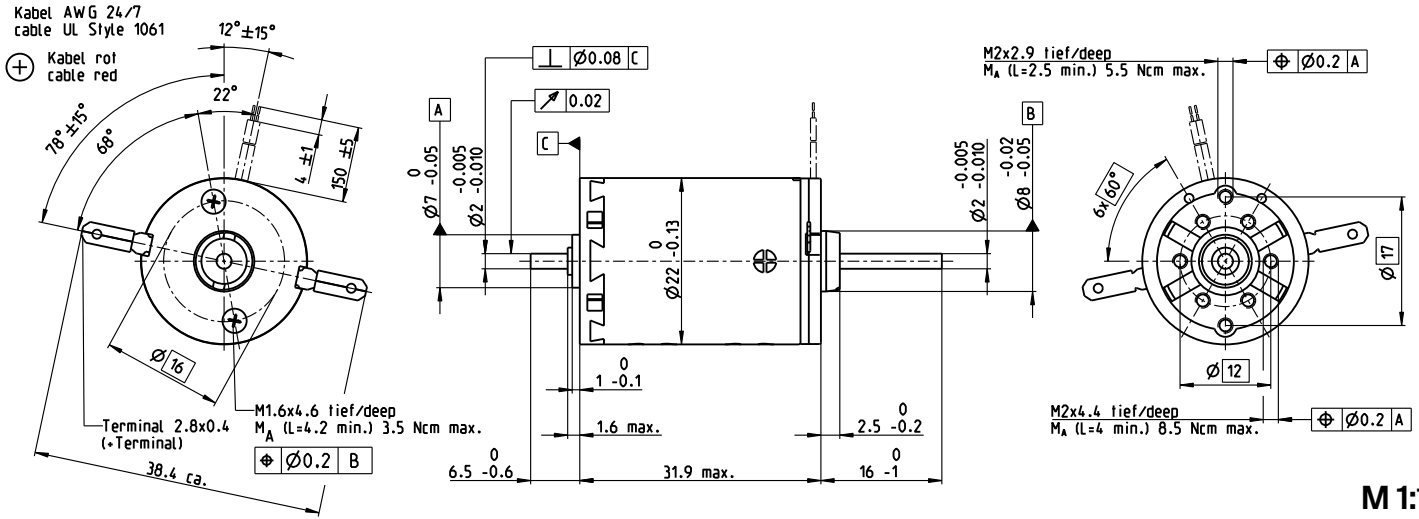


A-max 22 Ø22 mm, graphite brushes, 6 watt

A-max



M 1:1

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

		Part Numbers											
with terminals		110156	110158	110159	110160	110161	110162	110163	110164	110165	110166	110167	110168
with cables		139848	353023	353024	231171	353025	353026	231174	353027	353028	353029	316659	353603

Motor Data													
Values at nominal voltage													
1 Nominal voltage	V	6	9	9	12	12	15	18	24	24	36	48	48
2 No load speed	rpm	9240	9690	8500	10200	9170	10000	9770	10500	8480	9630	9110	8210
3 No load current	mA	831	579	496	458	405	36	29	23.7	18.4	14.2	9.99	8.84
4 Nominal speed	rpm	6240	6530	5350	7060	6000	6890	6600	7380	5270	6420	5840	4940
5 Nominal torque (max. continuous torque)	mNm	5.91	6.88	7.04	6.96	6.95	6.93	6.92	6.9	6.97	6.86	6.75	6.86
6 Nominal current (max. continuous current)	A	1.08	0.859	0.77	0.681	0.613	0.534	0.432	0.347	0.283	0.21	0.147	0.135
7 Stall torque	mNm	19.4	22.1	19.8	23.7	20.9	22.9	22	23.7	18.9	21.1	19.2	17.6
8 Stall current	A	3.29	2.59	2.04	2.17	1.72	1.65	1.29	1.12	0.721	0.606	0.393	0.325
9 Max. efficiency	%	67	70	69	72	70	72	72	73	70	72	71	70
Characteristics													
10 Terminal resistance	Ω	1.82	3.48	4.42	5.53	6.96	9.09	14	21.5	33.3	59.4	122	148
11 Terminal inductance	mH	0.106	0.223	0.288	0.363	0.445	0.585	0.891	1.37	2.1	3.69	7.3	8.97
12 Torque constant	mNm/A	5.9	8.55	9.73	10.9	12.1	13.9	17.1	21.2	26.2	34.8	48.9	54.3
13 Speed constant	rpm/V	1620	1120	981	875	790	689	558	450	364	274	195	176
14 Speed / torque gradient	rpm/mNm	500	454	446	444	455	452	457	456	461	468	487	479
15 Mechanical time constant	ms	21.3	20.5	20.4	20.2	20.3	20.2	20.1	20.1	20.1	20.1	20.2	20.1
16 Rotor inertia	gcm ²	4.07	4.32	4.37	4.36	4.26	4.27	4.2	4.2	4.16	4.09	3.97	4.01

Specifications	Operating Range	Comments
Thermal data 17 Thermal resistance housing-ambient 20 K/W 18 Thermal resistance winding-housing 6.0 K/W 19 Thermal time constant winding 10.2 s 20 Thermal time constant motor 313 s 21 Ambient temperature -30...+85°C 22 Max. winding temperature +125°C	n [rpm] 	<div style="background-color: red; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></div> 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.
Mechanical data (sleeve bearings) 23 Max. speed 9800 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) (static, shaft supported) 80 N / 440 N 28 Max. radial load, 5 mm from flange 2.8 N		<div style="border: 1px solid black; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></div> Short term operation The motor may be briefly overloaded (recurring).
Mechanical data (ball bearings) 23 Max. speed 9800 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) (static, shaft supported) 45 N / 240 N 28 Max. radial load, 5 mm from flange 12.3 N		<div style="border-bottom: 1px solid black; width: 15px; height: 10px; display: inline-block; margin-right: 5px;"></div> Assigned power rating

maxon Modular System		Details on catalog page 38	
Planetary Gearhead Ø22 mm 0.1 - 0.3 Nm Page 382		Encoder MR 32 CPT, 2/3 channels Page 475	
Planetary Gearhead Ø22 mm 0.5 - 2.0 Nm Page 383/385		Encoder MR 128 / 256 / 512 CPT, 2/3 channels Page 476	
Spur Gearhead Ø24 mm 0.1 Nm Page 389		Encoder Enc 22 mm 100 CPT, 2 channels Page 483	
Screw Drive Ø22 mm Page 424/425			

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Planetary Gearhead Ø22 mm 0.1 - 0.3 Nm Page 382		Encoder MR 32 CPT, 2/3 channels Page 475	
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Screw Drive Ø22 mm Page 424/425			