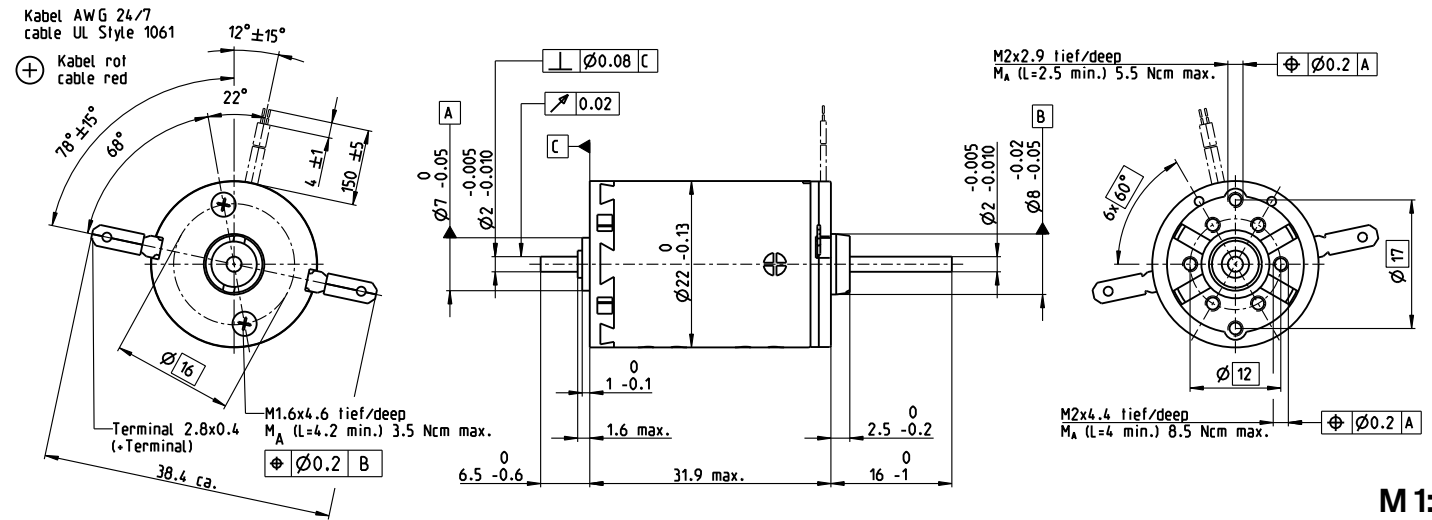


A-max 22 Ø22 mm, graphite brushes, 6 watt

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
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
2 No load speed	rpm	9240	9690	8500	10200	9170	10000	9770	10500	8480	9630
3 No load current	mA	83.1	57.9	49.6	45.8	40.5	36	29	23.7	18.4	14.2
4 Nominal speed	rpm	6240	6530	5350	7060	6000	6890	6600	7380	5270	6420
5 Nominal torque	mNm	5.91	6.88	7.04	6.96	6.95	6.93	6.92	6.9	6.97	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
7 Stall torque	mNm	19.4	22.1	19.8	23.7	20.9	22.9	22	23.7	18.9	21.1
8 Stall current	A	3.29	2.59	2.04	2.17	1.72	1.65	1.29	1.12	0.721	0.606
9 Max. efficiency	%	67	70	69	72	70	72	72	73	70	72
Characteristics											
10 Terminal resistance	Ω	1.82	3.48	4.42	5.53	6.96	9.09	14	21.5	33.3	59.4
11 Terminal inductance	mH	0.106	0.223	0.288	0.363	0.445	0.585	0.891	1.37	2.1	3.69
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
13 Speed constant	rpm/V	1620	1120	981	875	790	689	558	450	364	274
14 Speed/torque gradient	rpm/mNm	500	454	446	444	455	452	457	456	461	468
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
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

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 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 28 Max. radial load, 5 mm from flange 440 N 2.8 N	n [rpm] 	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)	Modular system	Details on catalog page 48
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 28 Max. radial load, 5 mm from flange 240 N 12.3 N	Gear 419_GP 22 B 420_GP 22 A 421_GP 22 C 452_GS 24 A 472_GP 22 S 473_GP 22 S Sensor 498_ENX 13 GAMA 504_ENX 22 IMR 533_Encoder MR 32 CPT	Motor Control 550_ESCON Module 24/2 550_ESCON 36/2 DC 551_ESCON Module 50/5 553_ESCON 50/5 557_ESCON2 Nano 24/2 557_ESCON2 Micro 60/5 563_EPOS4 Micro 24/5 564_EPOS4 Module 24/1.5 564_EPOS4 Module 50/5 565_EPOS4 Compact 24/5 3-axes 566_EPOS4 Compact 24/1.5 567_EPOS4 Compact 50/5

Other specifications
 29 Number of pole pairs 1
 30 Number of commutator segments 9
 31 Weight of motor 54 g

Values listed in the table are nominal.
 Explanation of the figures on page 94.

Option
 Ball bearings in place of sleeve bearings