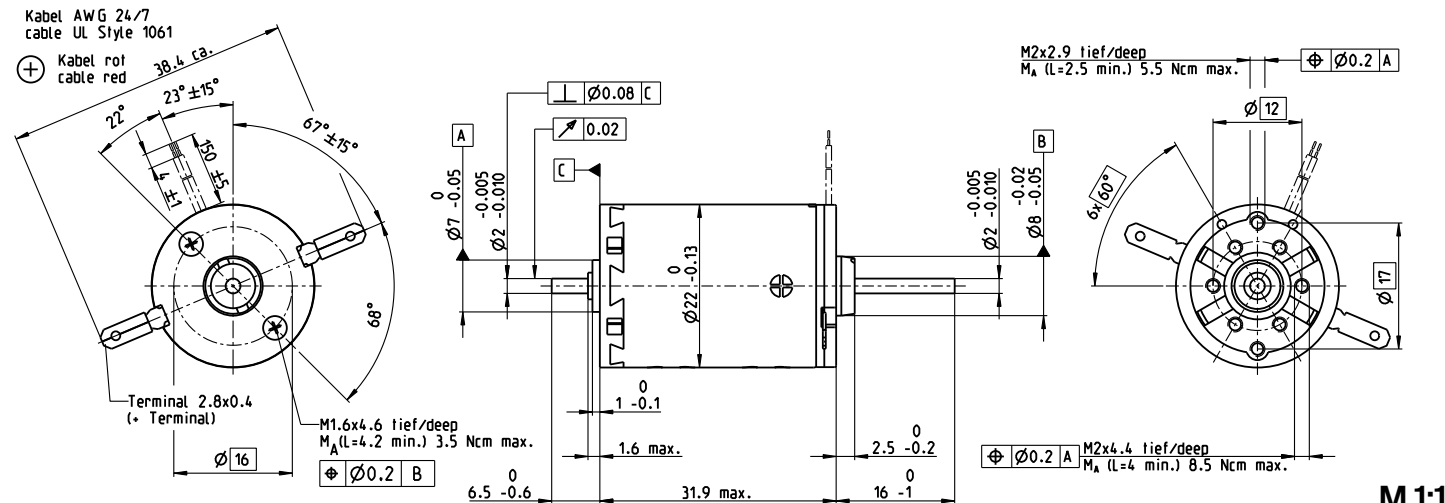


A-max 22 Ø22 mm, precious metal brushes CLL, 3.5 watt

A-max



M 1:1

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

Part numbers

	110130	110132	110133	110134	110135	110136	110137	110138	110139	110140	110141	110142
with terminals	139846	352986	352987	352988	352989	352990	352991	352992	352993	352994	352995	352996
with cables												

Motor data

Values at nominal voltage			4.5	6	7.2	7.2	7.2	9	12	15	18	24	36	42
1 Nominal voltage	V		4.5	6	7.2	7.2	7.2	9	12	15	18	24	36	42
2 No load speed	rpm		7210	6630	7000	6240	5620	6140	6630	6680	6480	6520	6950	7320
3 No load current	mA		26.7	17.8	16	13.6	11.8	10.6	8.88	7.17	5.73	4.33	3.16	2.92
4 Nominal speed	rpm		5010	3940	4330	3550	2890	3400	3890	3930	3710	3720	4100	4490
5 Nominal torque	mNm		4.82	6.27	6.31	6.31	6.24	6.21	6.16	6.15	6.11	6.05	5.91	5.95
6 Nominal current (max. continuous current)	A		0.84	0.749	0.662	0.589	0.525	0.457	0.368	0.296	0.237	0.177	0.123	0.112
7 Stall torque	mNm		15.4	15.3	16.4	14.6	12.8	14	14.9	15	14.4	14.2	14.5	15.5
8 Stall current	A		2.61	1.79	1.69	1.34	1.06	1.01	0.872	0.706	0.547	0.407	0.296	0.286
9 Max. efficiency	%		81	81	82	81	80	81	81	81	81	81	81	81
Characteristics														
10 Terminal resistance	Ω		1.72	3.36	4.27	5.39	6.78	8.9	13.8	21.2	32.9	59	122	147
11 Terminal inductance	mH		0.106	0.222	0.288	0.362	0.445	0.585	0.89	1.37	2.1	3.69	7.29	8.95
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		474	438	430	432	443	443	449	450	456	465	485	477
15 Mechanical time constant	ms		20.2	19.8	19.7	19.7	19.8	19.8	19.8	19.8	19.9	19.9	20.2	20
16 Rotor inertia	gcm ²		4.07	4.32	4.38	4.36	4.26	4.27	4.2	4.21	4.16	4.1	3.97	4.01

Specifications

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...+65°C	
22 Max. winding temperature	+85°C	

Mechanical data (sleeve bearings)

23 Max. speed	10 000 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

Mechanical data (ball bearings)

23 Max. speed	10 000 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	440 N
	12.3 N

Other specifications

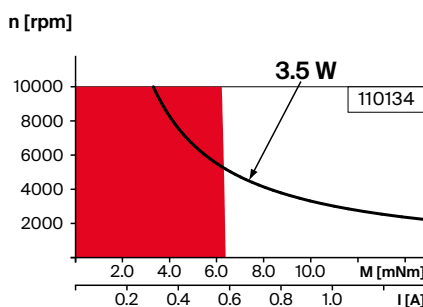
29 Number of pole pairs	1
30 Number of commutator segments	9
31 Weight of motor	54 g

CLL = Capacitor Long Life
Values listed in the table are nominal.
Explanation of the figures on page 94.

Option

Ball bearings in place of sleeve bearings
Without CLL

Operating range



Comments

- 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**

Modular system

Details on catalog page 48

Gear	Sensor	Motor Control
419_GP 22 B	498_ENX 13 GAMA	550_ESCON Module 24/2
420_GP 22 A	504_ENX 22 IMR	550_ESCON 36/2 DC
421_GP 22 C	533_Encoder MR 32 CPT	551_ESCON Module 50/5
452_GS 24 A		553_ESCON 50/5
472_GP 22 S		557_ESCON2 Nano 24/2
473_GP 22 S		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