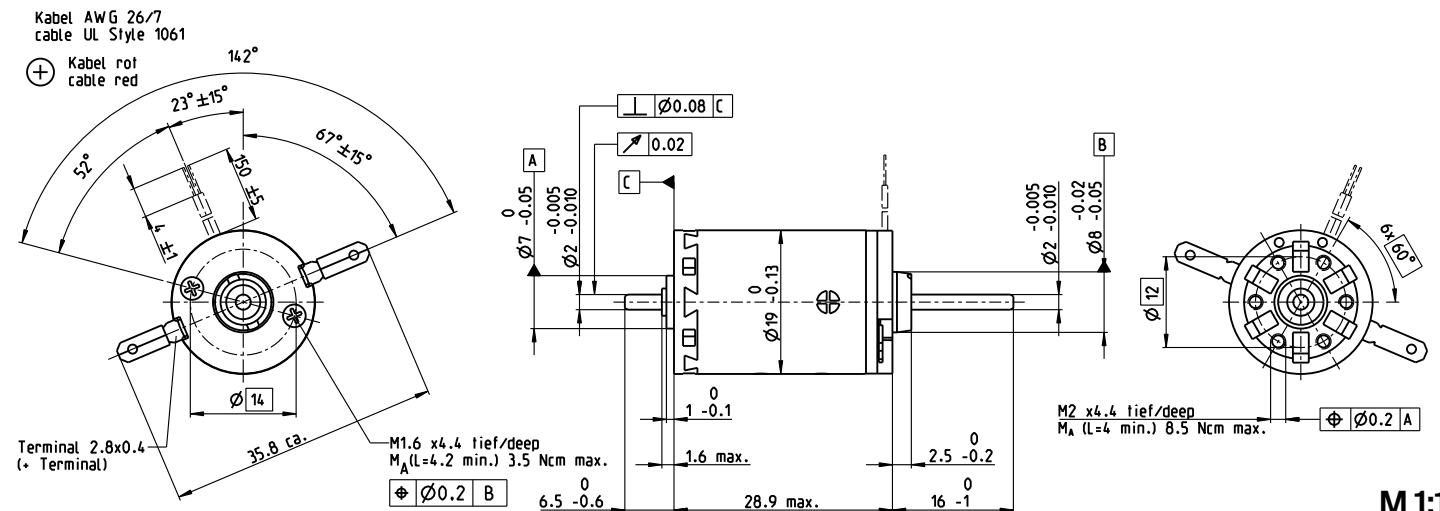


A-max 19 $\varnothing 19$ mm, precious metal brushes CLL, 1.5 watt

A-max



M 1:1

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

Part numbers									
with terminals	110090	110091	110092	110093	110094	110095	110096	110097	110098
with cables	139832	352925	352926	352927	352928	352929	352930	315468	352931

Motor data										
Values at nominal voltage										
1 Nominal voltage	V	1.2	2.4	3	4.8	6	7.2	9	12	18
2 No load speed	rpm	6390	7160	6230	6190	6090	6130	6130	6140	6590
3 No load current	mA	88.3	52	34.2	21.2	16.6	14	11.2	8.41	6.19
4 Nominal speed	rpm	5210	4410	2500	2410	2330	2290	2280	2210	2630
5 Nominal torque	mNm	1.33	2.49	3.62	3.57	3.59	3.51	3.51	3.43	3.38
6 Nominal current (max. continuous current)	A	0.84	0.84	0.833	0.511	0.405	0.332	0.265	0.195	0.138
7 Stall torque	mNm	6.23	6.28	6	5.89	5.89	5.68	5.67	5.44	5.73
8 Stall current	A	3.55	2.01	1.34	0.816	0.642	0.52	0.415	0.3	0.226
9 Max. efficiency	%	72	71	71	71	71	70	70	70	70
Characteristics										
10 Terminal resistance	Ω	0.338	1.19	2.24	5.88	9.34	13.8	21.7	40	79.7
11 Terminal inductance	mH	0.019	0.059	0.121	0.314	0.506	0.719	1.12	1.98	3.87
12 Torque constant	mNm/A	1.76	3.12	4.49	7.22	9.17	10.9	13.7	18.1	25.4
13 Speed constant	rpm/V	5440	3060	2130	1320	1040	874	699	526	377
14 Speed/torque gradient	rpm/mNm	1050	1170	1060	1080	1060	1110	1110	1160	1180
15 Mechanical time constant	ms	27.9	25.4	24.3	24.2	24.1	24.3	24.3	25	24.7
16 Rotor inertia	gcm ²	2.54	2.08	2.18	2.15	2.17	2.09	2.09	2.06	1.99

Specifications	Operating range	Comments
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- Thermal data**
- 17 Thermal resistance housing-ambient 21.3 K/W
 - 18 Thermal resistance winding-housing 10.5 K/W
 - 19 Thermal time constant winding 11 s
 - 20 Thermal time constant motor 201 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

- 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

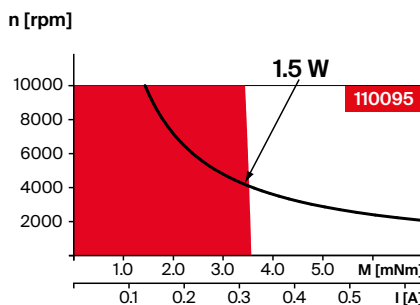
- Other specifications**
- 29 Number of pole pairs 1
 - 30 Number of commutator segments 9
 - 31 Weight of motor 34 g

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



- 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	
418_GP 19 B	498_ENX 13 GAMA	550_ESCON Module 24/2	
420_GP 22 A	503_ENX 19 IMR	550_ESCON 36/2 DC	
421_GP 22 C	533_Encoder MR 32 CPT	557_ESCON2 Nano 24/2	
452_GS 24 A		563_EPOS4 Micro 24/5	
472_GP 22 S		564_EPOS4 Module 24/1.5	
473_GP 22 S		565_EPOS4 Compact 24/5 3-axes	
		566_EPOS4 Compact 24/1.5	