

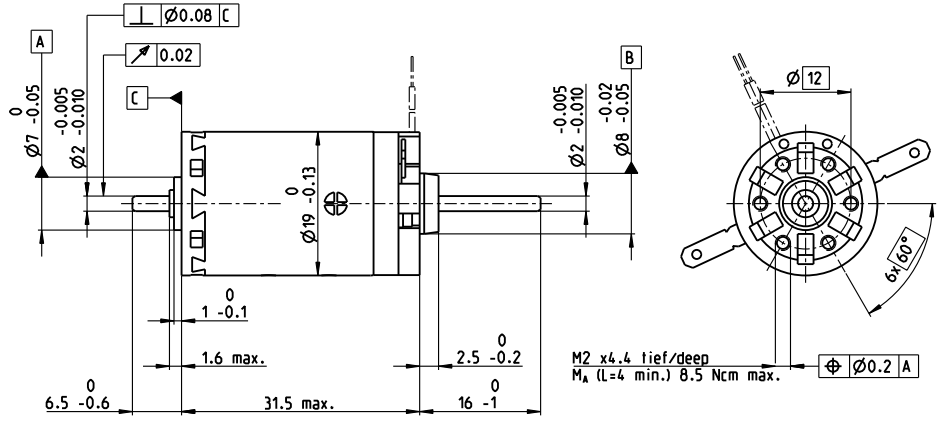
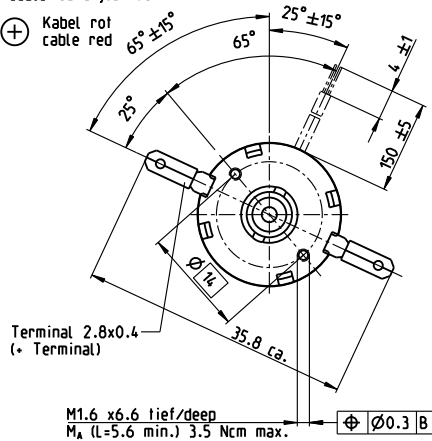
A-max 19 Ø19 mm, graphite brushes, 2.5 watt

A-max

Kabel AWG 26/7
cable UL Style 1061



Kabel rot
cable red



M 1:1

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

Part numbers									
with terminals	249991	249992	249993	249994	249995	249996	249997	249998	249999
with cables	240035	352971	353590	352972	352973	344596	352974	352975	352976

Motor data										
Values at nominal voltage										
1 Nominal voltage	V	2.4	3.6	6	7.2	9	12	15	18	24
2 No load speed	rpm	12400	10400	12200	8980	8850	9930	9930	8910	8470
3 No load current	mA	292	158	114	66.1	51.9	44.6	35.7	26.3	18.6
4 Nominal speed	rpm	11700	8350	9310	4750	4630	5670	5670	4520	4020
5 Nominal torque	mNm	0.759	1.78	2.75	3.98	4.02	3.89	3.89	3.83	3.8
6 Nominal current (max. continuous current)	A	0.72	0.72	0.72	0.612	0.485	0.397	0.317	0.235	0.167
7 Stall torque	mNm	14.1	9.66	12.1	8.84	8.83	9.47	9.44	8.16	7.63
8 Stall current	A	8.04	3.09	2.71	1.23	0.963	0.867	0.691	0.45	0.301
9 Max. efficiency	%	64	59	63	59	59	60	60	58	57
Characteristics										
10 Terminal resistance	Ω	0.299	1.16	2.22	5.88	9.35	13.8	21.7	40	79.8
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	925	1140	1050	1080	1060	1110	1110	1160	1180
15 Mechanical time constant	ms	24.6	24.8	24	24.2	24.1	24.2	24.3	25	24.6
16 Rotor inertia	gcm ²	2.54	2.07	2.18	2.14	2.16	2.09	2.09	2.06	1.99

Specifications	Operating range	Comments
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 11.0 s 20 Thermal time constant motor 201 s 21 Ambient temperature -30...+85°C 22 Max. winding temperature +125°C Mechanical data (sleeve bearings) 23 Max. speed 12 000 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 480 N Mechanical data (ball bearings) 23 Max. speed 12 000 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 240 N Other specifications 29 Number of pole pairs 1 30 Number of commutator segments 9 31 Weight of motor 34 g	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 Gear 418_GP 19 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 503_ENX 19 IMR 533_Encoder MR 32 CPT Motor Control 550_ESCON Module 24/2 550_ESCON 36/2 DC 557_ESCON2 Nano 24/2 563_EPOS4 Micro 24/5 564_EPOS4 Module 24/1.5 565_EPOS4 Compact 24/5 3-axes 566_EPOS4 Compact 24/1.5

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

Option

Ball bearings in place of sleeve bearings