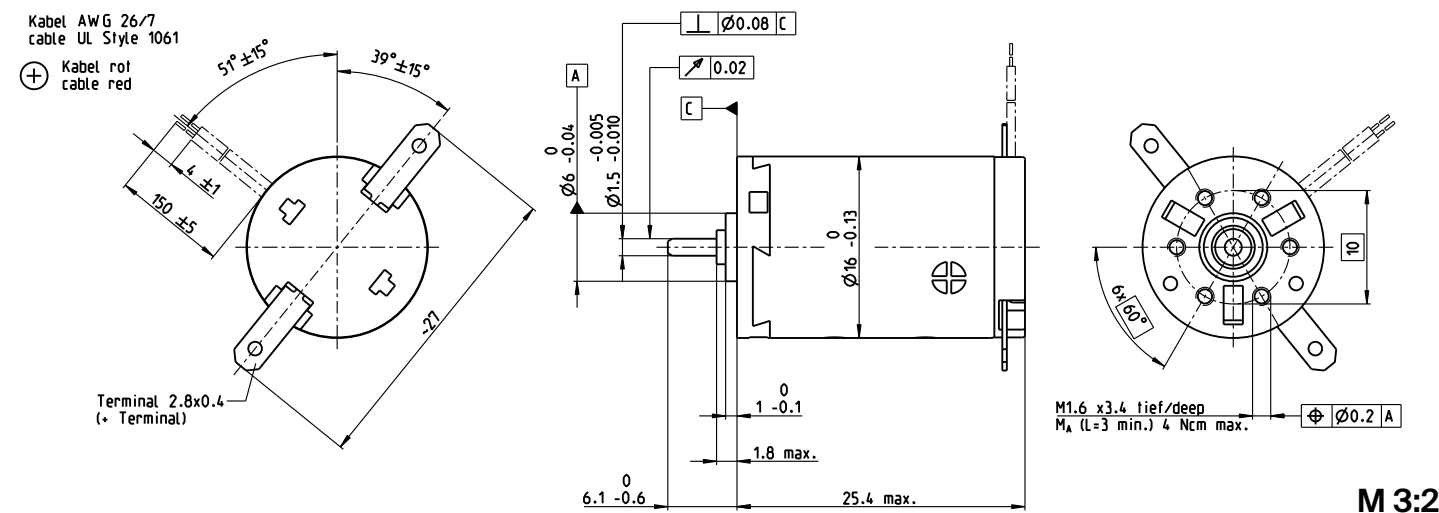


A-max 16 Ø16 mm, precious metal brushes CLL, 2 watt

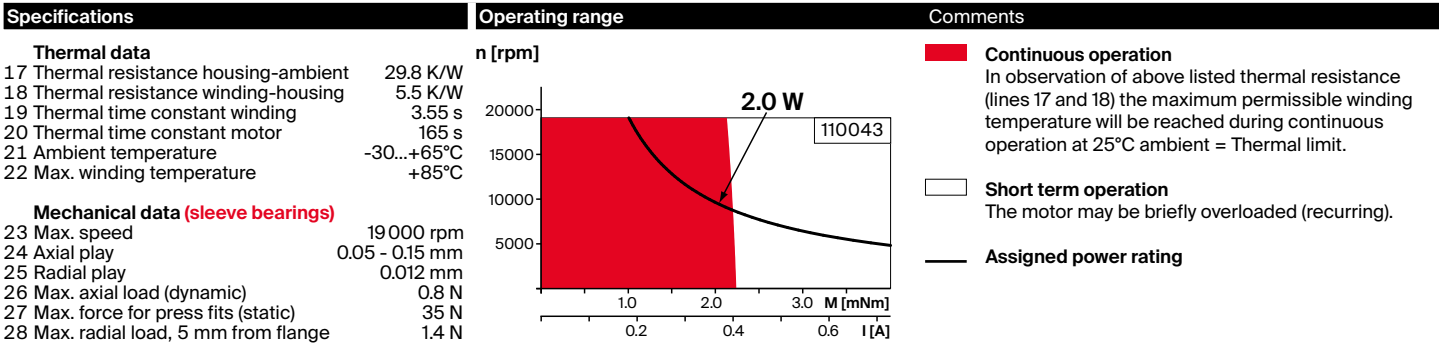


M 3:2

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

Part numbers										
with terminals	110041	110042	110043	110044	110045	110046	110047	110048	110049	110050
with cables	139820	352815	134844	231379	220514	304672	352823	352816	260678	352817

Motor data											
Values at nominal voltage											
1 Nominal voltage	V	1.5	3	6	9	12	15	18	21	24	30
2 No load speed	rpm	10800	11000	10100	12300	12300	13200	14100	13700	13800	11400
3 No load current	mA	61.4	38.1	13.9	12.7	9.54	8.57	7.99	6.53	5.83	3.37
4 Nominal speed	rpm	9360	8810	4530	6700	6660	7590	8480	8040	8120	5480
5 Nominal torque	mNm	0.712	1.3	2.22	2.19	2.17	2.17	2.15	2.14	2.11	2.08
6 Nominal current (max. continuous current)	A	0.6	0.6	0.408	0.327	0.243	0.209	0.185	0.153	0.134	0.0864
7 Stall torque	mNm	4.79	4.51	4.03	4.82	4.77	5.16	5.44	5.22	5.12	4.04
8 Stall current	A	3.66	1.97	0.723	0.702	0.52	0.482	0.453	0.362	0.315	0.164
9 Max. efficiency	%	76	75	75	76	76	76	76	76	76	74
Characteristics											
10 Terminal resistance	Ω	0.41	1.52	8.3	12.8	23.1	31.1	39.7	57.9	76.2	183
11 Terminal inductance	mH	0.017	0.052	0.306	0.467	0.83	1.13	1.42	2.05	2.61	6.01
12 Torque constant	mNm/A	1.31	2.29	5.57	6.88	9.17	10.7	12	14.4	16.3	24.7
13 Speed constant	rpm/V	7290	4170	1720	1390	1040	893	795	663	587	387
14 Speed / torque gradient	rpm/mNm	2280	2770	2560	2590	2620	2600	2630	2670	2750	2880
15 Mechanical time constant	ms	25.3	23.8	23.2	23.3	23.3	23.4	23.5	23.4	23.5	23.9
16 Rotor inertia	gcm ²	1.06	0.82	0.868	0.859	0.849	0.859	0.852	0.838	0.816	0.793



Mechanical data (ball bearings)		Modular system		Details on catalog page 48	
23 Max. speed	19000 rpm	Gear		Motor Control	
24 Axial play	0.05 - 0.15 mm	416_GP 16 A		550_ESCON Module 24/2	
25 Radial play	0.025 mm	417_GP 16 C		550_ESCON 36/2 DC	
26 Max. axial load (dynamic)	2.2 N	449_GS 16 A		557_ESCON2 Nano 24/2	
27 Max. force for press fits (static)	30 N	450_GS 16 V			
28 Max. radial load, 5 mm from flange	7.8 N	451_GS 16 VZ			
Other specifications		469-471_GP 16 S			
29 Number of pole pairs	1				
30 Number of commutator segments	7				
31 Weight of motor	21 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