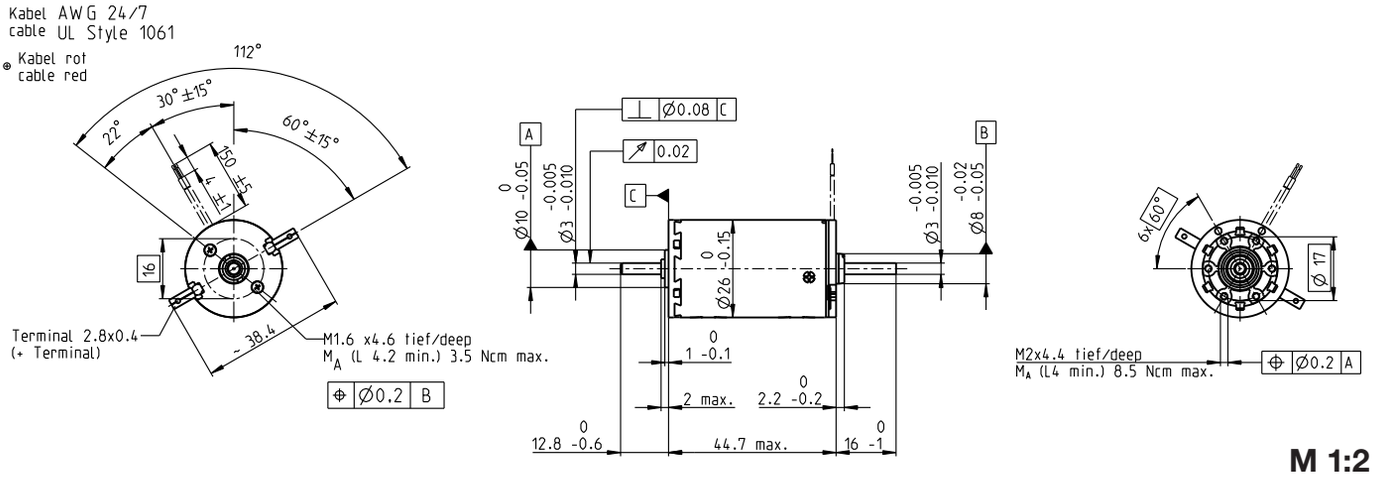
A-max 26 ∅26 mm, Precious Metal Brushes CLL, 4.5 Watt

High Power



M 1:2

Stock program
Standard program
Special program (on request)

Part Numbers

with terminals	110204	110205	110206	110207	110208	**110209**	110210	110211	**110212**	110213	110214	
with cables	353109	353110	353111	353112	353113	353114	353115	353116	353117	353118	353119	
Motor Data												
Values at nominal voltage												
1 Nominal voltage	V	2.4	3.6	6	7.2	9	12	15	18	24	30	36
2 No load speed	rpm	3890	5190	4090	4060	4020	4440	3530	3640	4510	4680	4520
3 No load current	mA	67.7	69.9	29.2	24	19	16.5	9.41	8.2	8.45	7.16	5.67
4 Nominal speed	rpm	3460	4640	2940	2650	2620	3030	2070	2180	3060	3210	3050
5 Nominal torque (max. continuous torque)	mNm	4.53	5.08	11.3	13.3	13.4	13.2	12.9	12.9	12.8	12.6	12.5
6 Nominal current (max. continuous current)	A	0.84	0.84	0.84	0.814	0.647	0.529	0.33	0.284	0.262	0.214	0.171
7 Stall torque	mNm	35.9	44.1	39.2	38.1	38.2	41.4	31.4	32.5	40.1	40.3	38.5
8 Stall current	A	6.15	6.71	2.83	2.27	1.8	1.62	0.783	0.697	0.797	0.665	0.513
9 Max. efficiency	%	81	81	81	81	81	81	80	80	81	81	81
Characteristics												
10 Terminal resistance	Ω	0.39	0.536	2.12	3.17	4.99	7.41	19.2	25.8	30.1	45.1	70.2
11 Terminal inductance	mH	0.0402	0.0509	0.227	0.332	0.528	0.77	1.9	2.57	2.99	4.34	6.68
12 Torque constant	mNm/A	5.84	6.57	13.9	16.8	21.2	25.5	40.1	46.7	50.3	60.6	75.2
13 Speed constant	rpm/V	1640	1450	689	569	451	374	238	205	190	158	127
14 Speed / torque gradient	rpm/mNm	109	119	105	108	106	108	114	113	114	117	119
15 Mechanical time constant	ms	16.6	16.1	15	14.9	14.9	14.9	14.9	14.9	14.9	15	15
16 Rotor inertia	gcm²	14.4	12.9	13.6	13.2	13.3	13.1	12.6	12.6	12.5	12.2	12.1

Specifications

Thermal data

17	Thermal resistance housing-ambient	13.2 K/W
18	Thermal resistance winding-housing	3.2 K/W
19	Thermal time constant winding	12.5 s
20	Thermal time constant motor	473 s
21	Ambient temperature	-30…+65°C
22	Max. winding temperature	+85°C

Mechanical data (sleeve bearings)

23	Max. speed	6700 rpm
24	Axial play	0.1 - 0.2 mm
25	Radial play	0.012 mm
26	Max. axial load (dynamic)	1.7 N
27	Max. force for press fits (static)	80 N
	(static, shaft supported)	1200 N
28	Max. radial load, 5 mm from flange	5.5 N

Mechanical data (ball bearings)

23	Max. speed	6700 rpm
24	Axial play	0.1 - 0.2 mm
25	Radial play	0.025 mm
26	Max. axial load (dynamic)	5.0 N
27	Max. force for press fits (static)	75 N
	(static, shaft supported)	1200 N
28	Max. radial load, 5 mm from flange	20.5 N

Other specifications

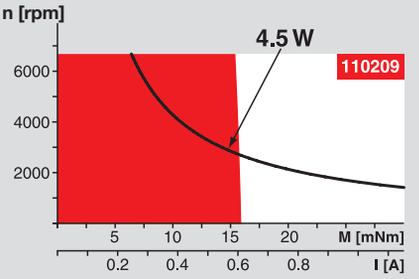
29	Number of pole pairs	1
30	Number of commutator segments	13
31	Weight of motor	119 g

CLL = Capacitor Long Life

Values listed in the table are nominal.
Explanation of the figures on page 151.

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

maxon Modular System

Overview on page 20–27

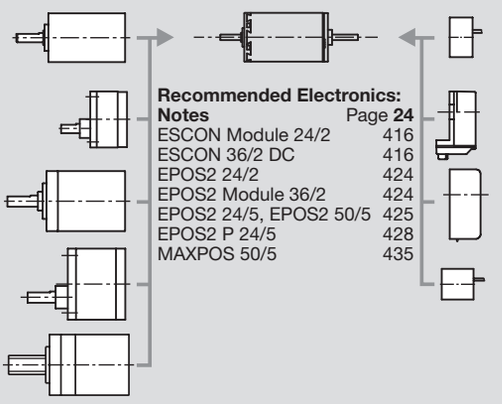
Planetary Gearhead
∅26 mm
0.75 - 4.5 Nm
Page 336

Spur Gearhead
∅30 mm
0.07 - 0.2 Nm
Page 337

Planetary Gearhead
∅32 mm
0.75 - 6.0 Nm
Page 338/339/342

Spur Gearhead
∅38 mm
0.1 - 0.6 Nm
Page 348

Spindle Drive
∅32 mm
Page 370–372



Recommended Electronics:

Notes	Page **24**
ESCON Module 24/2	416
ESCON 36/2 DC	416
EPOS2 24/2	424
EPOS2 Module 36/2	424
EPOS2 24/5, EPOS2 50/5	425
EPOS2 P 24/5	428
MAXPOS 50/5	435

Encoder MR
128 - 1000 CPT,
3 channels
Page 392

Encoder Enc
22 mm
100 CPT, 2 channels
Page 398

Encoder HED_ 5540
500 CPT,
3 channels
Page 400/402

Encoder MEnc
∅13 mm
16 CPT, 2 channels
Page 410