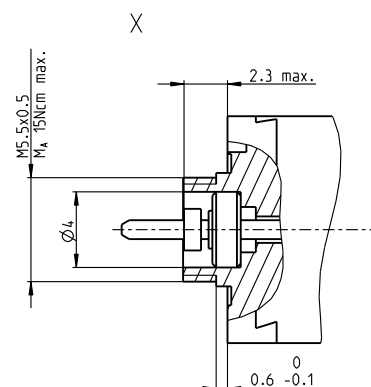
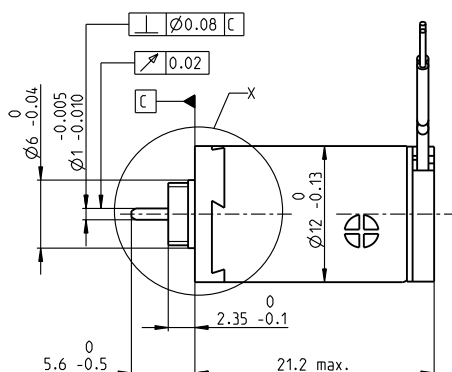
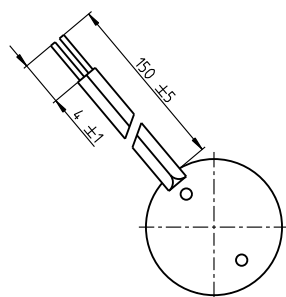


A-max

⊕ Kabel rot
cable red



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

200937	265374	265375	265376	265377	265378
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Motor Data		2003R	2003F	2003S	2003U	2003V	2003W									
Values at nominal voltage																
1 Nominal voltage	V	3	4.5	6	9	12	15									
2 No load speed	rpm	13900	11900	12800	12100	12300	13800									
3 No load current	mA	21.1	11.5	9.47	5.87	4.5	4.2									
4 Nominal speed	rpm	5980	4380	5260	4470	4610	5030									
5 Nominal torque (max. continuous torque)	mNm	0.897	0.961	0.948	0.941	0.931	0.804									
6 Nominal current (max. continuous current)	A	0.465	0.282	0.225	0.141	0.107	0.0836									
7 Stall torque	mNm	1.58	1.55	1.63	1.52	1.52	1.29									
8 Stall current	A	0.789	0.438	0.374	0.22	0.168	0.129									
9 Max. efficiency	%	70	71	71	70	70	68									
Characteristics																
10 Terminal resistance	Ω	3.8	10.3	16	40.9	71.6	116									
11 Terminal inductance	mH	0.085	0.264	0.403	1.01	1.74	2.13									
12 Torque constant	mNm/A	2.01	3.53	4.36	6.92	9.06	10									
13 Speed constant	rpm/V	4760	2710	2190	1380	1050	952									
14 Speed/torque gradient	rpm/mNm	9030	7880	8060	8170	8330	11000									
15 Mechanical time constant	ms	20.6	20.3	20.4	20.4	20.5	21.1									
16 Rotor inertia	gcm ²	0.218	0.246	0.241	0.238	0.235	0.183									

Specifications

Thermal data

17 Thermal resistance housing-ambient	44.5 K/W
18 Thermal resistance winding-housing	15 K/W
19 Thermal time constant winding	5.03 s
20 Thermal time constant motor	245 s
21 Ambient temperature	-30...+65°C
22 Max. winding temperature	+85°C

Mechanical data (sleeve bearings)

23 Max. speed	19 000 rpm
24 Axial play	0.05 - 0.15 mm
25 Radial play	0.012 mm
26 Max. axial load (dynamic)	0.15 N
27 Max. force for press fits (static)	15 N
28 Max. radial load, 4 mm from flange	0.4 N

Other specifications

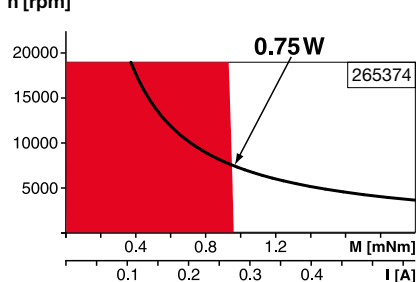
29 Number of pole pairs
30 Number of commutator segments
31 Weight of motor

CLL = Capacitor Long Life
Alignment of the electronic
connections not specified.

Values listed in the table are nominal.
Explanation of the figures on page 82.

Operating Range

n [rpm]



Comments

- Continuous operation

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

Short term operation
The motor may be briefly overloaded (recurring).

— Assigned power rating

maxon Modular System		Details on catalog page 38
11 g	Planetary Gearhead Ø10 mm 0.01 - 0.15 Nm Page 371	 Recommended Electronics: Notes Page 38 ESCON Module 24/2 500 ESCON 36/2 DC 500
	Spur Gearhead Ø12 mm 0.01 - 0.03 Nm Page 372	
	Planetary Gearhead Ø13 mm 0.05 - 0.15 Nm Page 373	
	Planetary Gearhead Ø13 mm 0.2 - 0.35 Nm Page 374	