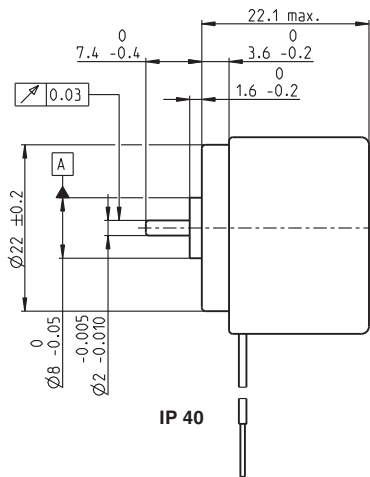


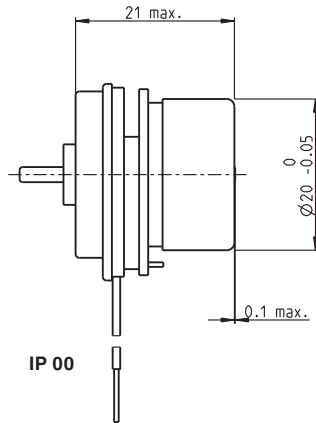
EC 20 flat brushless, 5 Watt, with integrated electronics

1-Q-speed controller

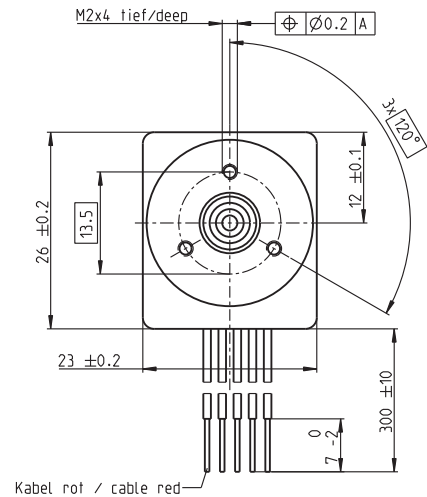
maxon flat motor



IP 40



IP 00



Kabel rot / cable red

M 1:1

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

Order Number

IP 40 (with cover)
IP 00 (without cover)

2 wire version		5 wire version	
		Enable	Direction
350834	350835	350806	370416
350804	350805	349731	370415

Motor Data

Values at nominal voltage						
1	Nominal voltage	V	24.0	24.0	24.0	24.0
2	No load speed	rpm	3000	6000	6000	6000
3	No load current	mA	16.8	23.1	23.1	23.1
4	Nominal speed	rpm	3000	6000	6000	6000
5	Nominal torque (max. continuous torque)	mNm	7.5	7.5	7.5	7.5
6	Nominal current (max. continuous current)	A	0.258	0.394	0.394	0.394
33	Max. torque	mNm	10.3	10.3	10.3	10.3
34	Max. current	A	0.458	0.58	0.58	0.58
9	Max. efficiency	%	42	55	55	55
Characteristics						
35	Control variable	Speed	Speed	Speed	Speed	
36	Supply voltage + V _{CC}	V	10 ... 28	10 ... 28	10 ... 28	10 ... 28
37	Speed set value input	V	= V _{CC}	= V _{CC}	0.33 ... 10.8	0.33 ... 10.8
38	Scale speed set value input	rpm/V	125	250	600	600
39	Speed range	rpm	1250 ... 3500	2500 ... 7000	200 ... 6480	200 ... 6480
40	Max. acceleration	rpm/s	3000	6000	6000	

Specifications

Thermal data		
17	Thermal resistance housing-ambient	13 K/W
18	Thermal resistance winding-housing	7.5 K/W
19	Thermal time constant winding	10.3 s
20	Thermal time constant motor	72.6 s
21	Ambient temperature	-40 ... +85°C
22	Max. permissible winding temperature	+125°C
41	Max. temperature of electronics	+105°C

Mechanical data (preloaded ball bearings)		
16	Rotor inertia	5.1 gcm ²
24	Axial play at axial load < 2.0 N	0 mm
	> 2.0 N	0.14 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	1.8 N
27	Max. force for press fits (static) (static, shaft supported)	20 N
28	Max. radial loading, 5 mm from flange	12 N

Other specifications		
31	Weight of motor	37 g
32	Direction of rotation	Clockwise (CW)

Values listed in the table are nominal.

Protective functions

Overload protection, blockage protection, inverse-polarity protection, thermal overload protection, low/high voltage cut-off

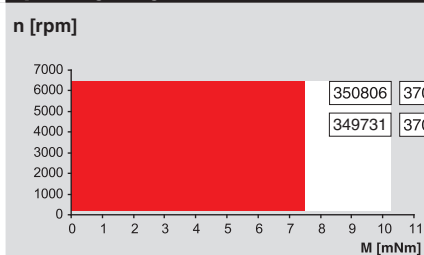
Connection 2 wire version (Cable AWG 28)

red + V_{CC} 10 ... 28 VDC
black GND

Connection 5 wire version (Cable AWG 28)

red + V_{CC} 10 ... 28 VDC
black GND
white Speed set value input
green Monitor n (6 pulses per revolution)
grey Disable (Enable) or sense of direction change over (Direction)

Operating Range



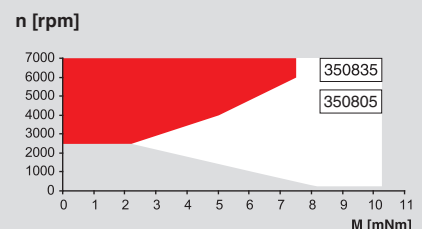
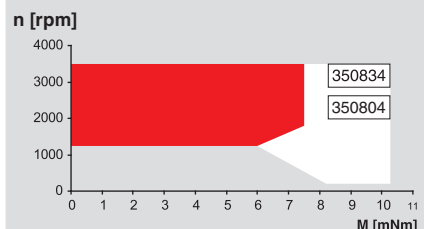
Comments

Continuous operation

The drive can be operated with a speed controller and, taking account of the given thermal resistance (fig. 17 and 18) at an ambient temperature of 25°C, does not exceed the maximum permissible operating temperatures.

Overload range

The drive reaches these operating points. Speed may vary from the set value. The overload protection shuts down the drive in the event of sustained overload.



maxon Modular System

Overview on page 16 - 21

Spur Gearhead

Ø20.3 mm
0.06 - 0.25 Nm
Page 219

Planetary Gearhead

Ø22 mm
0.5 - 2.0 Nm
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