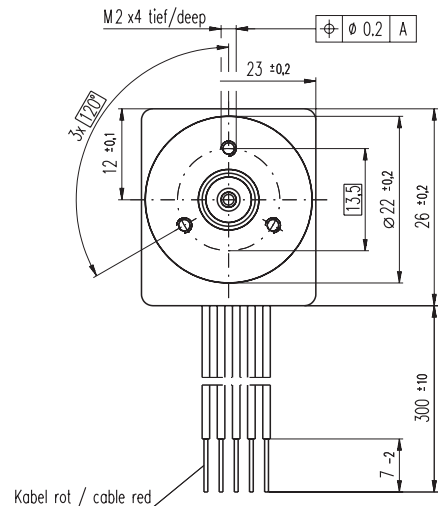
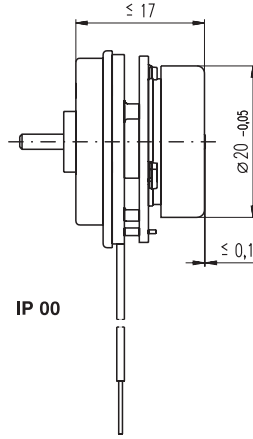
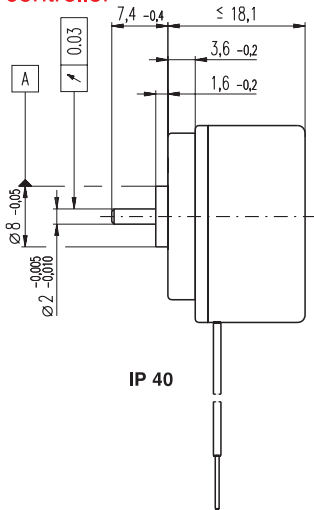


EC 20 flat brushless, 2 Watt, with integrated electronics

NEW

1-Q-speed controller

maxon flat motor



M 1:1

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

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

Order Number

2 wire		5 wire
350795	350796	350794
350776	350778	349694

Motor Data (provisional)

Values at nominal voltage		2 wire	5 wire	5 wire	
1	Nominal voltage	V	24	24	24
2	No load speed	rpm	3000	6000	6000
3	No load current	mA	14.5	19.8	19.8
4	Nominal speed	rpm	3000	6000	6000
5	Nominal torque (max. continuous torque)	mNm	3.74	3.74	3.74
6	Nominal current (max. continuous current)	A	0.196	0.278	0.278
33	Max. torque	mNm	5	5	5
34	Max. current	A	0.33	0.33	0.33
9	Max. efficiency	%	25	37	37
Characteristics					
35	Control variable	Speed	Speed	Speed	
36	Supply voltage + V _{CC}	V	10 ... 28	10 ... 28	10 ... 28
37	Speed set value input	V	= V _{CC}	= V _{CC}	0.33 ... 10.8
38	Scale speed set value input	rpm / V	125	250	600
39	Turning speed range	rpm	1250 ... 3500	2500 ... 7000	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	10 K / W
19	Thermal time constant winding	2.38 s
20	Thermal time constant motor	133 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	3.2 gcm ²
24	Axial play at axial load < 2 N	0 mm
	> 2 N	0.14 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	1.8 N
27	Max. axial load (static)	20 N
	(static, shaft supported)	200 N
28	Max. radial loading, 5 mm from flange	11 N
Other specifications		
31	Weight of motor	30 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

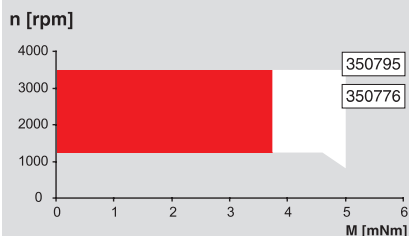
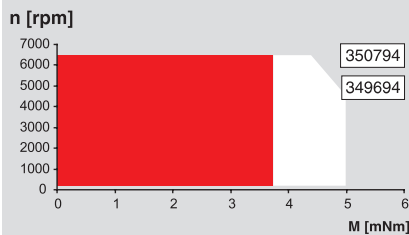
Connection 2 wire version (Cable AWG 28)

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 (2.4 ... 28 VDC)

Operating Range



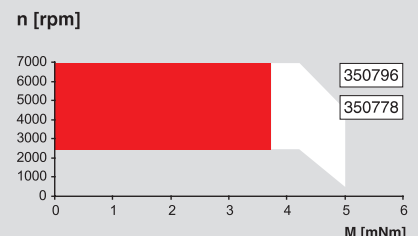
Comments

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

∅20.3 mm
0.06 - 0.25 Nm
Page 227

Planetary Gearhead

∅22 mm
0.5 - 1.0 Nm
Page 230

