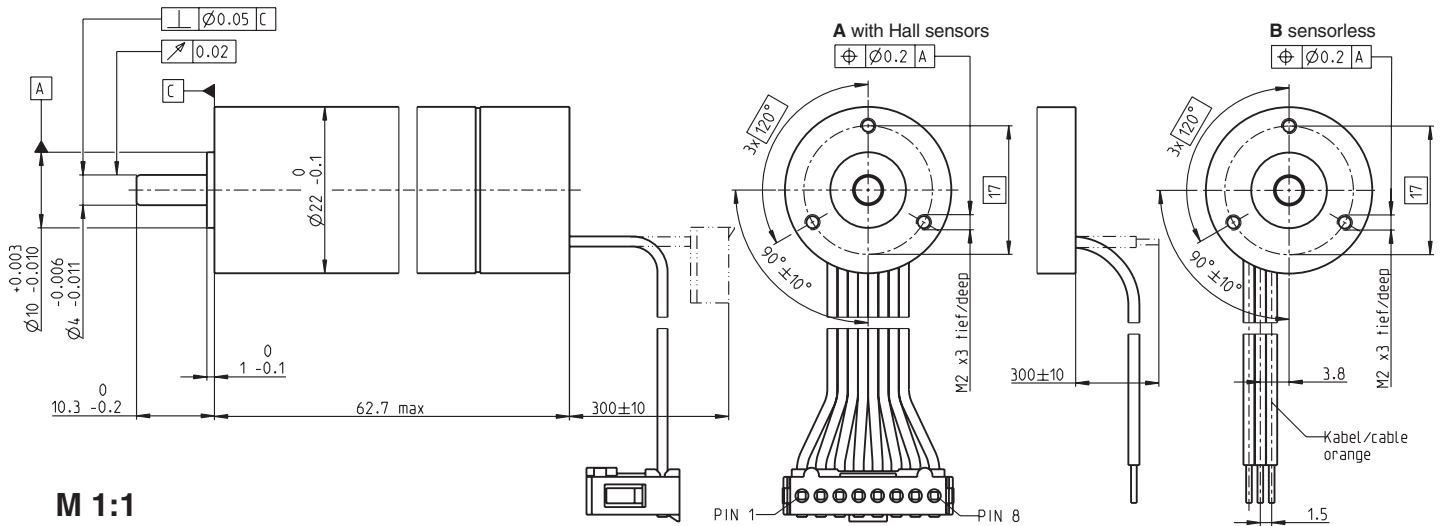


EC 22 Ø22 mm, brushless, 100 Watt

NEW

maxon EC motor



M 1:1

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

	Order Number		
A with Hall sensors	386673	386674	386675
B sensorless	386676	386677	386678

Motor Data (provisional)				
Values at nominal voltage				
1 Nominal voltage	V	18	24	48
2 No load speed	rpm	31600	30100	32800
3 No load current	mA	318	220	127
4 Nominal speed	rpm	29500	28000	30900
5 Nominal torque (max. continuous torque)	mNm	36.5	39.2	41.2
6 Nominal current (max. continuous current)	A	6.97	5.32	3.04
7 Stall torque	mNm	631	677	839
8 Starting current	A	116	89.1	60.2
9 Max. efficiency	%	90	90	91
Characteristics				
10 Terminal resistance phase to phase	Ω	0.155	0.269	0.797
11 Terminal inductance phase to phase	mH	0.0178	0.035	0.118
12 Torque constant	mNm / A	5.42	7.6	13.9
13 Speed constant	rpm / V	1760	1260	685
14 Speed / torque gradient	rpm / mNm	50.3	44.6	39.2
15 Mechanical time constant	ms	2.15	1.91	1.68
16 Rotor inertia	gcm ²	4.09	4.09	4.09

Specifications	
Thermal data	
17 Thermal resistance housing-ambient	7 K / W
18 Thermal resistance winding-housing	1 K / W
19 Thermal time constant winding	4.92 s
20 Thermal time constant motor	355 s
21 Ambient temperature	-20 ... +100°C
22 Max. permissible winding temperature	125°C
Mechanical data (preloaded ball bearings)	
23 Max. permissible speed	60000 rpm
24 Axial play at axial load < 5 N	0 mm
24 Axial play at axial load > 5 N	max. 0.14 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	4 N
27 Max. force for press fits (static) (static, shaft supported)	45 N
27 Max. force for press fits (static) (static, shaft supported)	250 N
28 Max. radial loading, 5 mm from flange	16 N
Other specifications	
29 Number of pole pairs	1
30 Number of phases	3
31 Weight of motor	128 g

Values listed in the table are nominal.

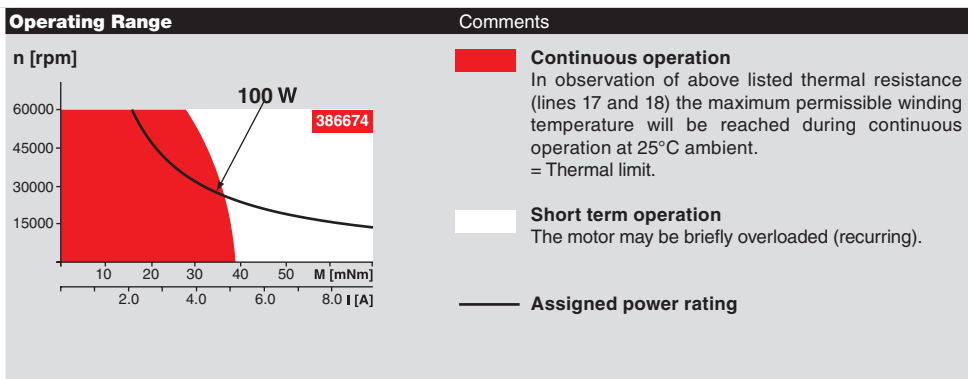
Connection A

brown	Motor winding 1	Pin 1
red	Motor winding 2	Pin 2
orange	Motor winding 3	Pin 3
yellow	V _{Hall} 4.5 ... 24 VDC	Pin 4
green	GND	Pin 5
blue	Hall sensor 1	Pin 6
violet	Hall sensor 2	Pin 7
gray	Hall sensor 3	Pin 8

Wiring diagram for Hall sensors see p. 27

Connection B (Cable AWG 24)

brown	Motor winding 1
red	Motor winding 2
orange	Motor winding 3



maxon Modular System Overview on page 16 - 21

Planetary Gearhead
Ø22 mm
0.5 - 3.4 Nm
Page 224 / 225

Spindle Drive
Ø22 mm
Page 247 / 248

for type A: Encoder MR
128 / 256 / 512 Imp.,
Page 261

for type B: Resolver
on request

Recommended Electronics:

DECS 50/5	Page 289
DEC 50/5, Module 50/5	291
DECV 50/5	297
DEC 70/10	297
DES 50/5	298
DES 70/10	298
EPOS2 24/5, EPOS2 50/5	305
EPOS2 70/10	305
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