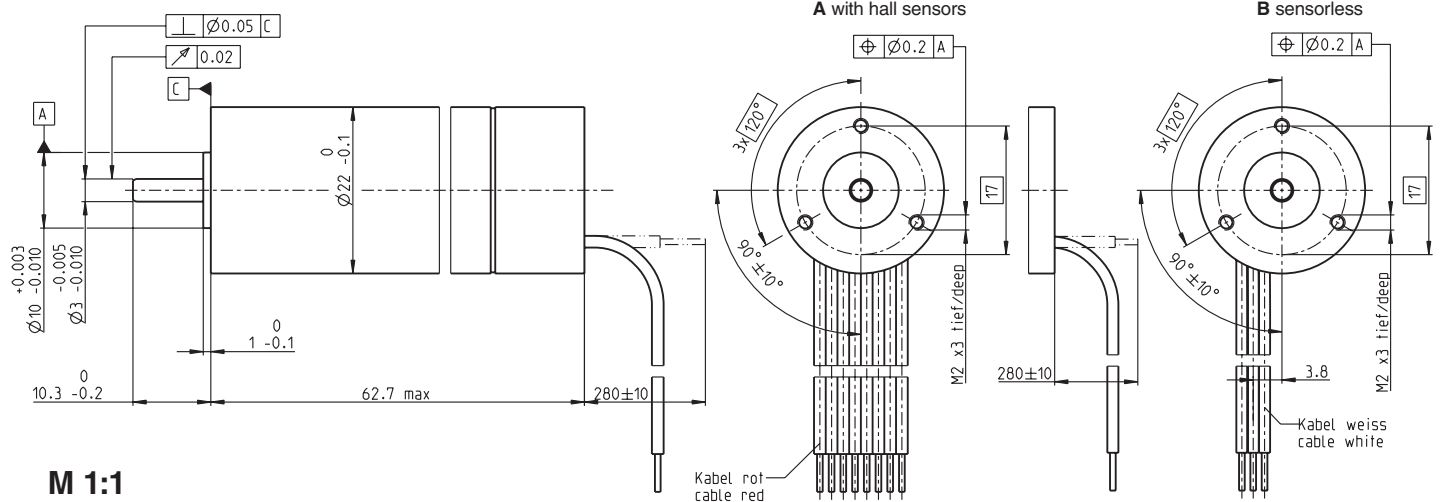


EC 22 Ø22 mm, brushless, 50 Watt, sterilizable

NRND See page 13
Not recommended for New Design



M 1:1

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

Part Numbers

A with hall sensors	266520	264443
B sensorless	275312	254168

Motor Data

Values at nominal voltage			
1 Nominal voltage	V	32	32
2 No load speed	rpm	41100	23800
3 No load current	mA	364	141
4 Nominal speed	rpm	38900	21400
5 Nominal torque (max. continuous torque)	mNm	28.6	34.9
6 Nominal current (max. continuous current)	A	4.18	2.82
7 Stall torque	mNm	652	411
8 Starting current	A	88.2	32.1
9 Max. efficiency	%	88	87
Characteristics			
10 Terminal resistance phase to phase	Ω	0.363	0.997
11 Terminal inductance phase to phase	mH	0.0490	0.147
12 Torque constant	mNm/A	7.39	12.8
13 Speed constant	rpm/V	1290	746
14 Speed/torque gradient	rpm/mNm	63.4	58.1
15 Mechanical time constant	ms	3.08	2.82
16 Rotor inertia	gcm ²	4.63	4.63

Specifications

Thermal data	
17 Thermal resistance housing-ambient	7.0 K/W
18 Thermal resistance winding-housing	1.0 K/W
19 Thermal time constant winding	5.06 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	50000 rpm
24 Axial play at axial load < 4.5 N	0 mm
24 Axial play at axial load > 4.5 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)	53 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	130 g

Values listed in the table are nominal.

Connection A motor (Cable AWG 22)
red Motor winding 1
black Motor winding 2
white Motor winding 3

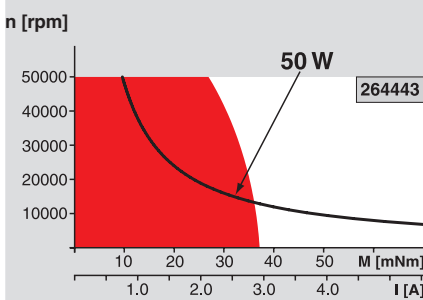
Connection A sensors (Cable AWG 26)
green V_{Hall} 4.5 ... 24 VDC
blue GND

red/grey Hall sensor 1
black/grey Hall sensor 2
white/grey Hall sensor 3

Connection B (Cable AWG 22)
red Motor winding 1
black Motor winding 2
white Motor winding 3

Wiring diagram for Hall sensors see p. 35

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

Application



Medicine/surgery/chemicals

Hand tools that can be sterilized, such as bone saw, bone drilling and grinding machine
Dermatological and dental tools
Infusion pumps
ECG
Therapy aid, analysis and dialysis equipment

Sterilization information

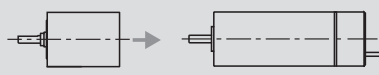
The motor can be sterilized at least 100 times in autoclave. No need to dismantle.

Sterilization with steam

Temperature	+134°C ± 4°C
Compression pressure up to	2.3 bar
Rel. humidity	100%
Cycle length	20 minutes

maxon Modular System

Planetary Gearhead
sterilizable
Ø22 mm
0.5 - 2.0 Nm
Page 255



Overview on page 20 - 25

Recommended Electronics:
ESCON 50/5 Page 321
DECS 50/5 324
Notes 24