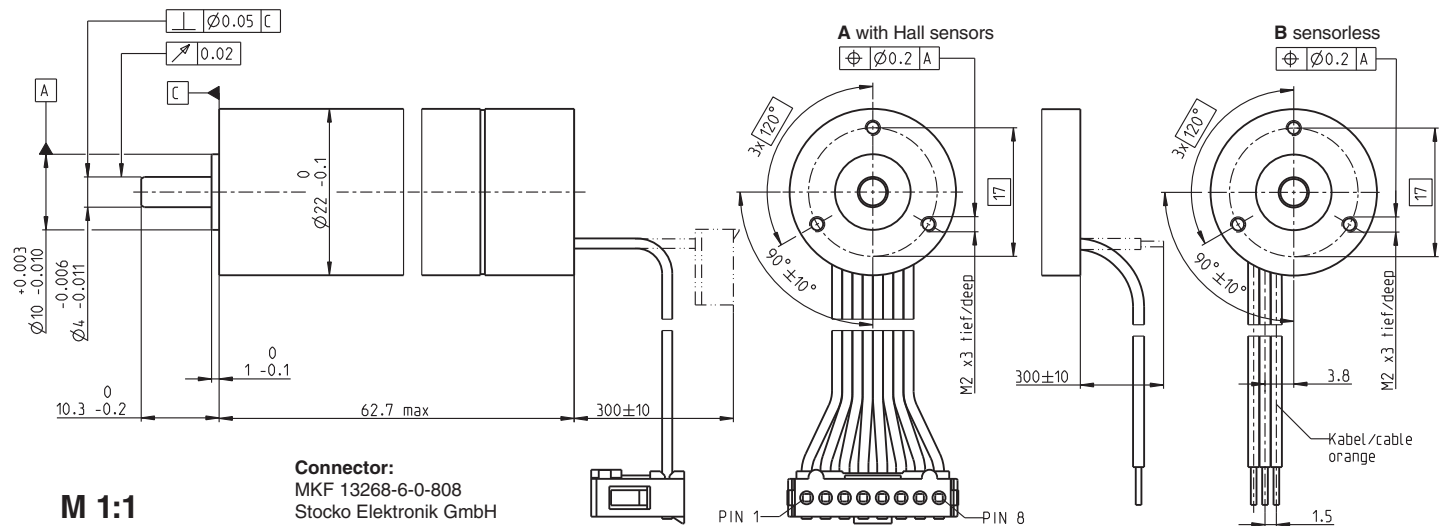


EC 22 Ø22 mm, brushless, 100 Watt



Connector:
MKF 13268-6-0-808
Stocko Elektronik GmbH

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

Order Number

A with Hall sensors
B sensorless

386673	386674	386675
386676	386677	386678

Motor Data

Values at nominal voltage					
1 Nominal voltage	V	18	24	48	
2 No load speed	rpm	31000	29500	32200	
3 No load current	mA	383	263	153	
4 Nominal speed	rpm	28700	27300	30100	
5 Nominal torque (max. continuous torque)	mNm	40.6	43.7	45.8	
6 Nominal current (max. continuous current)	A	7.64	5.83	3.33	
7 Stall torque	mNm	643	690	856	
8 Starting current	A	116	89.1	60.2	
9 Max. efficiency	%	89	90	90	
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	5.53	7.75	14.2	
13 Speed constant	rpm / V	1730	1230	672	
14 Speed / torque gradient	rpm / mNm	48.4	42.9	37.7	
15 Mechanical time constant	ms	2.07	1.84	1.61	
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	155°C	
Mechanical data (preloaded ball bearings)		
23 Max. permissible speed	60000 rpm	
24 Axial play at axial load < 5 N	0 mm	
	> 5 N	max. 0.14 mm
25 Radial play	preloaded	
26 Max. axial load (dynamic)	4 N	
27 Max. force for press fits (static)	45 N	
(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

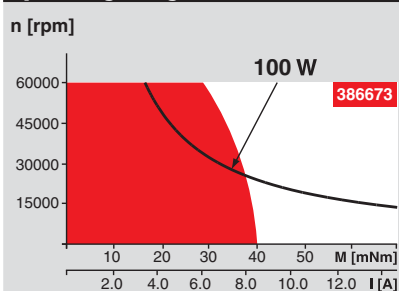
brown	Motor winding 1	Pin 1
red	Motor winding 2	Pin 2
orange	Motor winding 3	Pin 3
yellow	VHall 3 ... 24 VDC	Pin 4
green	GND	Pin 5
blue	Hall sensor 1	Pin 6
violet	Hall sensor 2	Pin 7
gray	Hall sensor 3	Pin 8

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

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**

maxon Modular System

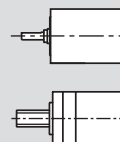
Overview on page 16 - 21

Planetary Gearhead

Ø22 mm
0.5 - 3.4 Nm
Page 223 / 224

Spindle Drive

Ø22 mm
Page 247 / 248



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
EPOS2 P 24/5	308
Notes	20

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

for type B:
Resolver
on request