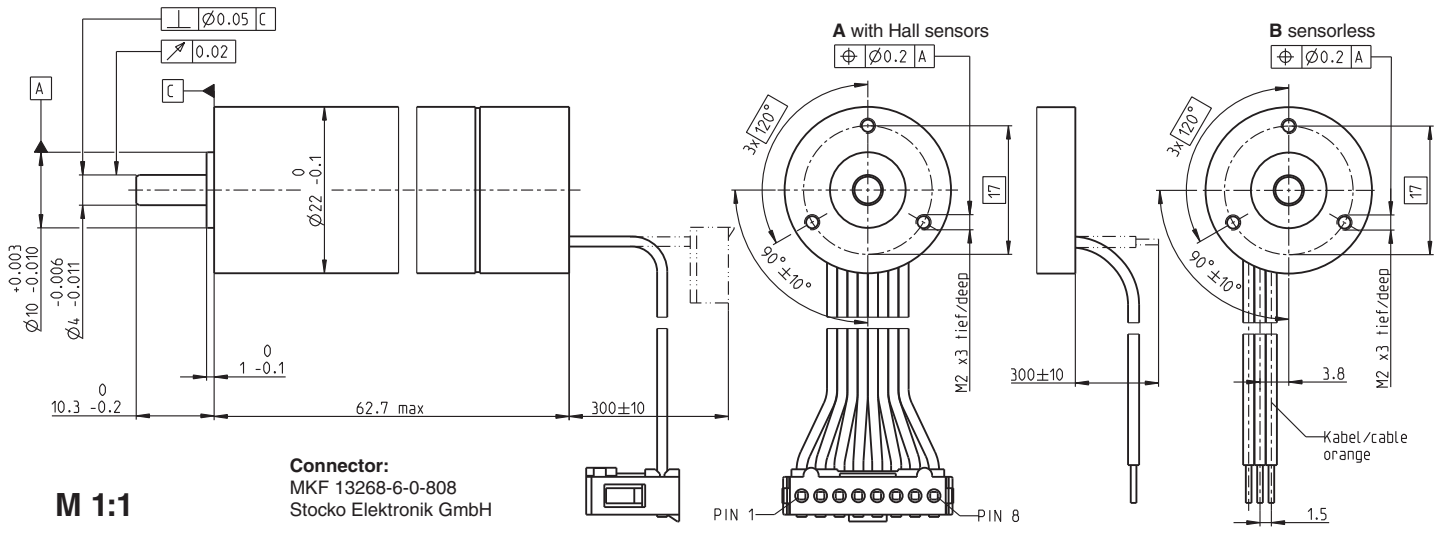


EC 22 Ø22 mm, brushless, 100 Watt



M 1:1

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

	Order Number		
Stock program			
Standard program			
Special program (on request)			
A with Hall sensors	386673	386674	386675
B sensorless	386676	386677	386678

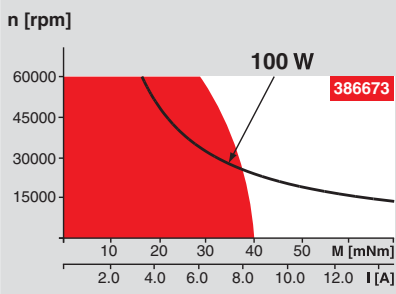
Motor Data

Values at nominal voltage		18	24	48
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		0.155	0.269	0.797
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
 - 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

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**

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

maxon Modular System

Overview on page 16 - 21

