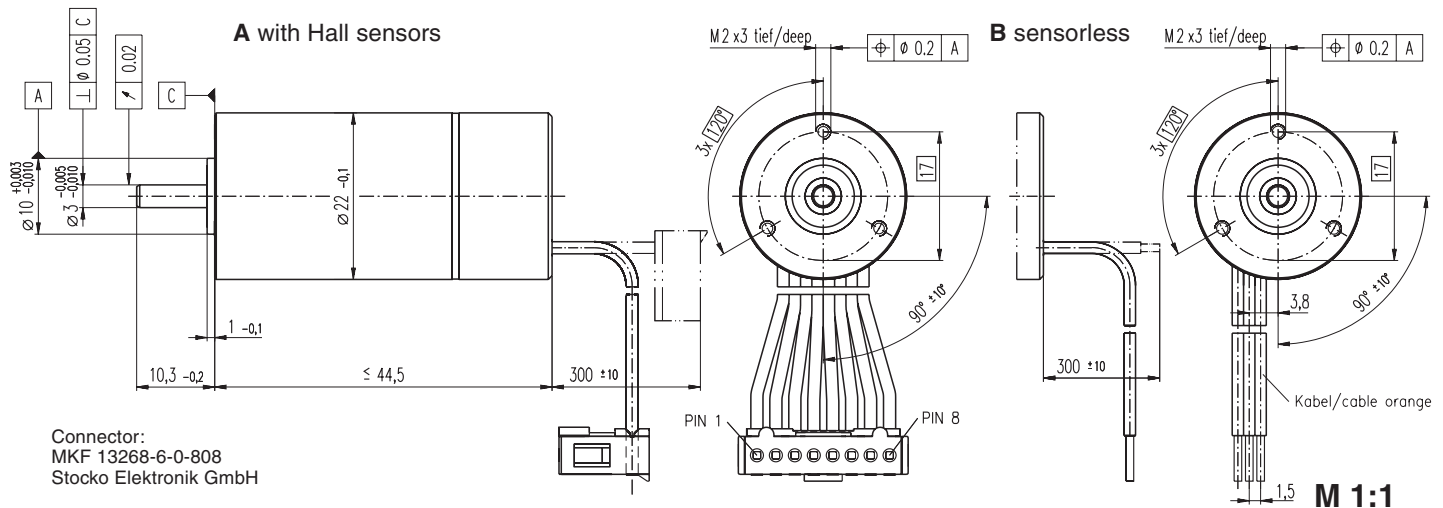


EC 22 Ø22 mm, brushless, 20 Watt



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

169007	169008	200685	200118
200859	200857	200860	200858

Motor Data

Values at nominal voltage					
1	Nominal voltage	V	24.0	24.0	24.0
2	No load speed	rpm	35500	20500	16700
3	No load current	mA	168	74.1	55.6
4	Nominal speed	rpm	30900	16500	12700
5	Nominal torque (max. continuous torque)	mNm	15.8	16.9	15.9
6	Nominal current (max. continuous current)	A	2.48	1.51	1.16
7	Stall torque	mNm	195	117	82.7
8	Starting current	A	30.4	10.5	6.08
9	Max. efficiency	%	86	84	82
Characteristics					
10	Terminal resistance phase to phase	Ω	0.789	2.28	3.95
11	Terminal inductance phase to phase	mH	0.071	0.214	0.322
12	Torque constant	mNm / A	6.40	11.1	13.6
13	Speed constant	rpm / V	1490	861	702
14	Speed / torque gradient	rpm / mNm	184	177	204
15	Mechanical time constant	ms	5.78	5.56	6.40
16	Rotor inertia	gcm ²	3.00	3.00	3.00

Specifications

Thermal data	
17	Thermal resistance housing-ambient 10 K / W
18	Thermal resistance winding-housing 2.0 K / W
19	Thermal time constant winding 4.93 s
20	Thermal time constant motor 300 s
21	Ambient temperature -20 ... +100°C
22	Max. permissible winding temperature +125°C
Mechanical data (preloaded ball bearings)	
23	Max. permissible speed ¹⁾ 50000 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) 60 N
	(static, shaft supported) 250 N
28	Max. radial loading, 5 mm from flange 16 N
	1) in combination with encoder MR n _{max} = 37500 rpm
Other specifications	
29	Number of pole pairs 1
30	Number of phases 3
31	Weight of motor 85 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 ... 18 VDC	Pin 4
green	GND	Pin 5
blue	Hall sensor 1*	Pin 6
violet	Hall sensor 2*	Pin 7
grey	Hall sensor 3*	Pin 8

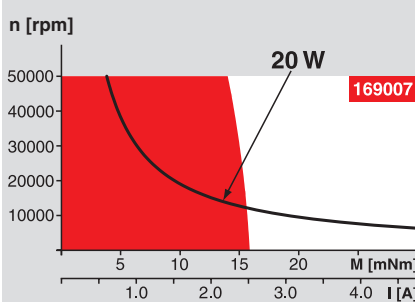
*Internal pull-up (7 ... 13 kΩ) on pin 4

Connection B (Cable AWG 24)

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

Wiring diagram for Hall sensors see page 27

Operating Range



Comments

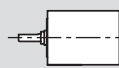
Continuous operation
In observation of above listed thermal resistance (lines 17 and 18) the maximum permissible winding temperature will be reached during continuous operation at 25°C ambient.
= Thermal limit.

Short term operation
The motor may be briefly overloaded (recurring).

— Assigned power rating

maxon Modular System

Planetary Gearhead
Ø22 mm
0.5 - 2.0 Nm
Page 232



Overview on page 16 - 21

for type A:
Encoder MR
128 / 256 / 512 CPT,
Page 257

for type B:
Resolver Res 26
on request

Recommended Electronics:

DECS 50/5	Page 284
DEC 24/1	284
DEC 24/3, DEC 50/5	285
DECV 50/5	286
DES 50/5	287
EPOS 24/1	294
EPOS 24/5	294
EPOS2 50/5	295
EPOS P 24/5	297
Notes	20