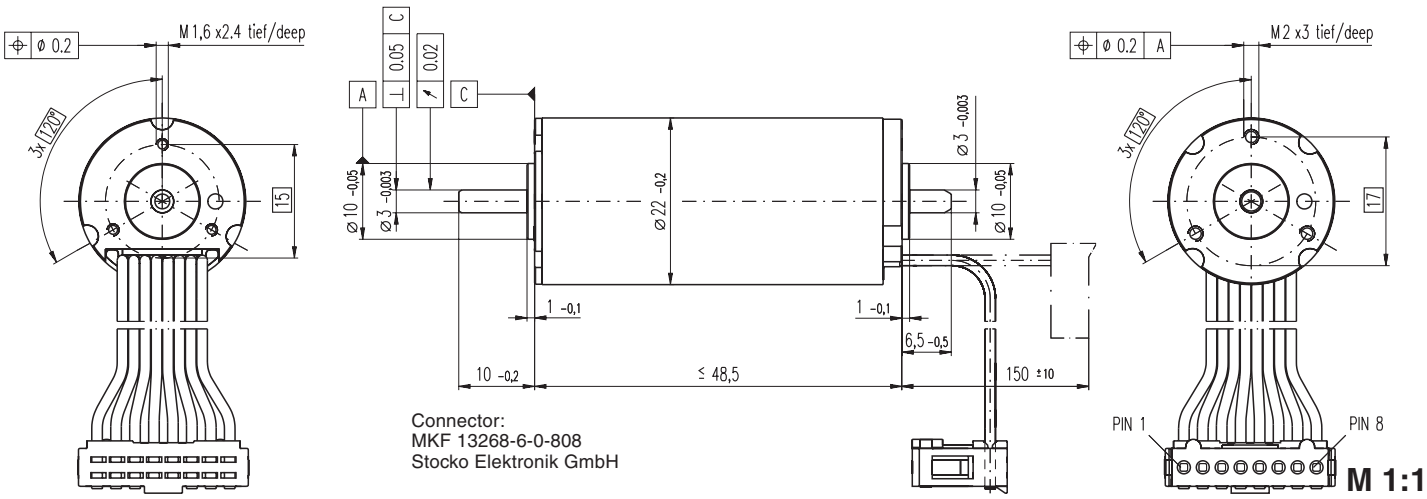
EC-max 22 ∅22 mm, brushless, 25 Watt



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

Stock program
Standard program
Special program (on request)

			Order Number							
			283856	283857	283858	283859	283860			
Motor Data										
	Values at nominal voltage									
1	Nominal voltage	V	12.0	18.0	24.0	36.0	48.0			
2	No load speed	rpm	12400	12900	12900	12200	13000			
3	No load current	mA	214	153	115	69.7	57.6			
4	Nominal speed	rpm	9820	10300	10400	9610	10500			
5	Nominal torque (max. continuous torque)	mNm	22.9	21.9	22.9	22.7	23.4			
6	Nominal current (max. continuous current)	A	2.69	1.80	1.41	0.877	0.720			
7	Stall torque	mNm	114	112	121	111	127			
8	Starting current	A	12.6	8.55	6.97	4.00	3.66			
9	Max. efficiency	%	76	76	77	76	77			
	Characteristics									
10	Terminal resistance phase to phase	Ω	0.955	2.10	3.44	9.01	13.1			
11	Terminal inductance phase to phase	mH	0.0499	0.103	0.182	0.462	0.730			
12	Torque constant	mNm / A	9.10	13.0	17.4	27.7	34.8			
13	Speed constant	rpm / V	1050	732	549	345	274			
14	Speed / torque gradient	rpm / mNm	110	118	109	112	103			
15	Mechanical time constant	ms	5.14	5.50	5.06	5.23	4.82			
16	Rotor inertia	gcm²	4.45	4.45	4.45	4.45	4.45			

Specifications

	Thermal data	
17	Thermal resistance housing-ambient	10.2 K / W
18	Thermal resistance winding-housing	1.02 K / W
19	Thermal time constant winding	1.97 s
20	Thermal time constant motor	628 s
21	Ambient temperature	-20 ... +100°C
22	Max. permissible winding temperature	+155°C
	Mechanical data (preloaded ball bearings)	
23	Max permissible speed	18000 rpm
24	Axial play at axial load < 5.0 N	0 mm
	> 5.0 N	0.14 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	4.5 N
27	Max. force for press fits (static)	60 N
	(static, shaft supported)	1000 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	110 g

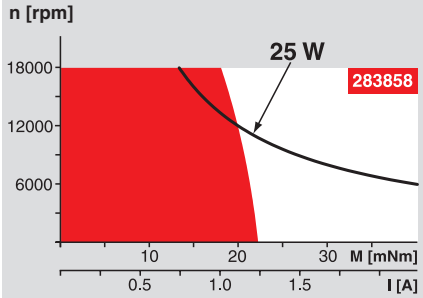
Values listed in the table are nominal.

Connection (Cable AWG 24)

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
grey	Hall sensor 3	Pin 8

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.

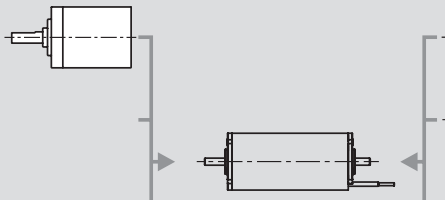
Short term operation
The motor may be briefly overloaded (recurring).

Assigned power rating

maxon Modular System

Overview on page 16 - 21

Planetary Gearhead
∅32 mm
1.0 - 6.0 Nm
Page 241



Encoder MR
128 / 256 / 512 CPT,
2 / 3 channels
Page 257

Brake AB 20
∅20 mm
24 VDC, 0.1 Nm
Page 306

Recommended Electronics:

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