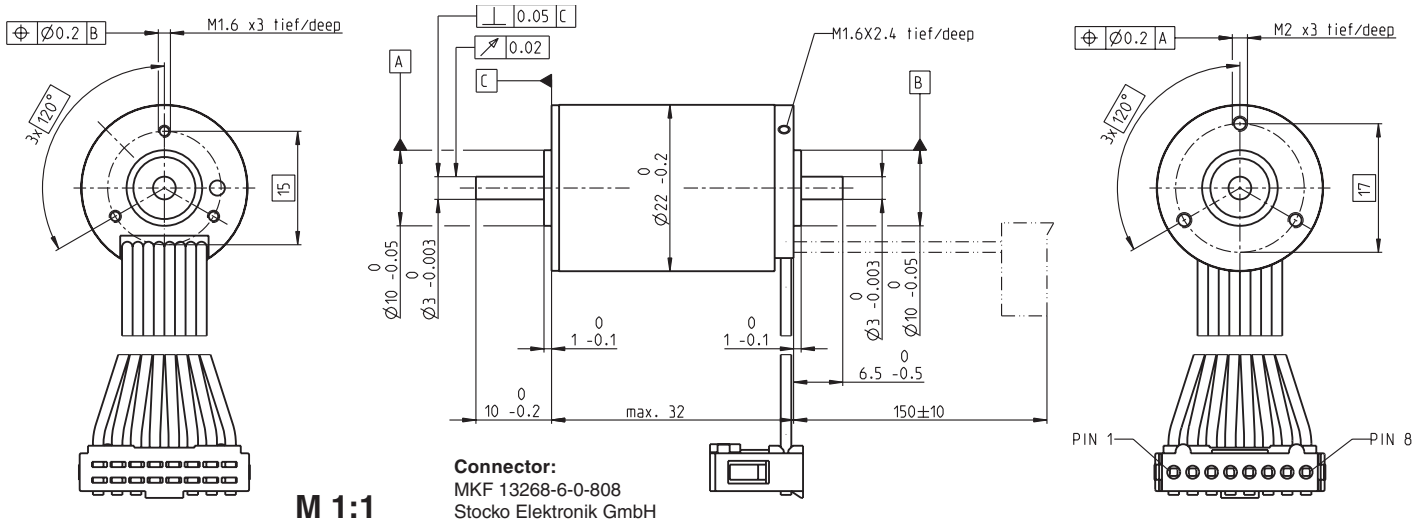


EC-max 22 Ø22 mm, brushless, 12 Watt



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

Order Number					
283837	283838	283839	283840	283841	

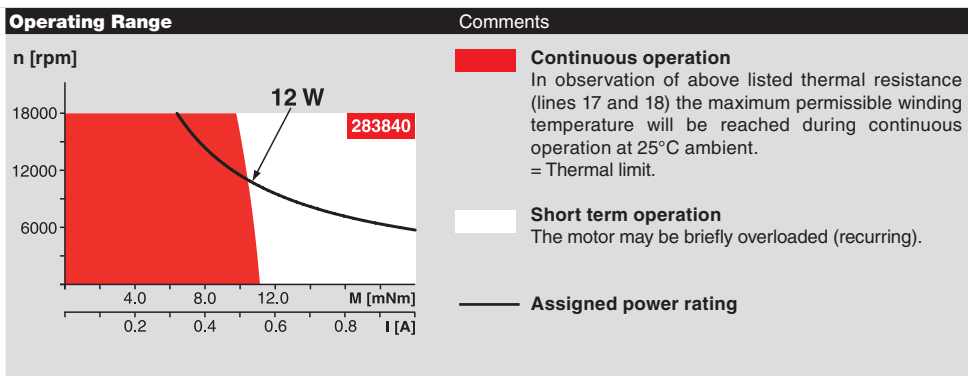
Motor Data						
Values at nominal voltage						
1 Nominal voltage	V	6.0	12.0	18.0	24.0	36.0
2 No load speed	rpm	11400	12200	12100	12100	12200
3 No load current	mA	263	146	96.7	72.7	48.6
4 Nominal speed	rpm	7280	8040	8240	8240	8190
5 Nominal torque (max. continuous torque)	mNm	10.5	10.3	11	11	10.8
6 Nominal current (max. continuous current)	A	2.38	1.25	0.882	0.659	0.433
7 Stall torque	mNm	30	31.3	35.4	35.1	34.1
8 Starting current	A	6.23	3.47	2.60	1.94	1.25
9 Max. efficiency	%	64	65	66	66	66
Characteristics						
10 Terminal resistance phase to phase	Ω	0.963	3.46	6.93	12.4	28.7
11 Terminal inductance phase to phase	mH	0.0343	0.121	0.275	0.488	1.09
12 Torque constant	mNm / A	4.81	9.02	13.6	18.1	27.2
13 Speed constant	rpm / V	1990	1060	701	526	352
14 Speed / torque gradient	rpm / mNm	397	406	356	360	371
15 Mechanical time constant	ms	9.36	9.56	8.39	8.47	8.75
16 Rotor inertia	gcm ²	2.25	2.25	2.25	2.25	2.25

Specifications	
Thermal data	
17 Thermal resistance housing-ambient	13.5 K / W
18 Thermal resistance winding-housing	1.72 K / W
19 Thermal time constant winding	1.82 s
20 Thermal time constant motor	567 s
21 Ambient temperature	-40 ... +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 14 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	4.5 N
27 Max. force for press fits (static) (static, shaft supported)	53 N 1400 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	83 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 p. 27



maxon Modular System		Overview on page 16 - 21
<p>Planetary Gearhead Ø22 mm 0.5 - 3.4 Nm Page 224 / 225</p> <p>Koaxdrive Ø32 mm 1.0 - 4.5 Nm Page 236</p> <p>Spindle Drive Ø22 mm Page 247 / 248</p>		<p>Encoder MR 128 / 256 / 512 Imp., 2 / 3 channels Page 261</p> <p>Brake AB 20 24 VDC 0.1 Nm Page 316</p>
<p>Recommended Electronics: DECS 50/5, DEC 24/1 P.289 DEC 24/3 290 DEC Module 24/2 290 DECV 50/5 297 DES 50/5 298 EPOS2 Module 36/2 304 EPOS 24/1 304 EPOS2 24/5, EPOS2 50/5 305 EPOS P 24/5 308 Notes 20</p>		