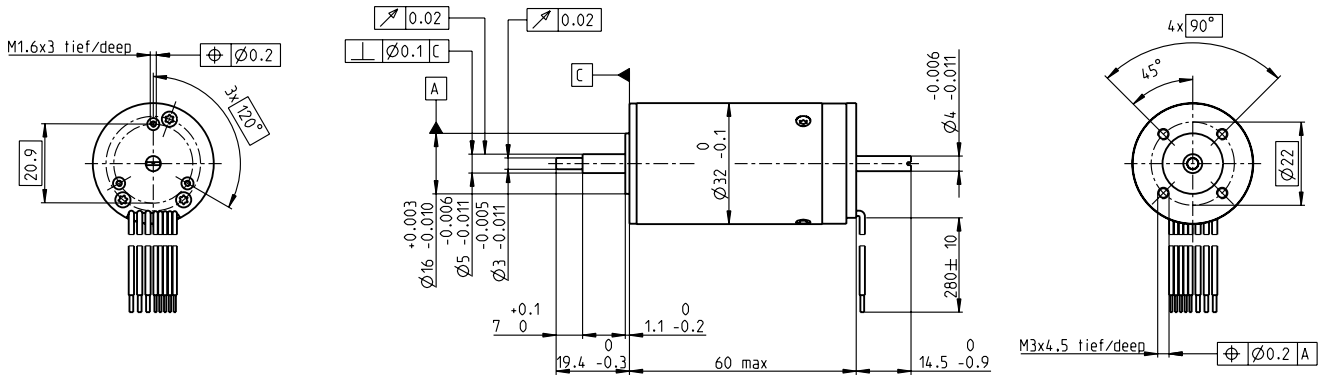


# EC 32 Ø32 mm, brushless, 80 Watt



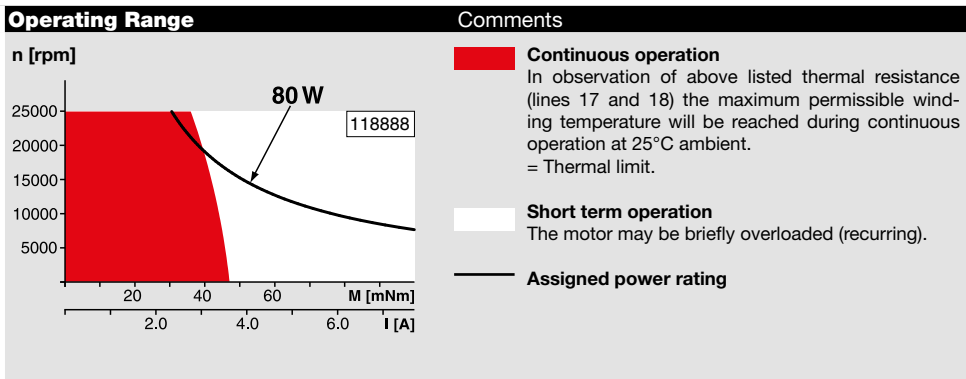
## M 1:2

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

Part Numbers						

Motor Data							
Values at nominal voltage							
1 Nominal voltage	V	12	18	18	24	36	48
2 No load speed	rpm	15100	14300	13100	11000	14700	11300
3 No load current	mA	662	404	349	199	211	104
4 Nominal speed	rpm	13400	12700	11500	9450	13200	9740
5 Nominal torque (max. continuous torque)	mNm	44.6	45.2	45.9	47.2	43.8	45.9
6 Nominal current (max. continuous current)	A	6.51	4.15	3.82	2.46	2.07	1.23
7 Stall torque	mNm	428	443	407	355	454	353
8 Stall current	A	57.2	37.4	31.4	17.3	19.7	8.84
9 Max. efficiency	%	80	81	81	80	81	80
Characteristics							
10 Terminal resistance phase to phase	Ω	0.21	0.481	0.573	1.39	1.83	5.43
11 Terminal inductance phase to phase	mH	0.03	0.0752	0.09	0.226	0.285	0.856
12 Torque constant	mNm/A	7.48	11.8	13	20.5	23.1	40
13 Speed constant	rpm/V	1280	806	737	465	414	239
14 Speed/torque gradient	rpm/mNm	35.8	32.7	32.6	31.5	32.8	32.5
15 Mechanical time constant	ms	7.49	6.86	6.82	6.59	6.87	6.8
16 Rotor inertia	gcm <sup>2</sup>	20	20	20	20	20	20

Specifications	
Thermal data	
17 Thermal resistance housing-ambient	5.4 K/W
18 Thermal resistance winding-housing	2.5 K/W
19 Thermal time constant winding	14.8 s
20 Thermal time constant motor	1180 s
21 Ambient temperature	-20...+100°C
22 Max. winding temperature	+125°C
Mechanical data (preloaded ball bearings)	
23 Max. speed <sup>1)</sup>	25000 rpm
24 Axial play at axial load < 8 N	0 mm
	> 8 N max. 0.14 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	5.6 N
27 Max. force for press fits (static) (static, shaft supported)	98 N
	1200 N
28 Max. radial load, 5 mm from flange	28 N



Other specifications	
29 Number of pole pairs	1
30 Number of phases	3
31 Weight of motor	270 g

Values listed in the table are nominal.

Connection motor (Cable AWG 22)	
red	Motor winding 1
black	Motor winding 2
white	Motor winding 3

Connection sensors (Cable AWG 26) <sup>1)</sup>	
green	V <sub>Hall</sub> 4.5...24 VDC
blue	GND
red/grey	Hall sensor 1
black/grey	Hall sensor 2
white/grey	Hall sensor 3

Wiring diagram for Hall sensors see p. 45

<sup>1)</sup> Not lead through in combination with resolver.

maxon Modular System		Details on catalog page 34
<p><b>Planetary Gearhead</b> Ø32 mm 0.75 - 4.5 Nm Page 348</p> <p><b>Planetary Gearhead</b> Ø32 mm 0.75 - 6.0 Nm Page 350-355</p> <p><b>Screw Drive</b> Ø32 mm Page 382-387</p>		<p><b>Encoder HED_5540</b> 500 CPT, 3 channels Page 441/443</p> <p><b>Resolver Res 26</b> Ø26 mm 10 V Page 450</p> <p><b>Recommended Electronics:</b> Notes Page 34</p> <ul style="list-style-type: none"> <li>ESCON 36/3 EC 455</li> <li>ESCON Module 50/5 455</li> <li>ESCON Mod. 50/4 EC-S 455</li> <li>ESCON Mod. 50/8 (HE) 456</li> <li>ESCON 50/5 457</li> <li>ESCON 70/10 457</li> <li>DEC Module 50/5 459</li> <li>EPOS4 50/5 463</li> <li>EPOS4 Mod./Comp. 50/5 463</li> <li>EPOS4 Module 50/8 465</li> <li>EPOS4 Comp. 50/8 CAN 465</li> <li>EEPOS4 70/15 467</li> <li>EPOS2 P 24/5 470</li> <li>MAXPOS 50/5 473</li> </ul>