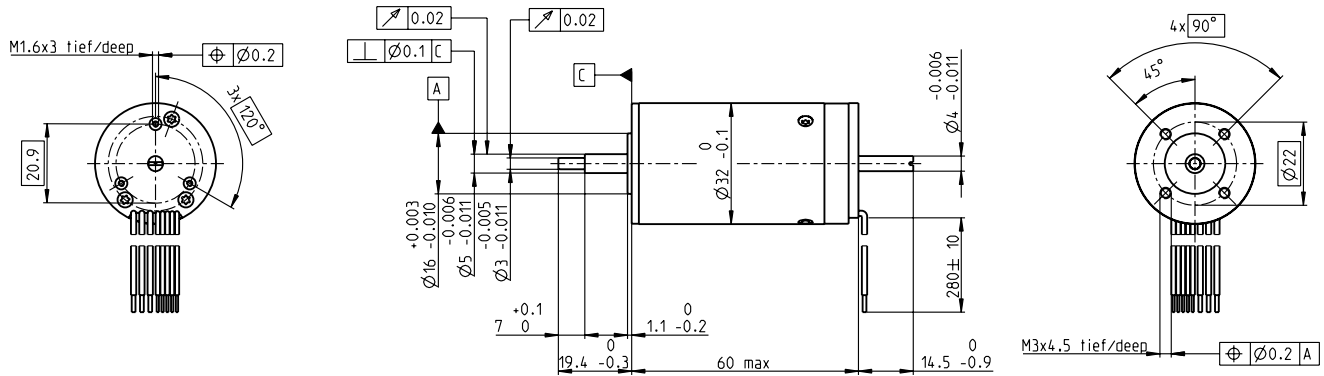


EC 32 Ø32 mm, brushless, 80 Watt



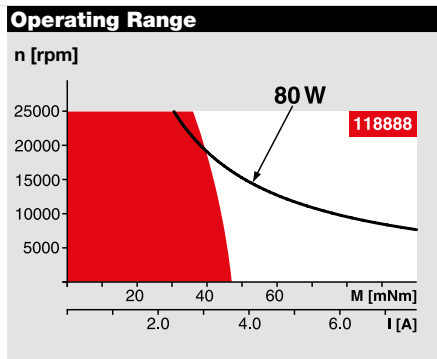
M 1:2

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

Part Numbers						
118891	118892	118888	118889	118893	118890	

Motor Data		118891	118892	118888	118889	118893	118890
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 ²	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 ¹⁾	25 000 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)	98 N
(static, shaft supported)	1200 N
28 Max. radial load, 5 mm from flange	28 N



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	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)¹⁾
 green V_{Hall} 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. 41

¹⁾ Not lead through in combination with resolver.

maxon Modular System		Overview on page 28–36
<p>Planetary Gearhead Ø32 mm 0.75 - 4.5 Nm Page 334</p> <p>Planetary Gearhead Ø32 mm 0.75 - 6.0 Nm Page 336–340</p> <p>Spindle Drive Ø32 mm Page 366–368</p>		<p>Encoder HED_5540 500 CPT, 3 channels Page 414/417</p> <p>Resolver Res 26 Ø26 mm 10 V Page 422</p>
<p>Recommended Electronics: Notes Page 32</p> <p>ESCON 36/3 EC 427 ESCON Mod. 50/5 427 ESCON Mod. 50/4 EC-S 427 ESCON 50/5 428 ESCON 70/10 428 DEC Module 50/5 430 EPOS2 24/5, 50/5, 70/10 435 EPOS2 P 24/5 438 EPOS2 Module 36/2 434 EPOS4 Module/CB 50/5 442 EPOS4 Module 50/8 443 EPOS4 Comp. 50/8 CAN 443 MAXPOS 50/5 447</p>		