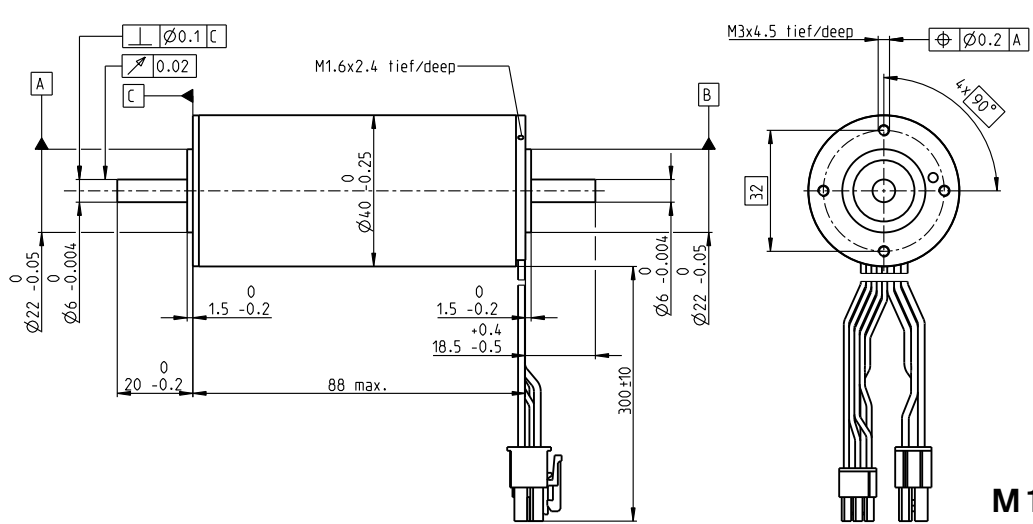
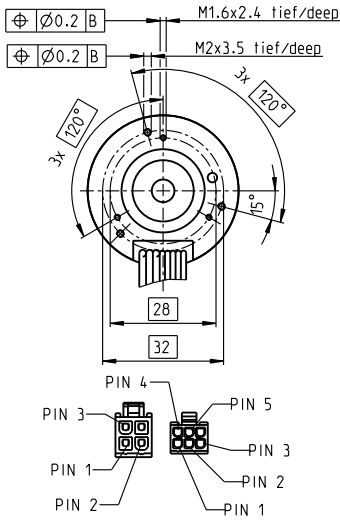


EC-max 40 Ø40 mm, brushless, 120 watt

EC-max



M 1:2

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

Part Numbers				
283870	283871	283872	283873	

Motor Data					
Values at nominal voltage					
1 Nominal voltage	V	48	48	48	48
2 No load speed	rpm	10100	7240	4720	3610
3 No load current	mA	310	188	104	72.8
4 Nominal speed	rpm	9250	6280	3770	2670
5 Nominal torque (max. continuous torque)	mNm	170	185	203	211
6 Nominal current (max. continuous current)	A	4.06	3.1	2.19	1.74
7 Stall torque	mNm	2090	1490	1050	838
8 Stall current	A	46.7	23.7	10.9	6.68
9 Max. efficiency	%	85	83	82	80
Characteristics					
10 Terminal resistance phase to phase	Ω	1.03	2.02	4.4	7.19
11 Terminal inductance phase to phase	mH	0.204	0.4	0.937	1.6
12 Torque constant	mNm/A	44.8	62.8	96.1	126
13 Speed constant	rpm/V	213	152	99.4	76.1
14 Speed/torque gradient	rpm/mNm	4.89	4.9	4.55	4.35
15 Mechanical time constant	ms	5.17	5.19	4.81	4.61
16 Rotor inertia	gcm ²	101	101	101	101

Specifications	Operating Range	Comments
Thermal data 17 Thermal resistance housing-ambient 3.45 K/W 18 Thermal resistance winding-housing 0.29 K/W 19 Thermal time constant winding 3.96 s 20 Thermal time constant motor 1240 s 21 Ambient temperature -40...+100°C 22 Max. winding temperature +155°C Mechanical data (preloaded ball bearings) 23 Max. speed 12000 rpm 24 Axial play at axial load < 10 N 0 mm > 10 N 0.14 mm 25 Radial play preloaded 8 N 26 Max. axial load (dynamic) 211 N 27 Max. force for press fits (static) (static, shaft supported) 4000 N 28 Max. radial load, 5 mm from flange 80 N		<ul style="list-style-type: none"> 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	Recommended Electronics:	Details on catalog page 42
1 3 720 g Planetary Gearhead Ø42 mm 3.0-15.0 Nm Page 406 Planetary Gearhead Ø52 mm 4-30 Nm Page 411		Encoder MR 256-1024 CPT, 3 channels Page 479 Encoder HEDL 5540 500 CPT, 3 channels Page 490 Brake AB 28 24 VDC 0.4 Nm Page 534
Values listed in the table are nominal. Connection motor (Cable AWG 20) red Motor winding 1 Pin 1 black Motor winding 2 Pin 2 white Motor winding 3 Pin 3 N.C. Pin 4 Connector Molex Part number 39-01-2040 Connection sensors (Cable AWG 26) yellow Hall sensor 1 Pin 1 brown Hall sensor 2 Pin 2 grey Hall sensor 3 Pin 3 blue GND Pin 4 green V _{Hall} 3...24 VDC Pin 5 N.C. Pin 6 Connector Part number Molex 430-25-0600 Wiring diagram for Hall sensors see p. 57	Notes Page 42 ESCON Module 50/5 501 ESCON Mod. 50/4 EC-S 501 ESCON 50/5 503 ESCON 70/10 503 DEC Module 50/5 505 EPOS4 Mod./Comp. 50/5 510 EPOS4 Module 50/8 511 EPOS4 Comp. 50/8 CAN 513 EPOS4 50/5 515 EPOS4 Disk 60/8 516 EPOS4 Disk 60/12 517 EPOS2 P 24/5 520	