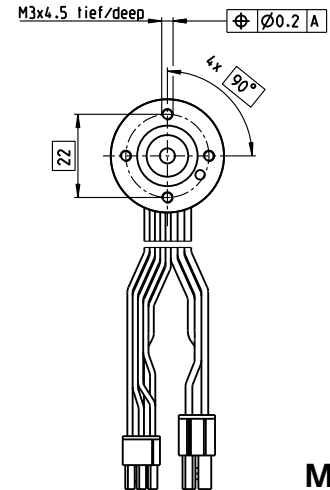
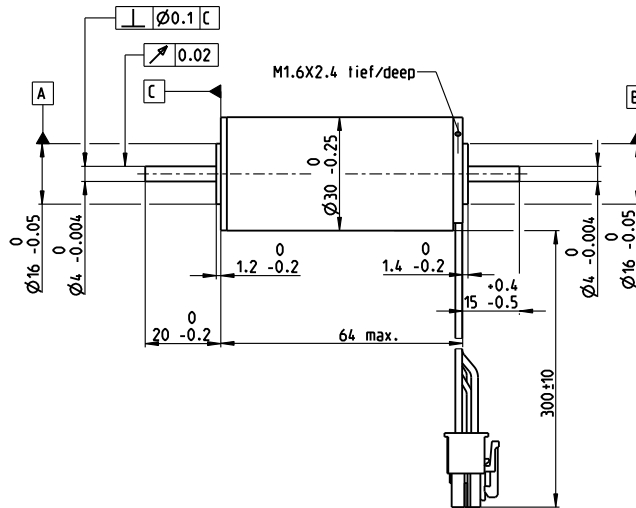
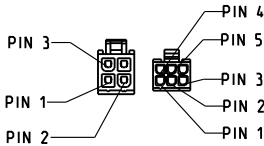
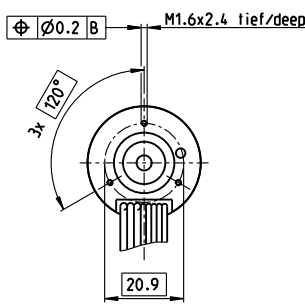


EC-max 30 $\varnothing 30$ mm, brushless, 60 watt



EC-max

M 1:2

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

Part Numbers				
272762	272763	272764	272765	

Motor Data						
Values at nominal voltage						
1	Nominal voltage	V	12	24	36	48
2	No load speed	rpm	7980	9340	9490	9350
3	No load current	mA	302	191	130	95.4
4	Nominal speed	rpm	6590	8040	8270	8130
5	Nominal torque (max. continuous torque)	mNm	63.6	60.7	63.7	64.1
6	Nominal current (max. continuous current)	A	4.72	2.66	1.88	1.4
7	Stall torque	mNm	381	458	522	519
8	Stall current	A	26.8	18.8	14.5	10.7
9	Max. efficiency	%	80	81	82	82
Characteristics						
10	Terminal resistance phase to phase	Ω	0.447	1.27	2.48	4.49
11	Terminal inductance phase to phase	mH	0.049	0.143	0.312	0.573
12	Torque constant	mNm/A	14.2	24.3	35.9	48.6
13	Speed constant	rpm/V	672	393	266	197
14	Speed/torque gradient	rpm/mNm	21.2	20.6	18.4	18.2
15	Mechanical time constant	ms	4.86	4.73	4.21	4.17
16	Rotor inertia	gcm ²	21.9	21.9	21.9	21.9

Specifications	Operating Range	Comments
Thermal data 17 Thermal resistance housing-ambient 7.4 K/W 18 Thermal resistance winding-housing 0.5 K/W 19 Thermal time constant winding 2.76 s 20 Thermal time constant motor 1000 s 21 Ambient temperature -40...+100°C 22 Max. winding temperature +155°C Mechanical data (preloaded ball bearings) 23 Max. speed 15000 rpm 24 Axial play at axial load < 6.0 N 0 mm > 6.0 N 0.14 mm preloaded 25 Radial play 5 N 26 Max. axial load (dynamic) 98 N 27 Max. force for press fits (static) (static, shaft supported) 1300 N 28 Max. radial load, 5 mm from flange 25 N		<p> 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.</p> <p> Short term operation The motor may be briefly overloaded (recurring).</p> <p>Assigned power rating</p>

Other specifications	maxon Modular System	Details on catalog page 42
29 Number of pole pairs 1	Planetary Gearhead $\varnothing 32$ mm 0.75-4.5 Nm Page 393/394 Planetary Gearhead $\varnothing 32$ mm 1.0-8.0 Nm Page 398/400 Koaxdrive $\varnothing 32$ mm 1.0-4.5 Nm Page 403 Planetary Gearhead $\varnothing 42$ mm 3-15 Nm Page 406 Screw Drive $\varnothing 32$ mm Page 426-433	Encoder MR 500/1000 CPT, 3 channels Page 478 Encoder HEDL 5540 500 CPT, 3 channels Page 490 Brake AB 20 24 VDC 0.1 Nm Page 532
30 Number of phases 3		Recommended Electronics: Notes Page 42 ESCON 36/3 EC 501 ESCON Mod. 50/4 EC-S 501 ESCON Module 50/5 501 ESCON 50/5 503 DEC Module 50/5 505 EPOS4 Micro 24/5 509 EPOS4 Mod./Comp. 50/5 510 EPOS4 Comp. 24/5 3-axes 511 EPOS4 50/5 515 EPOS4 Disk 60/8 516 EPOS4 Disk 60/12 517 EPOS2 P 24/5 520
31 Weight of motor 305 g		

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 Part number
 Molex 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