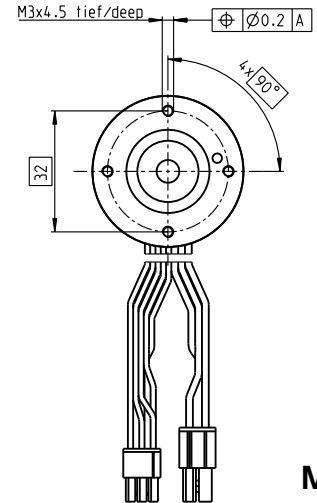
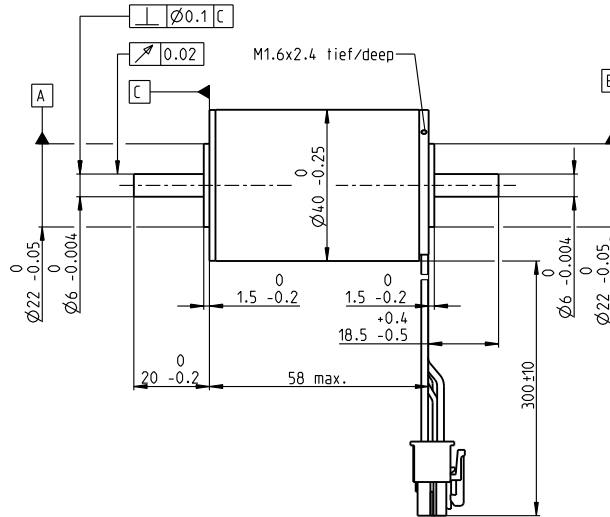
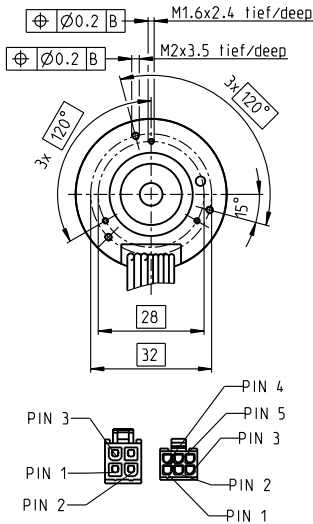


EC-max 40 Ø40 mm, brushless, 70 watt

EC-max



M 1:2

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

Part Numbers				
283866	283867	283868	283869	

Motor Data						
Values at nominal voltage						
1	Nominal voltage	V	12	24	36	48
2	No load speed	rpm	8030	8040	8470	9030
3	No load current	mA	584	292	209	173
4	Nominal speed	rpm	6410	6520	7030	7610
5	Nominal torque (max. continuous torque)	mNm	89.7	89.6	95	94.2
6	Nominal current (max. continuous current)	A	6.88	3.44	2.55	2.02
7	Stall torque	mNm	466	497	595	636
8	Stall current	A	33.3	17.8	14.9	12.7
9	Max. efficiency	%	76	77	78	79
Characteristics						
10	Terminal resistance phase to phase	Ω	0.36	1.35	2.42	3.78
11	Terminal inductance phase to phase	mH	0.0464	0.186	0.379	0.592
12	Torque constant	mNm/A	14	28	40	50
13	Speed constant	rpm/V	682	341	239	191
14	Speed/torque gradient	rpm/mNm	17.6	16.5	14.4	14.4
15	Mechanical time constant	ms	9.41	8.82	7.74	7.73
16	Rotor inertia	gcm ²	51.2	51.2	51.2	51.2

Specifications	Operating Range	Comments
<p>Thermal data</p> <p>17 Thermal resistance housing-ambient 4.63 K/W</p> <p>18 Thermal resistance winding-housing 0.542 K/W</p> <p>19 Thermal time constant winding 3.78 s</p> <p>20 Thermal time constant motor 1060 s</p> <p>21 Ambient temperature -40...+100°C</p> <p>22 Max. winding temperature +155°C</p> <p>Mechanical data (preloaded ball bearings)</p> <p>23 Max. speed 12000 rpm</p> <p>24 Axial play at axial load < 10 N 0 mm</p> <p style="padding-left: 20px;">> 10 N 0.14 mm</p> <p>25 Radial play preloaded 8 N</p> <p>26 Max. axial load (dynamic) 211 N</p> <p>27 Max. force for press fits (static) (static, shaft supported) 5000 N</p> <p>28 Max. radial load, 5 mm from flange 80 N</p>	<p>maxon Modular System</p> <p>1 Planetary Gearhead</p> <p>3 Ø42 mm</p> <p>460 g 3-15 Nm</p> <p>Page 406</p>	<p> Continuous operation</p> <p>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.</p> <p>= Thermal limit.</p> <p> Short term operation</p> <p>The motor may be briefly overloaded (recurring).</p> <p>Assigned power rating</p>

Other specifications	maxon Modular System	Details on catalog page 42
<p>29 Number of pole pairs</p> <p>30 Number of phases</p> <p>31 Weight of motor</p> <p>Values listed in the table are nominal.</p> <p>Connection motor (Cable AWG 20)</p> <p>red Motor winding 1 Pin 1</p> <p>black Motor winding 2 Pin 2</p> <p>white Motor winding 3 Pin 3</p> <p>N.C. Pin 4</p> <p>Connector Part number</p> <p>Molex 39-01-2040</p> <p>Connection sensor (Cable AWG 26)</p> <p>yellow Hall sensor 1 Pin 1</p> <p>brown Hall sensor 2 Pin 2</p> <p>grey Hall sensor 3 Pin 3</p> <p>blue GND Pin 4</p> <p>green V_{Hall} 3...24 VDC Pin 5</p> <p>N.C. Pin 6</p> <p>Connector Part number</p> <p>Molex 430-25-0600</p> <p>Wiring diagram for Hall sensors see p. 57</p>	<p>Recommended Electronics:</p> <p>Notes Page 42</p> <p>ESCON 36/3 EC 501</p> <p>ESCON Module 50/5 501</p> <p>ESCON Mod. 50/4 EC-S 501</p> <p>ESCON Mod. 50/8 (HE) 502</p> <p>ESCON 50/5, ESCON 70/10 503</p> <p>DEC Module 50/5 505</p> <p>EPOS4 Micro 24/5 509</p> <p>EPOS4 Mod./Comp. 50/5 510</p> <p>EPOS4 Comp. 24/5 3-axes 511</p> <p>EPOS4 Mod./Comp. 50/8 511</p> <p>EPOS4 50/5, EPOS4 70/15 515</p> <p>EPOS4 Disk 60/8 516</p> <p>EPOS4 Disk 60/12 517</p> <p>EPOS2 P 24/5 520</p>	<p>Encoder MR</p> <p>256-1024 CPT,</p> <p>3 channels</p> <p>Page 479</p> <p>Encoder HEDL 5540</p> <p>500 CPT,</p> <p>3 channels</p> <p>Page 490</p> <p>Brake AB 28</p> <p>24 VDC</p> <p>0.4 Nm</p> <p>Page 534</p>