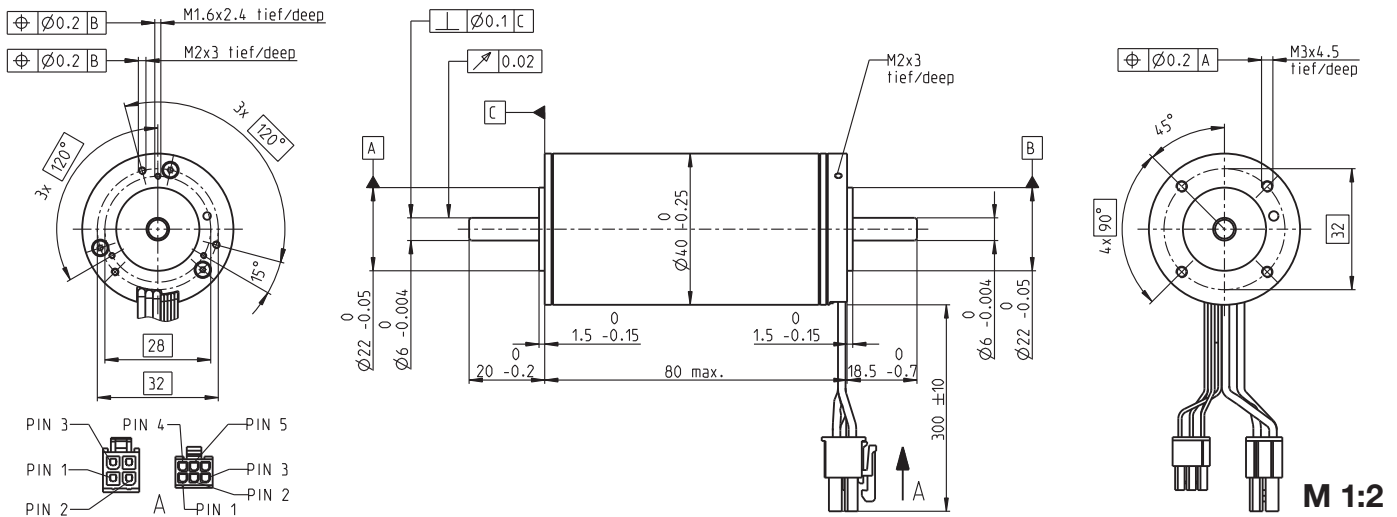


EC 40 Ø40 mm, brushless, 170 Watt



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

Part Numbers				
369146	393023	393024	393025	

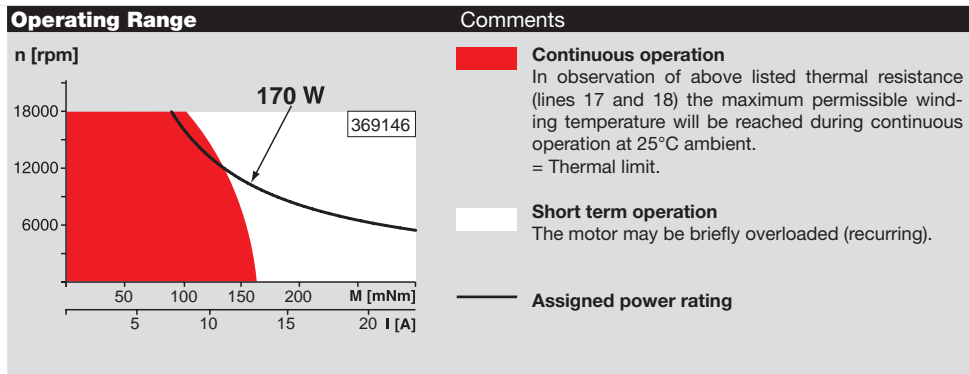
Motor Data (provisional)					
Values at nominal voltage					
1 Nominal voltage	V	15	24	42	48
2 No load speed	rpm	9840	9840	10100	9840
3 No load current	mA	617	386	230	193
4 Nominal speed	rpm	9090	9120	9380	9150
5 Nominal torque (max. continuous torque)	mNm	171	165	161	165
6 Nominal current (max. continuous current)	A	12.2	7.39	4.24	3.69
7 Stall torque	mNm	2620	2660	2740	2760
8 Stall current	A	181	115	69.1	59.6
9 Max. efficiency	%	89	89	89	89
Characteristics					
10 Terminal resistance phase to phase	Ω	0.0829	0.209	0.608	0.806
11 Terminal inductance phase to phase	mH	0.0329	0.0843	0.246	0.337
12 Torque constant	mNm/A	14.5	23.2	39.6	46.4
13 Speed constant	rpm/V	659	412	241	206
14 Speed/torque gradient	rpm/mNm	3.77	3.71	3.7	3.57
15 Mechanical time constant	ms	2.12	2.09	2.08	2.01
16 Rotor inertia	gcm ²	53.8	53.8	53.8	53.8

Specifications	
Thermal data	
17 Thermal resistance housing-ambient	5.21 K/W
18 Thermal resistance winding-housing	1.05 K/W
19 Thermal time constant winding	18.7 s
20 Thermal time constant motor	1910 s
21 Ambient temperature	-40...+100°C
22 Max. winding temperature	+155°C
Mechanical data (preloaded ball bearings)	
23 Max. speed	18000 rpm
24 Axial play at axial load < 9 N	0 mm
> 9 N	max. 0.14 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	23 N
27 Max. force for press fits (static)	106 N
(static, shaft supported)	5500 N
28 Max. radial load, 5 mm from flange	75 N

Other specifications	
29 Number of pole pairs	1
30 Number of phases	3
31 Weight of motor	580 g

Values listed in the table are nominal.

- Connection motor** (Cable AWG 16)
- 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. 35



maxon Modular System	Overview on page 20–27																								
<p>Planetary Gearhead Ø42 mm 3 - 15 Nm Page 349</p> <p>Planetary Gearhead Ø52 mm 4 - 30 Nm Page 354</p>	<p>Encoder HED_5540 500 CPT, 3 channels Page 400/402</p> <p>Resolver Res 26 Ø26 mm 10 V Page 412</p> <p>Brake AB 32 24 VDC 0.4 Nm Page 448</p>																								
<p>Recommended Electronics: Notes Page 26</p> <table border="0" style="width: 100%; font-size: small;"> <tr><td>ESCON Mod. 50/5</td><td>417</td></tr> <tr><td>ESCON Mod. 50/4 EC-S</td><td>417</td></tr> <tr><td>ESCON 50/5</td><td>418</td></tr> <tr><td>ESCON 70/10</td><td>418</td></tr> <tr><td>DEC Module 50/5</td><td>420</td></tr> <tr><td>EPOS2 24/5, 50/5, 70/10</td><td>425</td></tr> <tr><td>EPOS2 P 24/5</td><td>428</td></tr> <tr><td>EPOS4 Module 50/8</td><td>431</td></tr> <tr><td>EPOS4 Comp. 50/8 CAN</td><td>431</td></tr> <tr><td>EPOS4 Module 50/15</td><td>432</td></tr> <tr><td>EPOS4 Comp. 50/15 CAN</td><td>432</td></tr> <tr><td>MAXPOS 50/5</td><td>435</td></tr> </table>		ESCON Mod. 50/5	417	ESCON Mod. 50/4 EC-S	417	ESCON 50/5	418	ESCON 70/10	418	DEC Module 50/5	420	EPOS2 24/5, 50/5, 70/10	425	EPOS2 P 24/5	428	EPOS4 Module 50/8	431	EPOS4 Comp. 50/8 CAN	431	EPOS4 Module 50/15	432	EPOS4 Comp. 50/15 CAN	432	MAXPOS 50/5	435
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