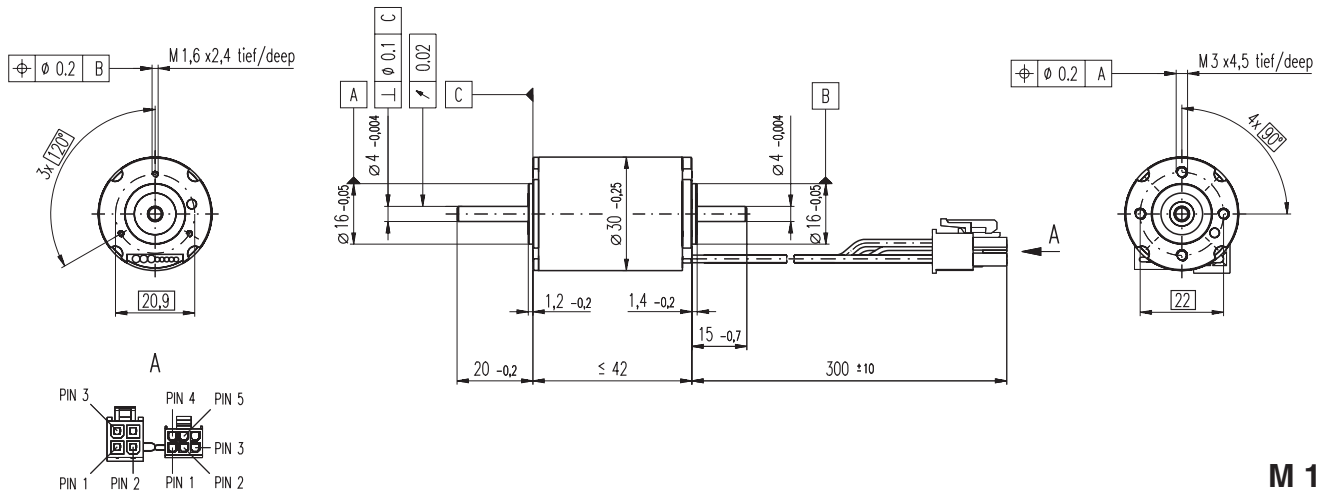


EC-max 30 \varnothing 30 mm, brushless, 40 Watt



M 1:2

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

Order Number

272766 272768 272769 272770

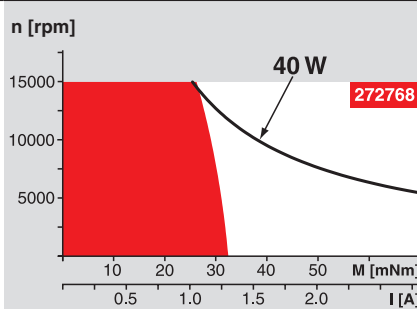
Motor Data

Values at nominal voltage		272766	272768	272769	272770	
1	Nominal voltage	V	12.0	24.0	36.0	48.0
2	No load speed	rpm	8700	9270	9160	9270
3	No load current	mA	202	112	73.2	55.9
4	Nominal speed	rpm	6640	7210	7080	7190
5	Nominal torque (max. continuous torque)	mNm	35.0	34.3	33.9	34.0
6	Nominal current (max. continuous current)	A	2.85	1.50	0.976	0.743
7	Stall torque	mNm	153	160	154	157
8	Starting current	A	11.8	6.57	4.18	3.24
9	Max. efficiency	%	76	76	76	76
Characteristics						
10	Terminal resistance phase to phase	Ω	1.01	3.65	8.61	14.8
11	Terminal inductance phase to phase	mH	0.088	0.31	0.713	1.24
12	Torque constant	mNm / A	12.9	24.3	36.8	48.6
13	Speed constant	rpm / V	738	393	259	197
14	Speed / torque gradient	rpm / mNm	57.8	59.1	60.6	59.9
15	Mechanical time constant	ms	6.66	6.81	6.98	6.90
16	Rotor inertia	gcm ²	11.0	11.0	11.0	11.0

Specifications

- Thermal data**
- 17 Thermal resistance housing-ambient 8.6 K / W
 - 18 Thermal resistance winding-housing 1 K / W
 - 19 Thermal time constant winding 3.12 s
 - 20 Thermal time constant motor 777 s
 - 21 Ambient temperature -40 ... +100°C
 - 22 Max. permissible winding temperature +155°C
- Mechanical data (preloaded ball bearings)**
- 23 Max permissible speed 15000 rpm
 - 24 Axial play at axial load < 6.0 N 0 mm
 - > 6.0 N 0.14 mm
 - 25 Radial play preloaded
 - 26 Max. axial load (dynamic) 5.5 N
 - 27 Max. force for press fits (static) 100 N
 - (static, shaft supported) 2000 N
 - 28 Max. radial loading, 5 mm from flange 25 N

Operating Range



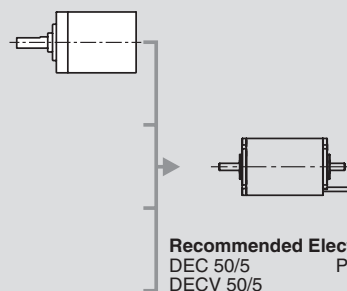
Comments

- 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 165 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 Article 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} 4.5 ... 24 VDC | Pin 5 |
| | N.C. | Pin 6 |
- Connector Article number**
- Molex 430-25-0600
- Wiring diagram for Hall sensors see page 26

maxon Modular System

- 1 Planetary Gearhead
- 3 \varnothing 32 mm
- 1.0 - 6.0 Nm
- Page 232



Overview on page 16 - 21

- Encoder MR**
500 / 1000 CPT,
3 channels
Page 250
- Encoder HEDL 5540**
500 CPT,
3 channels
Page 258
- Brake AB 20**
 \varnothing 20 mm
24 VDC, 0.1 Nm
Page 298

- Recommended Electronics:**
- | | |
|-------------|----------|
| DEC 50/5 | Page 277 |
| DECV 50/5 | 278 |
| DES 50/5 | 279 |
| EPOS 24/5 | 286 |
| EPOS P 24/5 | 287 |
| MIP 50 | 289 |
| Notes | 20 |