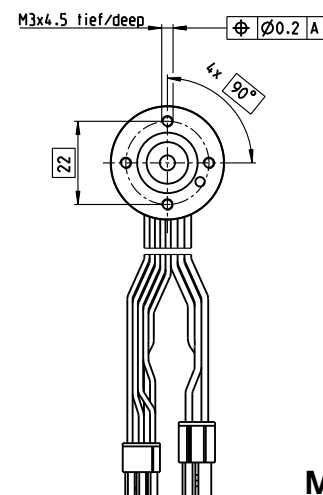
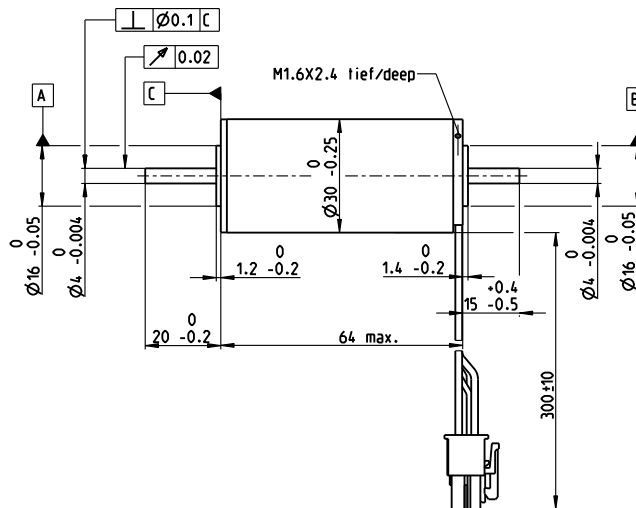
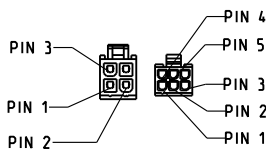
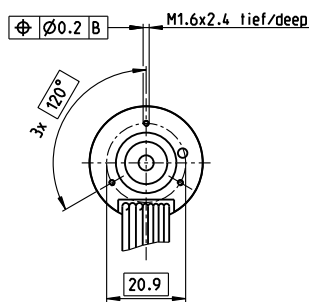


EC-max 30 Ø30 mm, brushless, 60 Watt Motor:272763



M 1:2

EC-max

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

Part Numbers

272762 272763 272764 272765

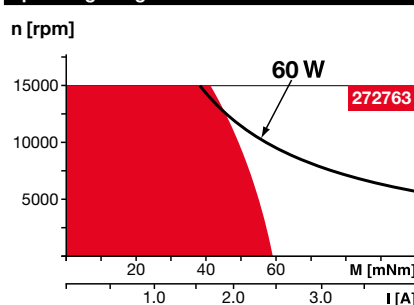
Motor Data

Values at nominal voltage		V	12	24	36	48
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

- 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
 - 25 Radial play preloaded 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

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
 - 30 Number of phases
 - 31 Weight of motor
- 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 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

Molex 430-25-0600
Wiring diagram for Hall sensors see p. 27

maxon Modular System

1
3
305 g

Planetary Gearhead

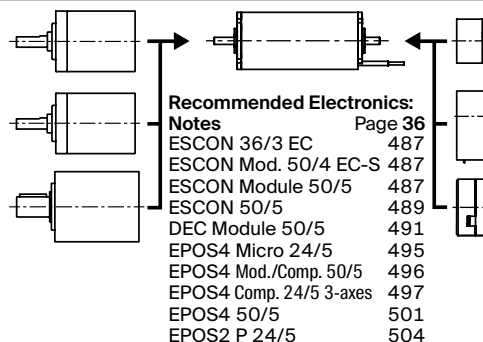
Ø32 mm
1.0 - 8.0 Nm
Page 388/391

Koaxdrive

Ø32 mm
1.0 - 4.5 Nm
Page 394

Planetary Gearhead

Ø42 mm
3 - 15 Nm
Page 397



Recommended Electronics:

Notes Page 36

- ESCON 36/3 EC 487
- ESCON Mod. 50/4 EC-S 487
- ESCON Module 50/5 487
- ESCON 50/5 489
- DEC Module 50/5 491
- EPOS4 Micro 24/5 495
- EPOS4 Mod./Comp. 50/5 496
- EPOS4 Comp. 24/5 3-axes 497
- EPOS4 50/5 501
- EPOS2 P 24/5 504

Details on catalog page 36

Encoder MR
500/1000 CPT,
3 channels
Page 463

Encoder HEDL 5540
500 CPT,
3 channels
Page 475

Brake AB 20
24 VDC
0.1 Nm
Page 516