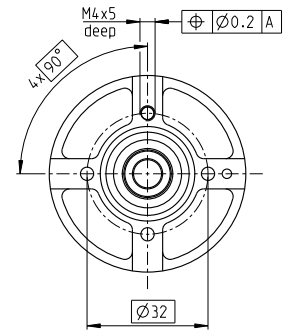
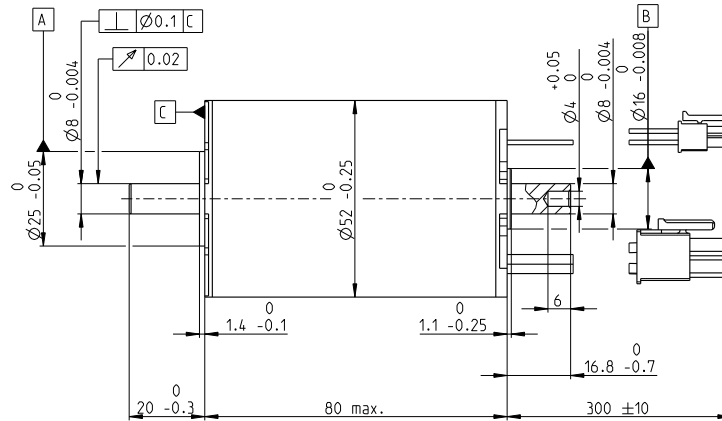
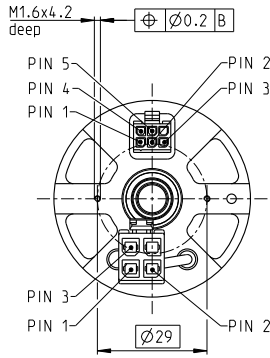


EC-i 52 Ø52 mm, brushless, 420 watt

Ventilated

EC-i



M 1:2

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

Part Numbers

	667064	667065	667066	633919
with Hall sensors				

Motor Data

Values at nominal voltage		18	24	36	48
1 Nominal voltage	V	18	24	36	48
2 No load speed	rpm	4450	4860	5010	5090
3 No load current	mA	829	707	493	379
4 Nominal speed	rpm	3470	3800	3920	3990
5 Nominal torque (max. continuous torque)	mNm	896	964	1040	1010
6 Nominal current (max. continuous current)	A	20.8	18.1	13.2	9.87
7 Stall torque ¹	mNm	10300	12800	15600	15300
8 Stall current	A	269	274	229	171
9 Max. efficiency	%	89.3	90.2	91	90.9
Characteristics		0.0668	0.0876	0.157	0.281
10 Terminal resistance phase to phase	Ω	0.0668	0.0876	0.157	0.281
11 Terminal inductance phase to phase	mH	0.0826	0.123	0.261	0.45
12 Torque constant	mNm/A	38.2	46.7	68	89.2
13 Speed constant	rpm/V	250	204	140	107
14 Speed/torque gradient	rpm/mNm	0.436	0.383	0.325	0.337
15 Mechanical time constant	ms	0.776	0.681	0.578	0.599
16 Rotor inertia	gcm ²	170	170	170	170

Specifications

Thermal data		1.77 K/W
17 Thermal resistance housing-ambient	1.77 K/W	1.77 K/W
18 Thermal resistance winding-housing	0.34 K/W	0.34 K/W
19 Thermal time constant winding	12.2 s	12.2 s
20 Thermal time constant motor	667 s	667 s
21 Ambient temperature	-40...+100°C	-40...+100°C
22 Max. winding temperature	+155°C	+155°C

Mechanical data (preloaded ball bearings)		6000 rpm
23 Max. speed	6000 rpm	6000 rpm
24 Axial play at axial load	< 9.0 N: 0 mm > 9.0 N: 0.14 mm	0 mm / 0.14 mm
25 Radial play	preloaded: 12 N	12 N
26 Max. axial load (dynamic)	150 N	150 N
27 Max. force for press fits (static) (static, shaft supported)	6000 N	6000 N
28 Max. radial load, 5 mm from flange	110 N	110 N

Other specifications

29 Number of pole pairs	8
30 Number of phases	3
31 Weight of motor	752 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

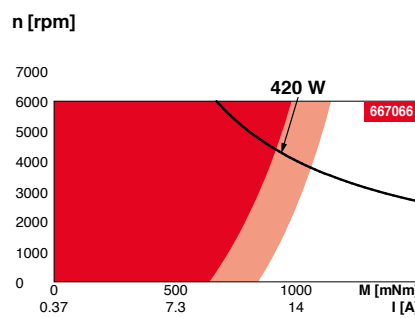
Connector Article number		
Molex	171692-0104	

Connection sensor (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 p. 59
¹Calculation does not include saturation effect (p. 71/178)

Operating Range

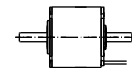


Comments

- 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**

maxon Modular System

Details on catalog page 42



Recommended Electronics:	
Notes	Page 42
ESCON 70/10	503
EPOS4 Mod./Comp. 50/15	511
EPOS4 70/15	515

- Encoder 16 EASY**
128 - 1024 CPT, 3 channels
Page 465
- Encoder 16 EASY XT**
128 - 1024 CPT, 3 channels
Page 467
- Encoder 16 EASY Absolute**
4096 steps
Page 469
- Encoder 16 EASY Absolute XT**
4096 steps
Page 471
- Encoder 16 RIO**
1024 - 32768 CPT, 3 channels
Page 482