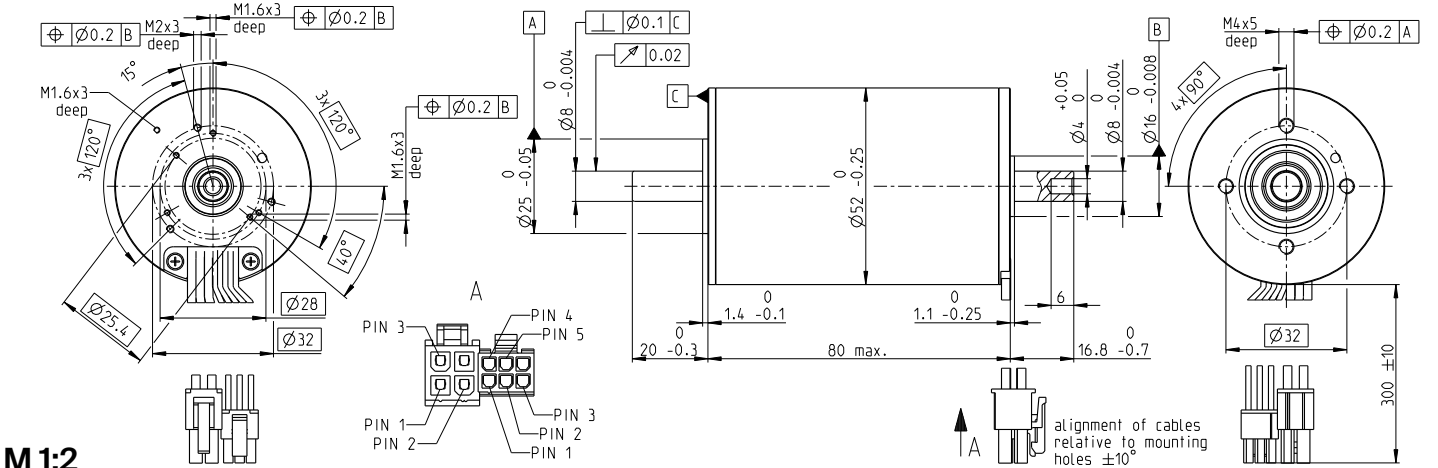


EC-i 52 Ø52 mm, brushless, 180 watt
High Torque

EC-i



M 1:2

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

Part Numbers

	with Hall sensors	574740	574741	579164	579165
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Motor Data (provisional)

Values at nominal voltage					
1 Nominal voltage	V	18	24	36	48
2 No load speed	rpm	4860	4720	4870	4950
3 No load current	mA	1000	716	500	384
4 Nominal speed	rpm	4360	4210	4370	4470
5 Nominal torque	mNm	399	438	448	423
6 Nominal current (max. continuous current)	A	11.5	9.03	6.33	4.59
7 Stall torque	mNm	4370	4580	4930	4930
8 Stall current	A	298	257	222	169
9 Max. efficiency	%	88.6	89.6	90.6	90.5
Characteristics					
10 Terminal resistance phase to phase	Ω	0.0604	0.0935	0.162	0.284
11 Terminal inductance phase to phase	mH	0.0653	0.123	0.261	0.45
12 Torque constant	mNm/A	35	48.1	70	91.9
13 Speed constant	rpm/V	273	198	136	104
14 Speed/torque gradient	rpm/mNm	0.471	0.386	0.316	0.321
15 Mechanical time constant	ms	0.839	0.687	0.563	0.572
16 Rotor inertia	gcm ²	170	170	170	170

Specifications

- Thermal data
- 17 Thermal resistance housing-ambient 4.32 K/W
- 18 Thermal resistance winding-housing 0.63 K/W
- 19 Thermal time constant winding 22.7 s
- 20 Thermal time constant motor 1780 s
- 21 Ambient temperature -40...+100°C
- 22 Max. winding temperature +155°C

Mechanical data (preloaded ball bearings)

- 23 Max. speed 6000 rpm
- 24 Axial play at axial load < 15 N 0 mm
- 25 Radial play 0.14 mm
- 26 Max. axial load (dynamic) 12 N
- 27 Max. force for press fits (static) 150 N
- 28 Max. radial load, 5 mm from flange 110 N

Other specifications

- 29 Number of pole pairs 8
 - 30 Number of phases 3
 - 31 Weight of motor 823
- 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 39-01-2040

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

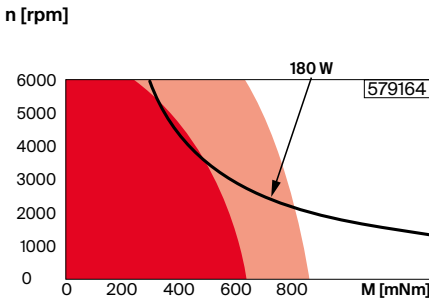
Connector Article number

- Molex 430-25-0600

Wiring diagram for Hall sensors see p. 67

Operating Range

Comments



- Continuous operation
- Continuous operation with reduced thermal resistance R_{th2} 50%
- Intermittent operation
- Assigned power rating

Modular System

Details on catalog page 50

Gear	Sensor	Motor Control
458_GP 52 C	505_ENX 16 EASY	552_ESCON Module 50/8 HE
462_GB 80 ¹	506_ENX 16 EASY XT	553_ESCON 70/10
463_GB 12 ¹	507_ENX 16 EASY Absolute	563_EPOS4 Module 50/8
	508_ENX 16 EASY Absolute XT	563_EPOS4 Module 50/15
	516_ENX 22 EMT	565_EPOS4 Compact 50/8
	517_ENX 16 RIO	566_EPOS4 Compact 50/15
	524_TSX 40 MAG	567_EPOS4 70/15
	525_TSX 40 RIO	568_EPOS4 Disk 60/8
		569_EPOS4 Disk 60/12