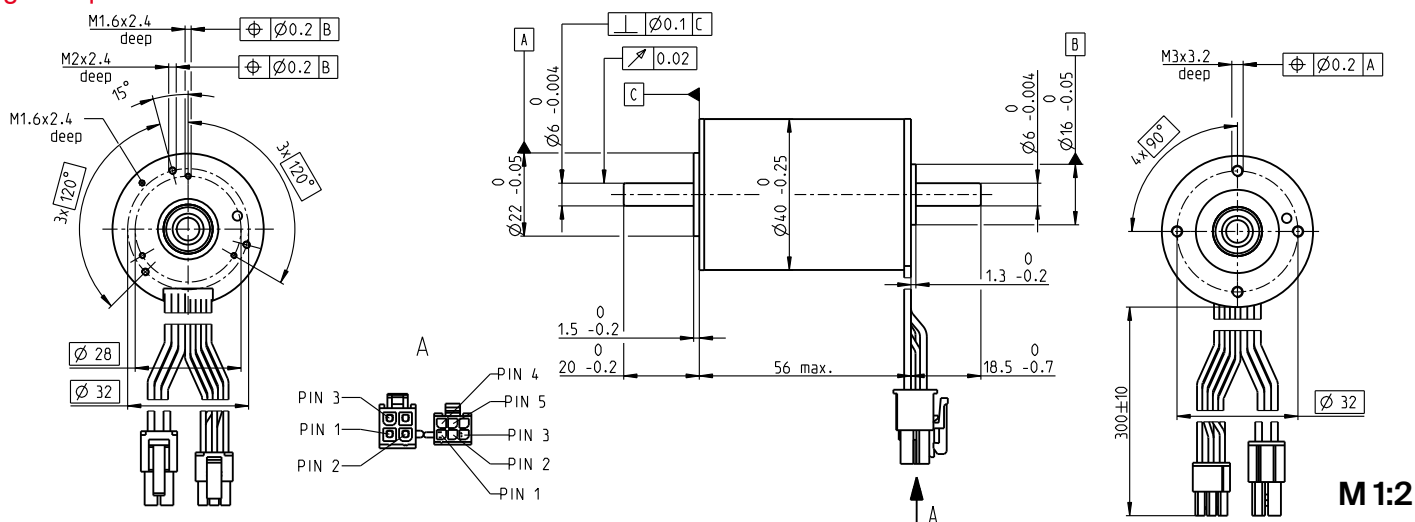


High Torque



Part numbers

Motor data	100000	100000	100000					
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Values at nominal voltage

1 Nominal voltage	V	18	36	48			
2 No load speed	rpm	4540	4550	5000			
3 No load current	mA	352	176	150			
4 Nominal speed	rpm	3920	3950	4390			
5 Nominal torque	mNm	209	210	224			
6 Nominal current (max. continuous current)	A	5.5	2.76	2.41			
7 Stall torque	mNm	1850	1930	2080			
8 Stall current	A	77.4	43.4	48.3			
9 Max. efficiency	%	86.8	87.5	89			

10 Terminal resistance phase

10	Terminal resistance phase to phase	Ω	0.233	0.829	0.994				
11	Terminal inductance phase to phase	mH	0.169	0.675	0.995				
12	Torque constant	mNm/A	37.5	74.9	91				
13	Speed constant	rpm/V	255	127	105				
14	Speed/torque gradient	rpm/mNm	1.58	1.41	1.15				
15	Mechanical time constant	ms	0.729	0.65	0.528				
16	Rotor inertia	gcm ²	44	44	44				

Operating range

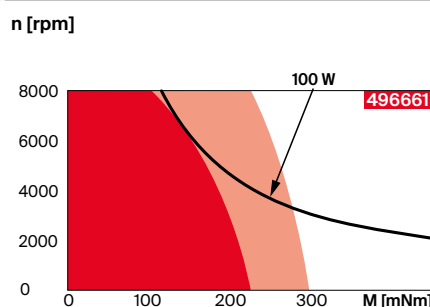
Comments





17 Thermal resistance housing-ambient

17 Thermal resistance housing-ambient	717 K/W
18 Thermal resistance winding-housing	135 K/W
19 Thermal time constant winding	25.8 s
20 Thermal time constant motor	1400 s
21 Ambient temperature	-40...+100°C
22 Max. winding temperature	+155°C

Mechanical data (preloaded ball bearings)

23 Max. speed	8000 rpm
24 Axial play at axial load	0 mm
< 9.0 N	
> 9.0 N	0.15 mm
25 Radial play	preloaded
26 Max. axial load (dynamic)	7 N
27 Max. force for press fits (static)	87 N
(static, shaft supported)	3000 N
28 Max. radial load, 5 mm from flange	29.9 N



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

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	N.O. Article number
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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	N.C. Article number
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Molex	430-25-0600
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Wiring diagram for Hall sensors see p. 69

Modular system

Gear	Sensor
436-438_GP 42 A	509_ENX 16 EASY
439-441_GP 42 C	510_ENX 16 EASY XT
455_GSW 55 A	511_ENX 16 EASY Absolute
456_GSW 62 A	512_ENX 16 EASY Absolute XT
	518_ENX 22 EMT
	519_ENX 16 RIO
	526_TSX 40 MAG
	527_TSX 40 RIO

Details on catalog page 52

Motor Control

547_DEC Module 50/5
551_ESCON 36/3 EC
551_ESCON Module 50/4 EC-S
551_ESCON Module 50/5
552_ESCON Module 50/8 HE
553_ESCON 50/5
553_ESCON 70/10
557_ESCON2 Micro 60/5
558_ESCON2 Module 60/12
559_ESCON2 Compact 60/12
564_EPOS4 Module 50/5
565_EPOS4 Module 50/8
567_EPOS4 Compact 50/5
567_EPOS4 Compact 50/8
569_EPOS4 50/5
569_EPOS4 70/15
570_EPOS4 Disk 60/8
571_EPOS4 Disk 60/12