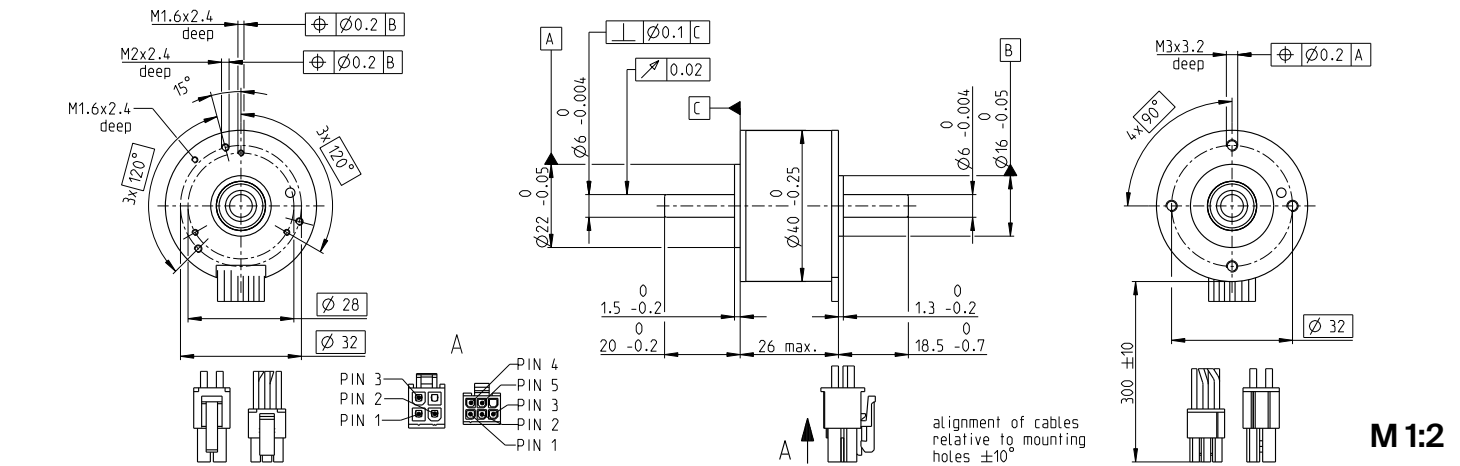


High Torque



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

Part numbers

	with Hall sensors	496650	496651	496652	496653				
Motor data									

Motor data

Values at nominal voltage

1 Nominal voltage	V	9	18	36	48				
2 No load speed	rpm	7780	7790	7350	7560				
3 No load current	mA	577	289	131	103				
4 Nominal speed	rpm	6390	6520	6080	6310				
5 Nominal torque	mNm	65.7	65.2	78.9	73.9				
6 Nominal current (max. continuous current)	A	5.95	2.95	1.62	1.19				
7 Stall torque	mNm	466	497	534	526				
8 Stall current	A	66.9	40.1	25.4	18.5				
9 Max. efficiency	%	82.3	83.7	86	85.5				

Characteristics

10	Terminal resistance phase to phase	Ω	0.135	0.448	1.42	2.59				
11	Terminal inductance phase to phase	mH	0.064	0.255	1.15	1.93				
12	Torque constant	mNm/A	10.8	21.7	46.1	59.6				
13	Speed constant	rpm/V	881	440	207	160				
14	Speed/torque gradient	rpm/mNm	10.9	9.1	6.38	6.96				
15	Mechanical time constant	ms	1.47	1.22	0.855	0.933				
16	Rotor inertia	gcm ²	12.8	12.8	12.8	12.8				

Specifications

Thermal data

17 Thermal resistance housing-ambient	9.91 K/W
18 Thermal resistance winding-housing	3.77 K/W
19 Thermal time constant winding	26 s
20 Thermal time constant motor	892 s
21 Ambient temperature	-40...+100°C
22 Max. winding temperature	+155°C

Mechanical data (preloaded ball bearings)

23	Max. speed	10 000 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)	6500 N
28	Max. radial load, 5 mm from flange	21 N

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	Article number
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Connector: Molex
Article Number: 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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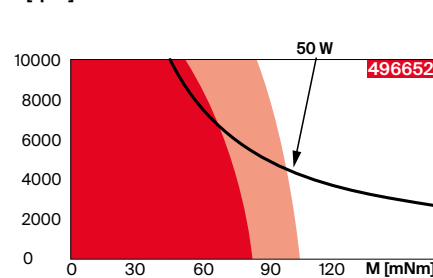
Wiring diagram for Hall sensors see p. 69

Wiring diagram for Hall sensors see p. 69

Operating range

Comments

n [rpm]



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

— Assigned power rating

Modular system

	Gear	Sensor
7	436-438_GP 42 A	509_ENX 16 EASY
3	439-441_GP 42 C	510_ENX 16 EASY XT
180	455_GSW 55 A	511_ENX 16 EASY Absolute
g	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, 70/10
557_ESCON2 Micro 60/5
558_ESCON2 Module 60/12
559_ESCON2 Compact 60/12
563_EPOS4 Micro 24/5
564_EPOS4 Module 50/5
565_EPOS4 Comp. 24/5 3-axes
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