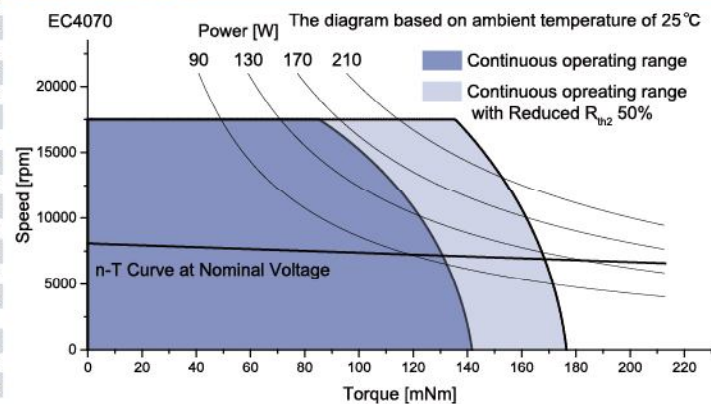


		1206	2408	3608	4808	
<b>Motor data</b>						
Sensorless		<b>EC4070L-...</b>				
With hall sensor		<b>EC4070S-...</b>				
<b>Values at nominal voltage</b>						
1	Nominal voltage	V	12	24	36	48
2	No load speed	rpm	6154	8102	8113	8061
3	No load current	mA	264	200	190	130
4	Nominal speed	rpm	5084	7304	7266	7238
5	Nominal torque	mNm	130	130	130	130
6	Nominal current	A	7.29	4.82	3.28	2.43
7	Stall torque	mNm	748	1320	1245	1273
8	Stall current	A	40.7	47.1	29.8	22.6
9	Max. efficiency	%	84.5	87.4	84.7	85.4
10	Terminal resistance	$\Omega$	0.3	0.51	1.21	2.12
11	Terminal inductance	mH	0.11	0.30	0.66	1.2
12	Torque constant	mNm/A	18.5	28.2	42.1	56.5
13	Speed constant	rpm/V	516	339	227	169
14	Speed/torque gradient	rpm/mNm	8.23	6.14	6.52	6.33
15	Mechanical time constant	ms	3.4	2.5	2.7	2.6
16	Rotor inertia	gcm <sup>2</sup>	39.4	39.4	39.4	39.4

17	Thermal resistance housing-ambient	3.8 K/W
18	Thermal resistance winding-housing	1.5 K/W
19	Thermal time constant winding	33 s
20	Thermal time constant motor	775 s
21	Ambient temperature	-30...+100°C
22	Max. permissible winding temperature	+150°C
23	Max. permissible speed	17500 rpm
24	Axial play at axial load <10N	0 mm
	>10N	max. 0.3 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	9 N
27	Max. force for press fits (static)	170 N
	(static, shaft supported)	4500 N
28	Max. radial loading, 5mm from flange	80 N
29	Number of pole pairs	1
30	Number of phases	3
31	Weight of motor	415 g

**Operating Range**



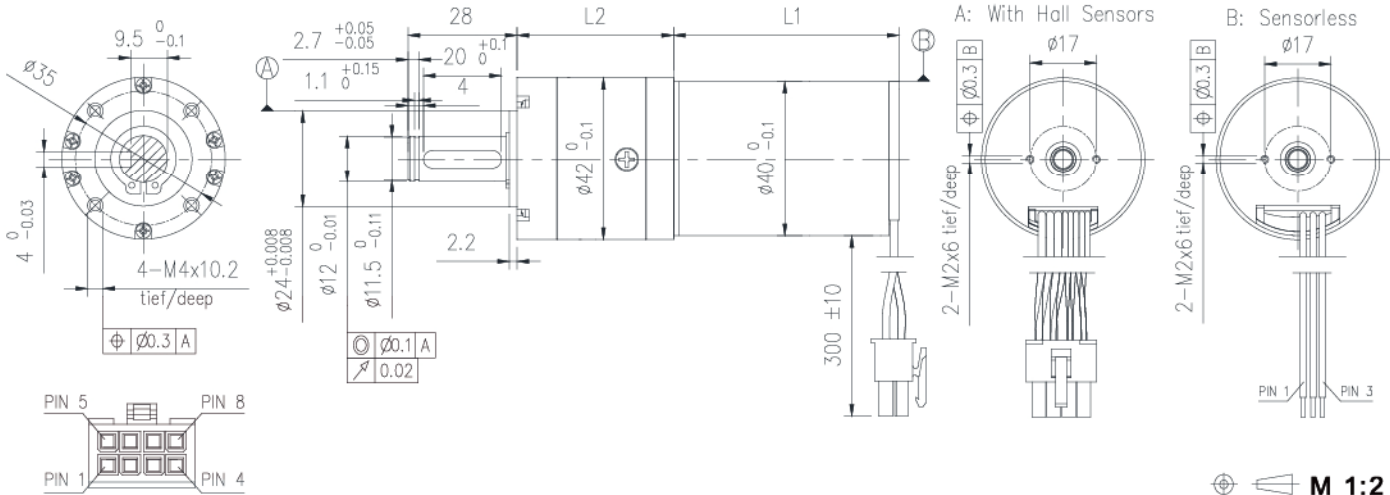
**Connection**

Connection A (Sensor)		PTFE	
Pin 1	Motor winding MB	AWG20	Green
Pin 2	Vhall 3-18 VDC	AWG26	Red
Pin 3	Hall sensor HA	AWG26	Yellow
Pin 4	Hall sensor HC	AWG26	Blue
Pin 5	Motor winding MA	AWG20	Yellow
Pin 6	Motor winding MC	AWG20	Blue
Pin 7	GND	AWG26	Black
Pin 8	Hall sensor HB	AWG26	Green
Connector Molex5557-8P			

Connection B (Sensorless)		PTFE	
Pin 1	Motor winding MA	AWG20	Yellow
Pin 2	Motor winding MB	AWG20	Green
Pin 3	Motor winding MC	AWG20	Blue

**Configuration**

Performance: Customized in the continuous operating range  
Ball bearing: Preload  
Flange: Standard frange front&back/customize the frange  
Shaft: Length/Diameter/Cut face/double shaft/hollow shaft  
Leadwire: PVC/Silicon/Teflon/UL No/Dimension/length  
Connector: JST/MOLEX/TE



M 1:2

**ECG40..L**  
**ECG40..S** P42

Motor type				
1 Length of motor L1	ECG4058S/L	mm	58	Motor performance at P24
	ECG4070S/L	mm	70	Motor performance at P25
	ECG4088S/L	mm	88	Motor performance at P26

Gearhead Data					
2 Housing material		Steel			
3 Geartrain material		Steel			
4 Bearing type on output shaft		Ball bearing			
5 Max. radial load (10mm from flange)	N	196			
6 Max. axial load	N	98			
7 Radial play of shaft	mm	0.04			
8 Thrust play of shaft	mm	0.4			
9 Backlash at no load	°	2			
10 Max. continuous speed	rpm	30000			
11 Operating temperature range	°C	-30..+100			
12 Number of stages		1	2	3	4
13 Max continuous torque	Nm	6.5	8.6	10.8	13
14 Max. intermittent torque	Nm	13	17.2	21.6	26
15 Max. efficiency	%	90	83	77	72
16 Gearhead length L2	mm	43.8	54.6	65.4	76
17 Ratio	X:1	4.3,5.1, 6.3, 7.6	14.7,16.3, 18.6,19.2, 21.9,23.9, 25.8, 27.2, 28.9, 32, 38.7, 39.7, 48, 58.1	65.6, 74.6, 81.4, 90.5, 98.5, 109, 112.1, 124.6, 123, 141.8, 150.4, 162.4, 171.2, 182, 196.5, 220.3 243.9, 250.7	277.4, 302.6, 335.8, 351, 382.2, 413.2, 459.3, 500.1, 537.4, 583.5, 620.6, 686.9, 744.7, 824.4, 869, 924.2 1006, 1388, 1680, 3380

Connection	Configuration
<p><b>Connection A (Sensor)</b> PTFE</p> <p>Pin 1 Motor winding MB AWG20 Green</p> <p>Pin 2 Vhall 3-18 VDC AWG26 Red</p> <p>Pin 3 Hall sensor HA AWG26 Yellow</p> <p>Pin 4 Hall sensor HC AWG26 Blue</p> <p>Pin 5 Motor winding MA AWG20 Yellow</p> <p>Pin 6 Motor winding MC AWG20 Blue</p> <p>Pin 7 GND AWG26 Black</p> <p>Pin 8 Hall sensor HB AWG26 Green</p> <p>Connector Molex5557-8P</p> <p><b>Connection B (Sensorless)</b> PTFE</p> <p>Pin 1 Motor winding MA AWG20 Yellow</p> <p>Pin 2 Motor winding MB AWG20 Green</p> <p>Pin 3 Motor winding MC AWG20 Blue</p>	<p>Pinion: Metal/Plastic</p> <p>Ball bearing: Preload</p> <p>Flange: Standard frange front&amp;back/customize the frange</p> <p>Shaft: Length/Diameter/Cut face/double shaft/hollow shaft</p> <p>Leadwire: PVC/Silicon/Teflon/UL No/Dimensions/length</p> <p>Connector: JST/MOLEX/TE</p> <p><b>More:</b></p> <p>Special design for high speed/big torque</p> <p>ECD series can be chosen in some application</p> <p>Details please contact our sales engineer</p>