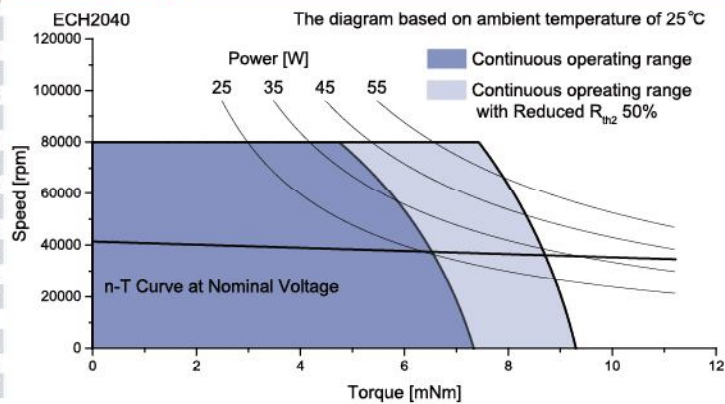


	Sensorless With hall sensor	ECH2040L-...	2440	3040	3640			
<b>Motor data</b>								
<b>Values at nominal voltage</b>								
1	Nominal voltage	V	24	30	36			
2	No load speed	rpm	41392	40700	40020			
3	No load current	mA	69	60	55			
4	Nominal speed	rpm	37500	36777	36049			
5	Nominal torque	mNm	6.3	6.3	6.3			
6	Nominal current	A	1.21	0.96	0.79			
7	Stall torque	mNm	67	65.4	63.5			
8	Stall current	A	12.2	9.4	7.5			
9	Max. efficiency	%	85.5	84.7	83.6			
10	Terminal resistance	$\Omega$	1.96	3.19	4.8			
11	Terminal inductance	mH	0.21	0.47	0.47			
12	Torque constant	mNm/A	5.51	6.99	8.53			
13	Speed constant	rpm/V	1734	1365	1120			
14	Speed/torque gradient	rpm/mNm	618	623	630			
15	Mechanical time constant	ms	4.5	4.5	4.6			
16	Rotor inertia	gcm <sup>2</sup>	0.69	0.69	0.69			

17	Thermal resistance housing-ambient	18.7 K/W
18	Thermal resistance winding-housing	1.9 K/W
19	Thermal time constant winding	5 s
20	Thermal time constant motor	397 s
21	Ambient temperature	-30...+100°C
22	Max. permissible winding temperature	+150°C
23	Max. permissible speed	80000 rpm
24	Axial play at axial load <3 N	0 mm
	>3 N	max. 0.3 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	2.5 N
27	Max. force for press fits (static)	44 N
	(static, shaft supported)	1200 N
28	Max. radial loading, 5mm from flange	11 N
29	Number of pole pairs	1
30	Number of phases	3
31	Weight of motor	53 g

**Operating Range**



**Connection**

<b>Connection A (Sensor)</b>		
Pin 1 Vhall 3-18 VDC	PVC	
Pin 2 Hall sensor HA	AWG26	black
Pin 3 Hall sensor HB	AWG26	black
Pin 4 Hall sensor HC	AWG26	black
Pin 5 GND	AWG26	black
Pin 6 Motor winding MA	AWG26	black
Pin 7 Motor winding MB	AWG26	black
Pin 8 Motor winding MC	AWG26	black
Connector		
JST PH2.0-8P		

<b>Connection B (Sensorless)</b>		
Pin 1 Motor winding MA	PVC	yellow
Pin 2 Motor winding MB	AWG26	green
Pin 3 Motor winding MC	AWG26	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