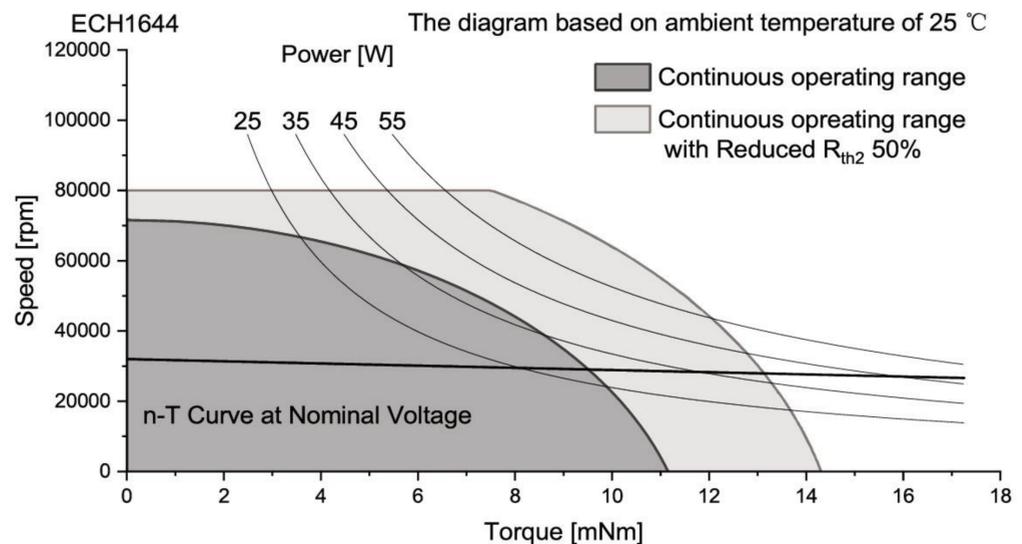


	Sensorless	ECH1644L-...	2430	3040	3640				
	With hall sensor	ECH1644S-...							
<b>Motor data</b>									
<b>Values at nominal voltage</b>									
1	Nominal voltage	V	24	30	36				
2	No load speed	rpm	30580	30900	30160				
3	No load current	mA	95	80	76				
4	Nominal speed	rpm	28134	28403	27632				
5	Nominal torque	mNm	7.5	7.5	7.5				
6	Nominal current	A	1.10	0.90	0.74				
7	Stall torque	mNm	93.75	92.81	89.46				
8	Stall current	A	12.70	10.17	8.00				
9	Max. efficiency	%	83.4	83.0	81.5				
10	Terminal resistance	$\Omega$	1.89	2.95	4.5				
11	Terminal inductance	mH	0.12	0.19	0.28				
12	Torque constant	mNm/A	7.44	9.20	11.29				
13	Speed constant	rpm/V	1284	1038	846				
14	Speed/torque gradient	rpm/mNm	326	333	337				
15	Mechanical time constant	ms	2.8	2.9	2.9				
16	Rotor inertia	gcm <sup>2</sup>	0.82	0.82	0.82				

17	Thermal resistance housing-ambient	16.2 K/W
18	Thermal resistance winding-housing	3.5 K/W
19	Thermal time constant winding	4 s
20	Thermal time constant motor	339 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	43g

**Operating Range**



**Connection**

<b>Connection A (Sensor)</b>		PVC	
Pin 1	Vhall 3-18 VDC	AWG26	black
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>		PVC	
Pin 1	Motor winding MA	AWG26	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