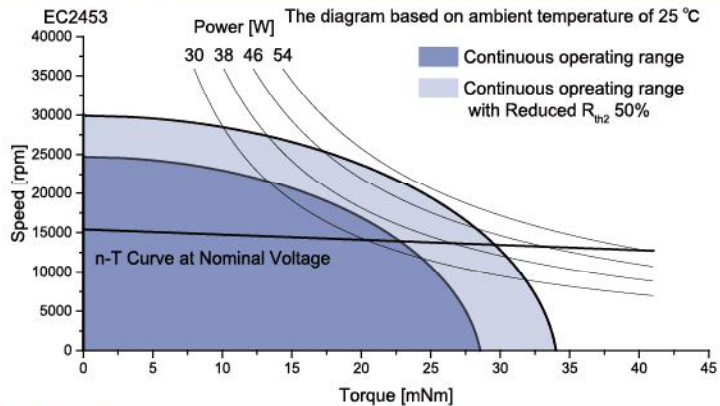


M 1:1.5

	Sensorless	EC2453L-...	1215	2415	3615	4815			
	With hall sensor	EC2453S-...							
<b>Motor data</b>									
<b>Values at nominal voltage</b>									
1	Nominal voltage	V	12	24	36	48			
2	No load speed	rpm	15083	15398	15202	15310			
3	No load current	mA	308	156	115	94			
4	Nominal speed	rpm	13938	14347	14211	14263			
5	Nominal torque	mNm	20	20	20	20			
6	Nominal current	A	2.96	1.51	1.01	0.77			
7	Stall torque	mNm	263	293	307	293			
8	Stall current	A	35.3	20	13.8	9.96			
9	Max. efficiency	%	82.2	83.1	82.6	81.5			
10	Terminal resistance	$\Omega$	0.34	1.2	2.61	4.82			
11	Terminal inductance	mH	0.05	0.19	0.44	0.76			
12	Torque constant	mNm/A	7.53	14.8	22.4	29.7			
13	Speed constant	rpm/V	1268	647	426	322			
14	Speed/torque gradient	rpm/mNm	57.2	52.5	49.6	52.3			
15	Mechanical time constant	ms	3.5	3.2	3.1	3.2			
16	Rotor inertia	gcm <sup>2</sup>	5.9	5.9	5.9	5.9			

17	Thermal resistance housing-ambient	10.2 K/W
18	Thermal resistance winding-housing	6.4 K/W
19	Thermal time constant winding	36 s
20	Thermal time constant motor	555 s
21	Ambient temperature	-30...+100°C
22	Max. permissible winding temperature	+150°C
23	Max. permissible speed	30000 rpm
24	Axial play at axial load <4 N	0 mm
	>4 N	max. 0.3 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	3.5 N
27	Max. force for press fits (static)	44 N
	(static, shaft supported)	1200 N
28	Max. radial loading, 5mm from flange	15 N
29	Number of pole pairs	1
30	Number of phases	3
31	Weight of motor	110 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