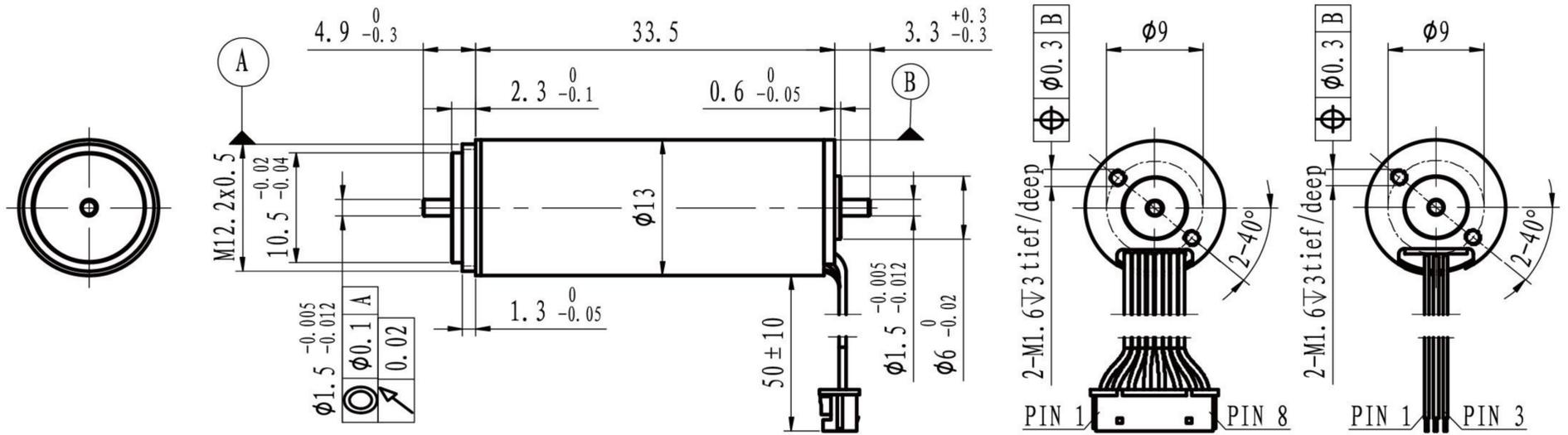


A: With Hall Sensors

B: Sensorless

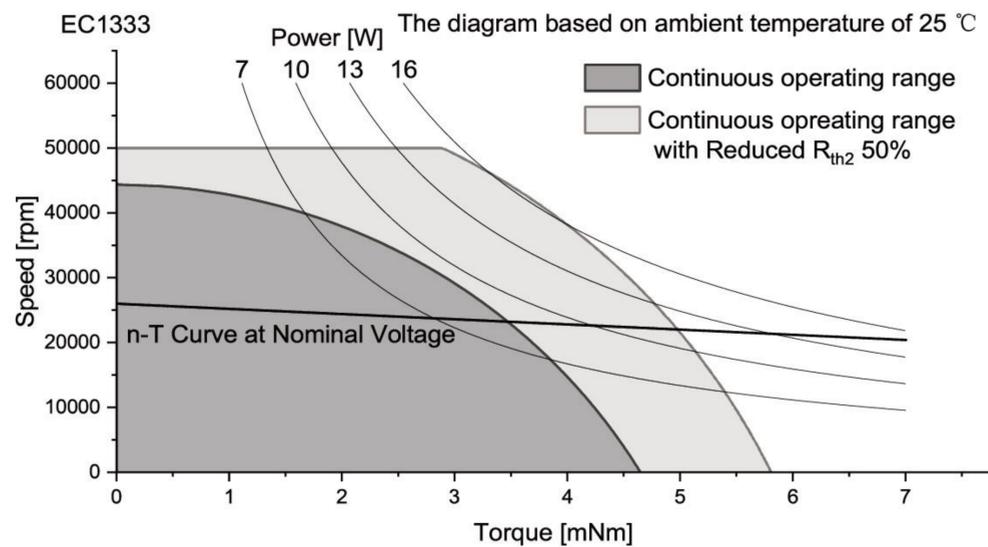


**M 1.2:1**

	Sensorless	EC1333L-...	0624	1224	2424				
	With hall sensor	EC1333S-...							
<b>Motor data</b>									
<b>Values at nominal voltage</b>									
1	Nominal voltage	V	6	12	24				
2	No load speed	rpm	24011	24430	24821				
3	No load current	mA	270	160	100				
4	Nominal speed	rpm	21236	21695	22040				
5	Nominal torque	mNm	3.7	3.7	3.7				
6	Nominal current	A	1.85	0.97	0.51				
7	Stall torque	mNm	32.02	33.05	33.02				
8	Stall current	A	13.95	7.36	3.77				
9	Max. efficiency	%	74.1	72.7	70.1				
10	Terminal resistance	$\Omega$	0.43	1.63	6.36				
11	Terminal inductance	mH	0.014	0.055	0.208				
12	Torque constant	mNm/A	2.34	4.59	8.99				
13	Speed constant	rpm/V	4081	2081	1062				
14	Speed/torque gradient	rpm/mNm	750	739	752				
15	Mechanical time constant	ms	2.8	2.8	2.8				
16	Rotor inertia	gcm <sup>2</sup>	0.36	0.36	0.36				

17	Thermal resistance housing-ambient	27.5 K/W
18	Thermal resistance winding-housing	10.7 K/W
19	Thermal time constant winding	8.2 s
20	Thermal time constant motor	275 s
21	Ambient temperature	-30...+100°C
22	Max. permissible winding temperature	+125°C
23	Max. permissible speed	50000 rpm
24	Axial play at axial load	<0.8 N 0 mm >0.8 N max. 0.3 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	0.3 N
27	Max. force for press fits (static)	11 N
	(static, shaft supported)	200 N
28	Max. radial loading, 5mm from flange	4.3 N
29	Number of pole pairs	1
30	Number of phases	3
31	Weight of motor	26.9 g

**Operating Range**



**Connection**

<b>Connection A (Sensor)</b>		PTFE	
Pin 1	Vhall 3-18 VDC	AWG30	red
Pin 2	Hall sensor HA	AWG30	Yellow
Pin 3	Hall sensor HB	AWG30	Green
Pin 4	Hall sensor HC	AWG30	blue
Pin 5	GND	AWG30	black
Pin 6	Motor winding MA	AWG30	Yellow
Pin 7	Motor winding MB	AWG30	Green
Pin 8	Motor winding MC	AWG30	blue
Conector			
MX 1.25-8Y			

<b>Connection B (Sensorless)</b>		PVC	
Pin 1	Motor winding MA	AWG28	yellow
Pin 2	Motor winding MB	AWG28	green
Pin 3	Motor winding MC	AWG28	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