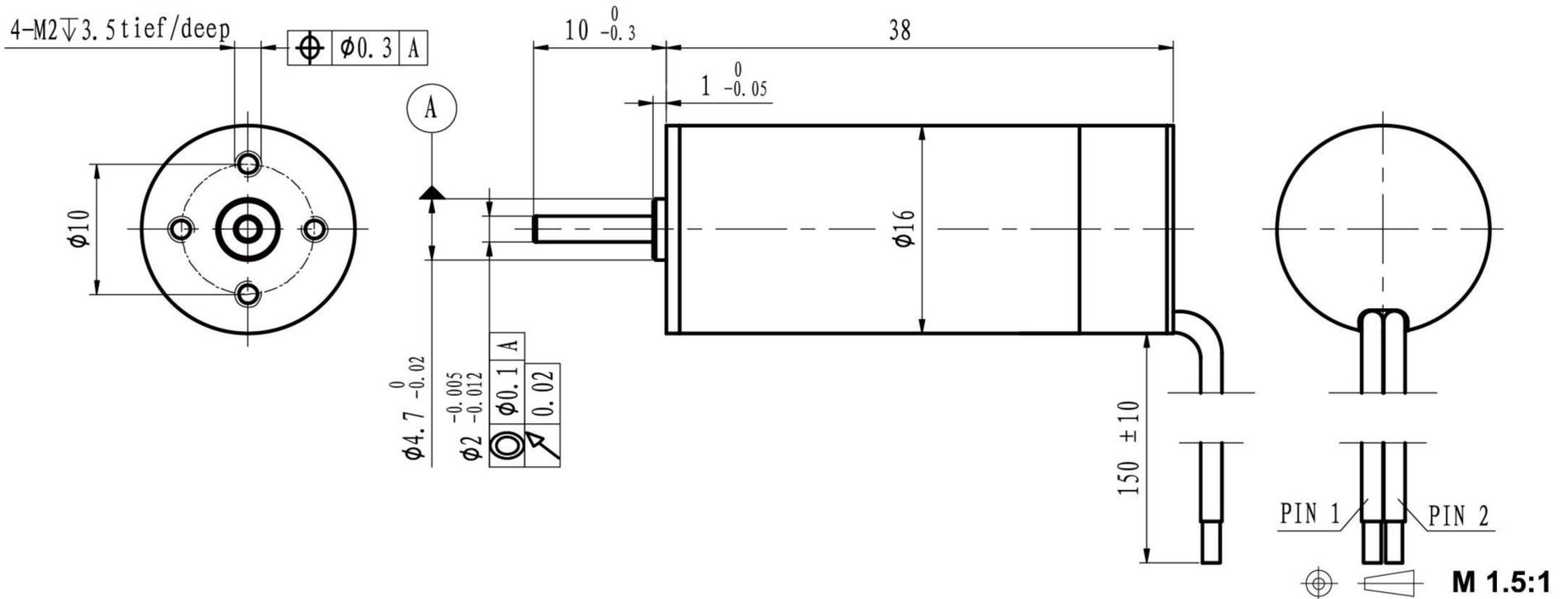


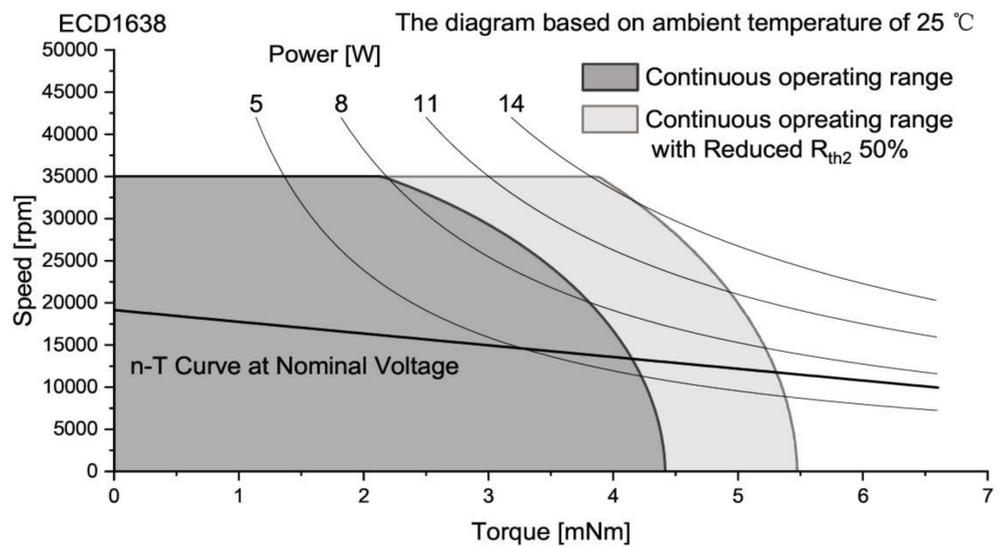
ECD1638,  $\Phi 16\text{mm} \times 38\text{mm}$



	Sensorless	ECD1638L-...	0617	1217
<b>Motor data</b>				
<b>Values at nominal voltage</b>				
1	Nominal voltage	V	6	12
2	No load speed	rpm	17310	17664
3	No load current	mA	190	100
4	Nominal speed	rpm	15037	15284
5	Nominal torque	mNm	1.5	1.5
6	Nominal current	A	0.67	0.34
7	Stall torque	mNm	11.42	11.13
8	Stall current	A	3.82	1.91
9	Max. efficiency	%	60.4	59.5
10	Supply voltage +Vcc	V	4.5..7	8..13
11	Direction of rotation		CW	CW
12	Torque constant	mNm/A	3.15	6.15
13	Speed constant	rpm/V	3036	1553
14	Speed/torque gradient	rpm/mNm	1515	1587
15	Mechanical time constant	ms	6.3	6.6
16	Rotor inertia	gcm <sup>2</sup>	0.4	0.4

17	Thermal resistance housing-ambient	20.2 K/W
18	Thermal resistance winding-housing	8.7 K/W
19	Thermal time constant winding	7 s
20	Thermal time constant motor	238 s
21	Ambient temperature	-30...+100°C
22	Max. permissible winding temperature	+150°C
23	Max. permissible speed	35000 rpm
24	Axial play at axial load	<1.8 N 0 mm >1.8 N max. 0.3 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	1.3 N
27	Max. force for press fits (static)	15 N
	(static, shaft supported)	350 N
28	Max. radial loading, 5mm from flange	5 N
29	Number of pole pairs	1
30	Number of phases	3
31	Weight of motor	27 g

**Operating Range**



Controller features	
Sensorless, Open loop, $I_{max} < 0.5A$	
Overload protection, Stall protection	
Max. temperature of electronics	+105°C

Connection			
<b>Conection</b>		PTFE	
Pin 1 +VCC		AWG24	red
Pin 2 GND		AWG24	black

**Caution:**  
Incorrect lead connection will damage the controller!

Configuration	
Function:	On&Off/Direction/Speed control/Brake
	Speed closed&open-loop Control/Speed feedback
Performance:	Customized in the continuous operating range
Ball bearing:	Preload
Flange:	Standard frange front&back/customize the frange
Shaft:	Length/Diameter/Cut face
Leadwire:	PVC/Silicon/Teflon/UL No/Dimension/length
Connector:	JST/MOLEX/TE
More:	Please contact our sales engineers