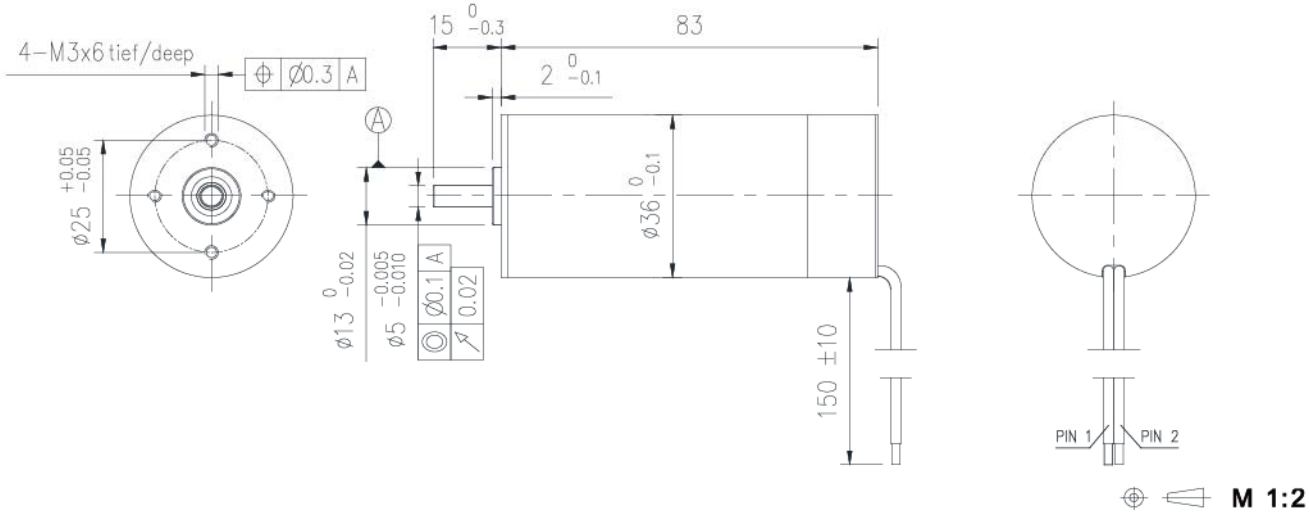
ECD Series Slotless Brushless DC Motor with build-in controller

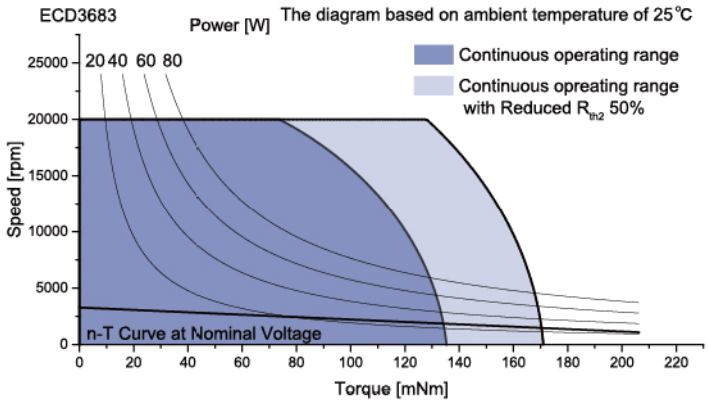
ECD3683 Φ36mmX83mm



	With hall sensor ECD3683S-...		1203	2403						
Motor data										
Values at nominal voltage										
1	Nominal voltage	V	12	24						
2	No load speed	rpm	3278	3273						
3	No load current	mA	137	78						
4	Nominal speed	rpm	2294	2304						
5	Nominal torque	mNm	100	100						
6	Nominal current	A	3.04	1.53						
7	Stall torque	mNm	333	338						
8	Stall current	A	9.8	4.98						
9	Max. efficiency	%	77.8	76.5						
10	Supply voltage +Vcc	V	10..28	10..28						
11	Direction of ratation		CW	CW						
12	Torque constant	mNm/A	34.5	68.9						
13	Speed constant	rpm/V	277	139						
14	Speed/torque gradient	rpm/mNm	9.83	9.69						
15	Mechanical time constant	ms	2.2	2.2						
16	Rotor inertia	gcm^2	21.5	21.5						

17	Thermal resistance housing-ambient	5 K/W
18	Thermal resistance winding-housing	2.3 K/W
19	Thermal time constant winding	46 s
20	Thermal time constant motor	816 s
21	Ambient temprature	-40...+100℃
22	Max. permissible winding temperature	+150℃
23	Max. permissible speed	20000 rpm
24	Axial play at axial load <8 N	0 mm
	>8 N	max. 0.3 mm
25	Radial play	preloaded
26	Max. axial load (dynamic)	7.5 N
27	Max.force for press fits (static)	100 N
	(static, shaft supported)	2700 N
28	Max. radial loading, 5mm from flange	25 N
29	Number of pole pairs	1
30	Number of phases	3
31	Weight of motor	366 g

Operating Range



Controller features	
Sensor, Open loop, Imax < 4A	
Overload protection, Stall protection	
Max. temperature of electronics	+105℃

Connection

Conection		PTFE	
Pin 1	+VCC	AWG20	red
Pin 2	GND	AWG20	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 within 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