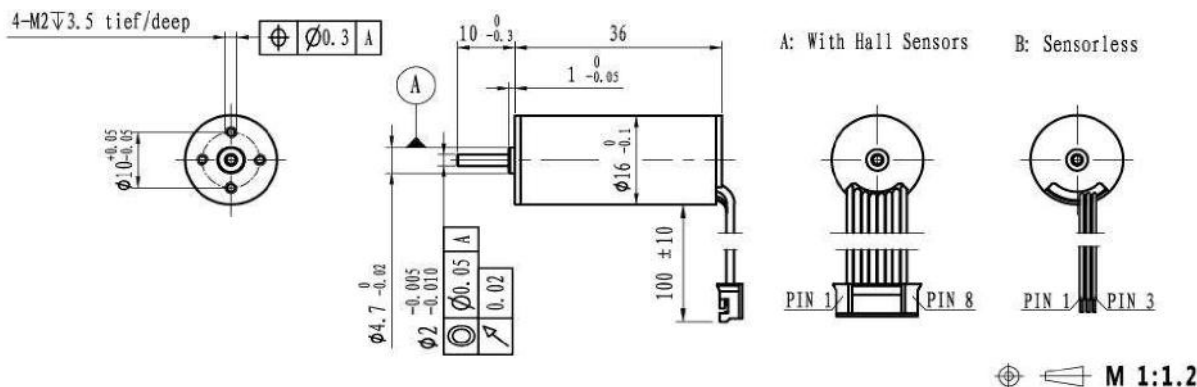


16mm Slotless BLDC motor

6, 9, 12 & 24 volt

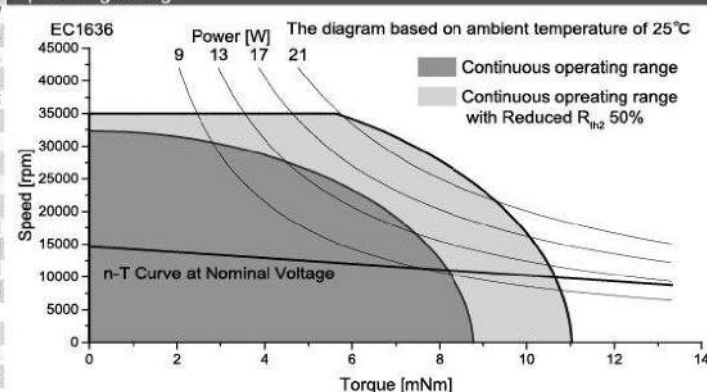
P/N: MFU-3333-S006 / S009 / S012 / S024



Sensorless								
With hall sensor								
Motor data								
Values at nominal voltage								
1	Nominal voltage	V	6	9	12	24		
2	No load speed	rpm	13835	14533	14460	14668		
3	No load current	mA	150	110	70	50		
4	Nominal speed	rpm	11412	11930	11615	12005		
5	Nominal torque	mNm	6	6	6	6		
6	Nominal current	A	1.62	1.14	0.84	0.44		
7	Stall torque	mNm	34.3	33.5	30.5	33		
8	Stall current	A	8.57	5.88	3.99	2.21		
9	Max. efficiency	%	75.3	74.5	75.3	72.2		
10	Terminal resistance	Ω	0.7	1.53	3.01	10.8		
11	Terminal inductance	mH	0.04	0.08	0.15	0.81		
12	Torque constant	mNm/A	4.07	5.8	7.79	15.3		
13	Speed constant	rpm/V	2347	1646	1227	625		
14	Speed/torque gradient	rpm/mNm	404	434	474	444		
15	Mechanical time constant	ms	2.6	2.8	3.1	2.9		
16	Rotor inertia	gcm^2	0.62	0.62	0.62	0.62		

17	Thermal resistance housing-ambient	17.1 K/W
18	Thermal resistance winding-housing	5.3 K/W
19	Thermal time constant winding	6 s
20	Thermal time constant motor	252 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	32 g

Operating Range



Connection

Connection A (Sensor)		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

Connection B (Sensorless)		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