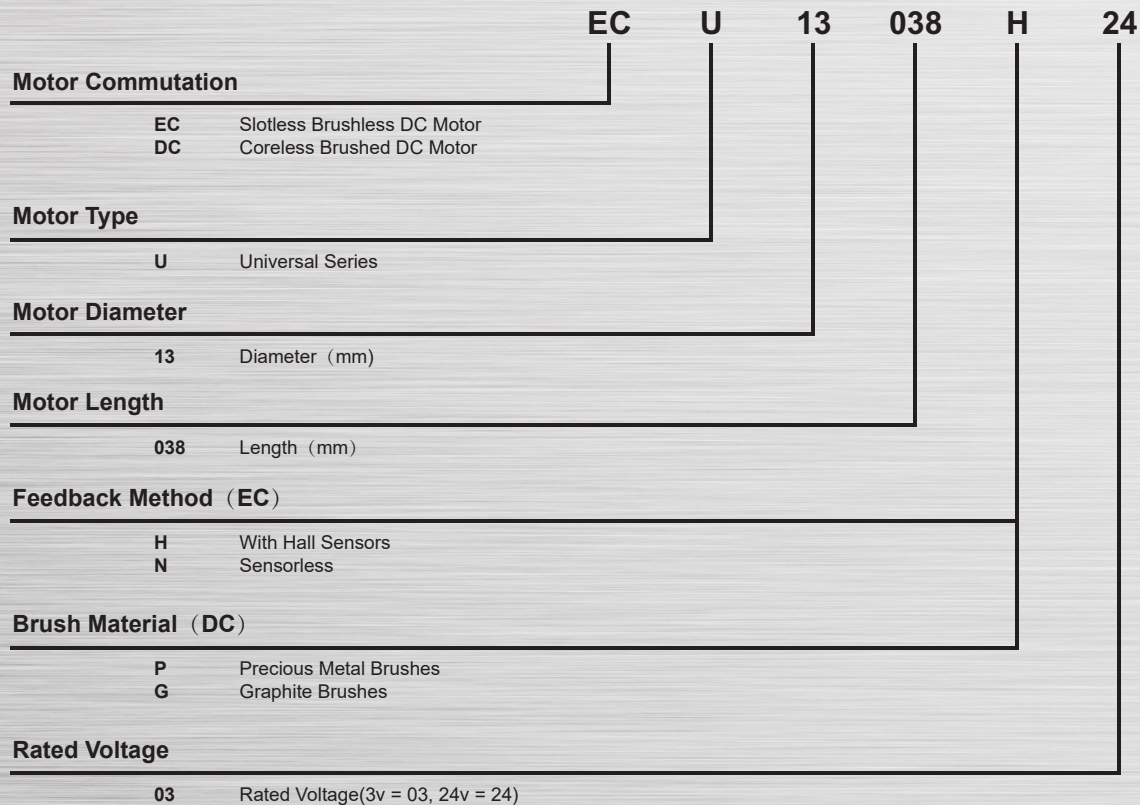


# Product Feature

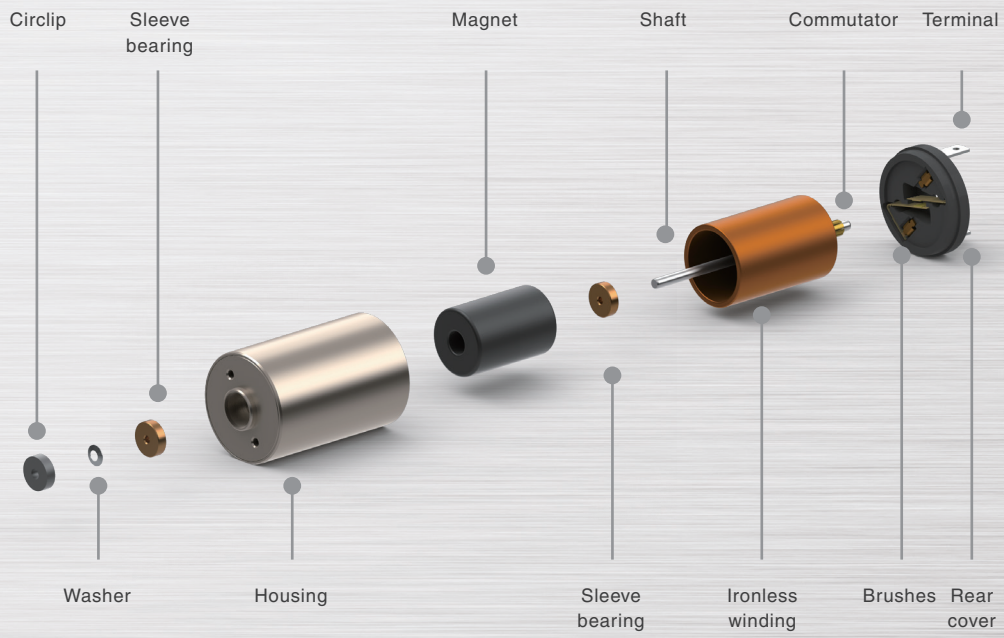
MOONS' EC motor and DC motor use independent patented ironless winding. this special design can bring high speed, high torque and low noise. Because of no cogging and compact structure, we can get smoother running at high or low speed, more accurate control, higher efficiency and higher power density.

- Ironless Winding
- Small Size
- High Torque
- High Speed

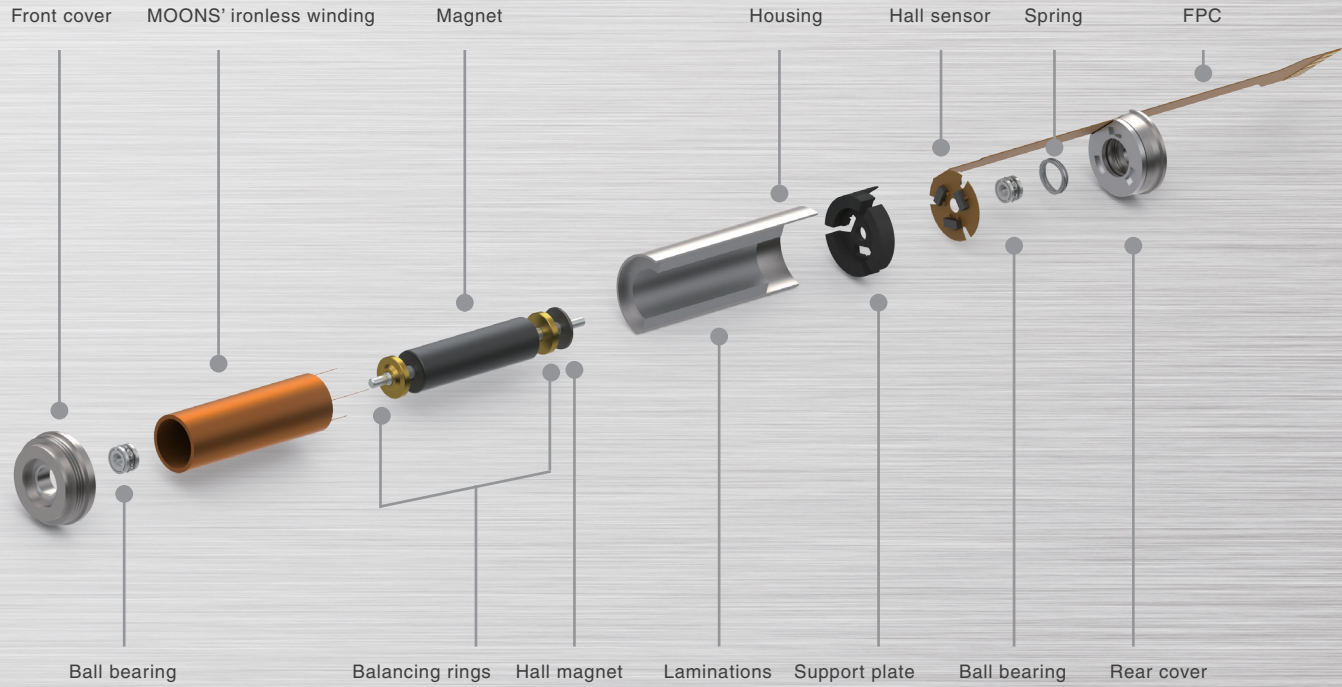
## Product Code



# DC Series Motor Structure



# EC Series Motor Structure

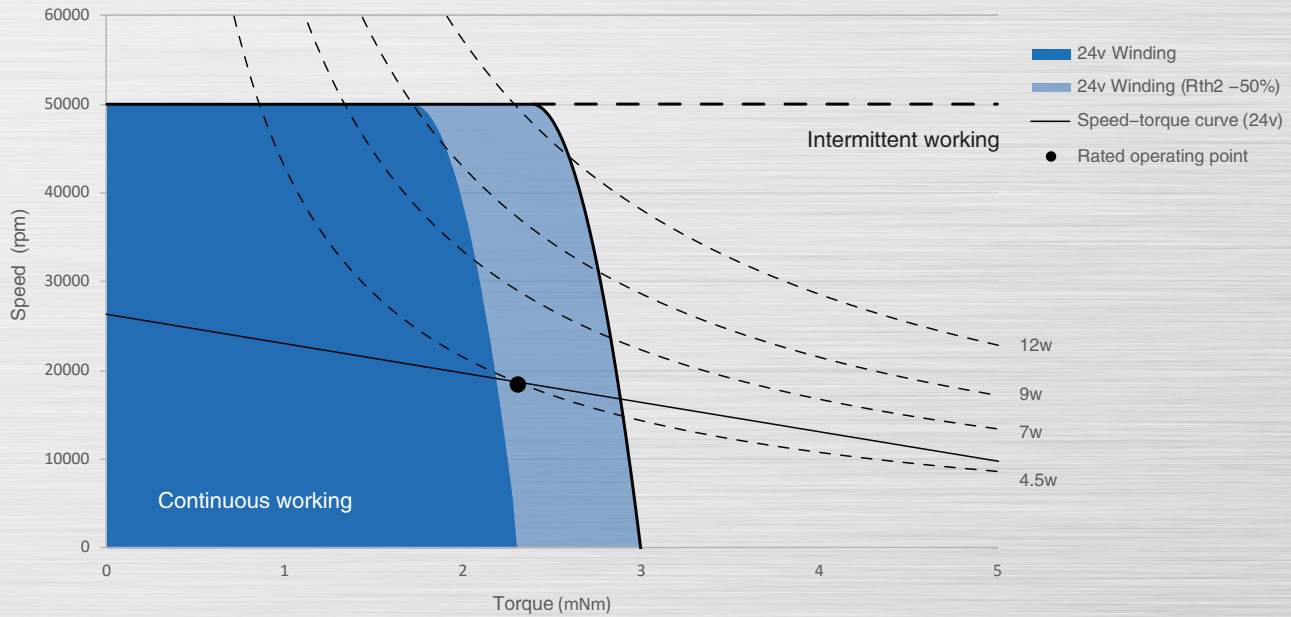


# ECU13026 $\varnothing$ 13mm 4.5/9W

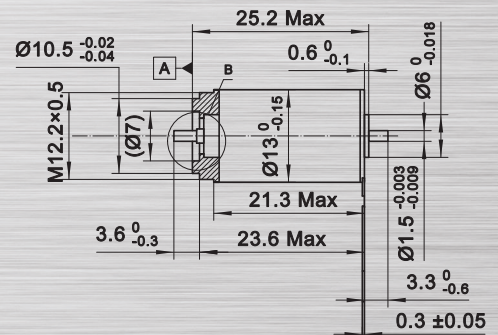
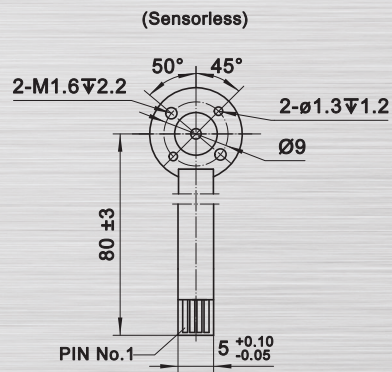
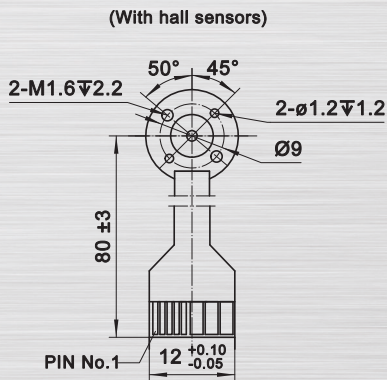
Motor Data		Part Numbers				
With hall sensors		ECU13026H06	ECU13026H09	ECU13026H12	ECU13026H18	ECU13026H24
Sensorless		ECU13026N06	ECU13026N09	ECU13026N12	ECU13026N18	ECU13026N24
Nominal voltage	V	6	9	12	18	24
No load speed	rpm	29200	31000	28000	28400	27600
No load current	mA	165	120	77	56	42
Rated speed	rpm	19800	21500	19300	19300	19300
Rated torque	mNm	2.33	2.45	2.31	2.41	2.33
Rated current	A	1.35	1.01	0.64	0.44	0.32
Stall torque	mNm	7.88	10.37	8.45	8.55	7.83
Stall current	A	3.97	3.60	1.96	1.40	0.96
Max efficiency	%	64	67	65	64	64
Terminal Resistance	Ohm	1.51	2.65	6.11	13.4	25.1
Terminal Inductance	mH	0.021	0.044	0.095	0.209	0.377
Torque constant	mNm / A	1.95	2.88	4.15	6.11	8.19
Speed constant	rpm / V	4867	3444	2333	1578	1150
Speed/torque gradient	rpm / mNm	3706	2990	3314	3320	3524
Mechanical time constant	ms	7.89	6.85	7.11	7.45	7.62

Specification		
Max speed	rpm	50000
Rotor inertia	gcm <sup>2</sup>	0.194
Number of pole pairs		1
Ambient temperature	° C	-40~+100
Max winding temperature	° C	155
Thermal resistance		
Housing - Ambient	° C/ W	33.5
Winding - Housing	° C/ W	2.5
Thermal time constant		
Motor	s	190
Winding	s	0.75
Max axial load	N	1
Max radial load	N	4
Weight	g	19

## Operating Range



## Dimension



	With hall sensors	Sensorless
PIN No.	Signal	Signal
1	4.5-24VDC	Winding 1
2	Hall 3	Winding 2
3	Hall 1	Winding 3
4	Hall 2	N.C.
5	GND	
6	Winding 3	
7	Winding 2	
8	Winding 1	

	With hall sensors	Sensorless
Connection	Part number	Part number
Tyco	1-84959-3	84959-4
Molex	52207-1133	52207-0433
Molex	52089-1119	52089-0419

FPC, 11-pol, Pitch 1.0mm, top contact style.

