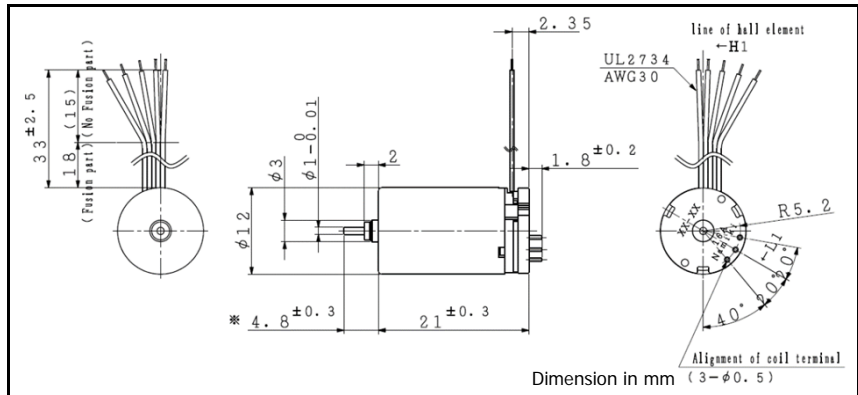
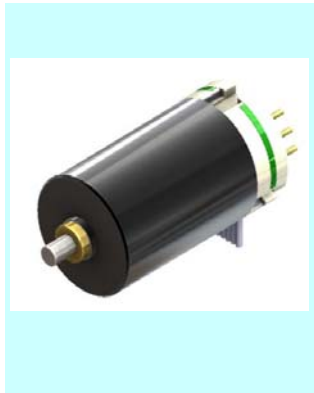


**BMS 12-21       $\phi 12$  , 1.42 mNm      with Hall sensors**



For combination with gearhead: SSG12, SPG12

Ordering number	BMS12-2102	BMS12-2104	
1 Nominal voltage	7.4	12.0	V
2 Rated torque	1.42	1.41	mNm
3 Rated speed	21800	23700	rpm
4 Rated current	590	395	mA
5 No load speed	24900	27100	rpm
6 No load current	81	54	mA
7 Stall torque	11.36	11.28	mNm
8 Stall current	4.16	2.77	A
9 Output power	7.4	8.0	W
10 Max. efficiency	74	74	%
11 Terminal resistance	1.78	4.32	$\Omega$
12 Friction torque	0.23	0.23	mNm
13 Back-EMF constant	0.291	0.434	mV/rpm
14 Torque constant	2.78	4.15	mNm/A
15 Slope of N-T curve	2192	2402	rpm/mNm
16 Mechanical time constant	3.22	3.53	ms
17 Rotor inertia	0.13	0.13	gcm <sup>2</sup>
18 Max. torque	5.68	5.64	mNm

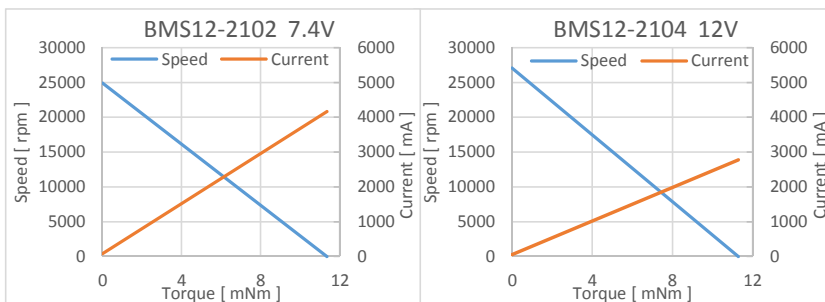
Mechanical data		
19 Shaft radial play	0.015	mm
20 Shaft axial play	0.23	mm
21 Max. shaft radial load	0.27 (3.7 mm)	N
22 Max. shaft axial load	0.1	N
23 Max. shaft axial load at standstill	10	N

Electrical connections		
H1	Hu	Hall sensor output U
H2	Hv	Hall sensor output V
H3	Hw	Hall sensor output W
H4	Gnd	GND
H5	Vdd	Input voltage 3.0~5.0V
L1	Lu	Motor winding U
L2	Lv	Motor winding V
L3	Lw	Motor winding W

Environmental specifications		
24 Operating temperature	-20 ~ 80	°C
25 Max. coil temperature	90	°C

Other specifications		
26 Weight	10.5	g

\*The characteristics are measured with our test driver.



V01