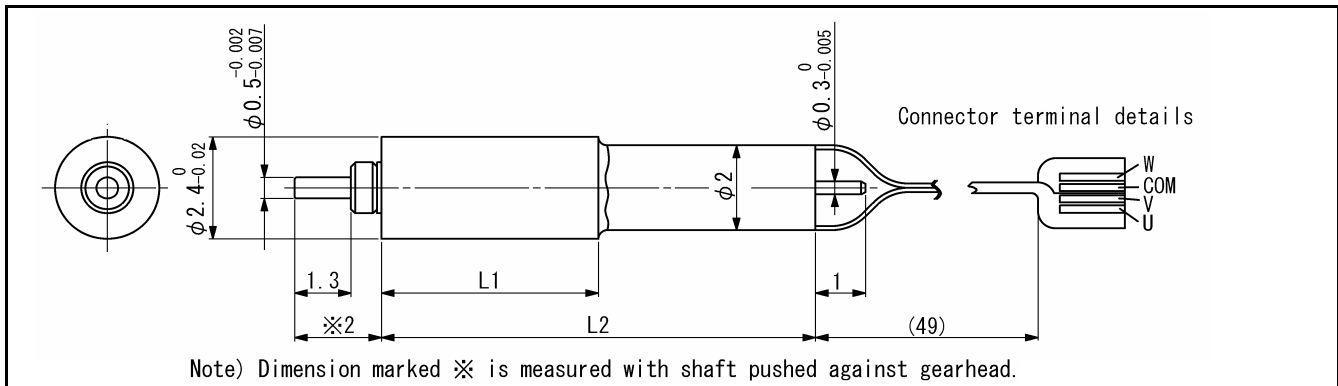


SBL02-06

Electronically commutated sensorless motor, slotless stator design

Sensorless drive circuit SSD04

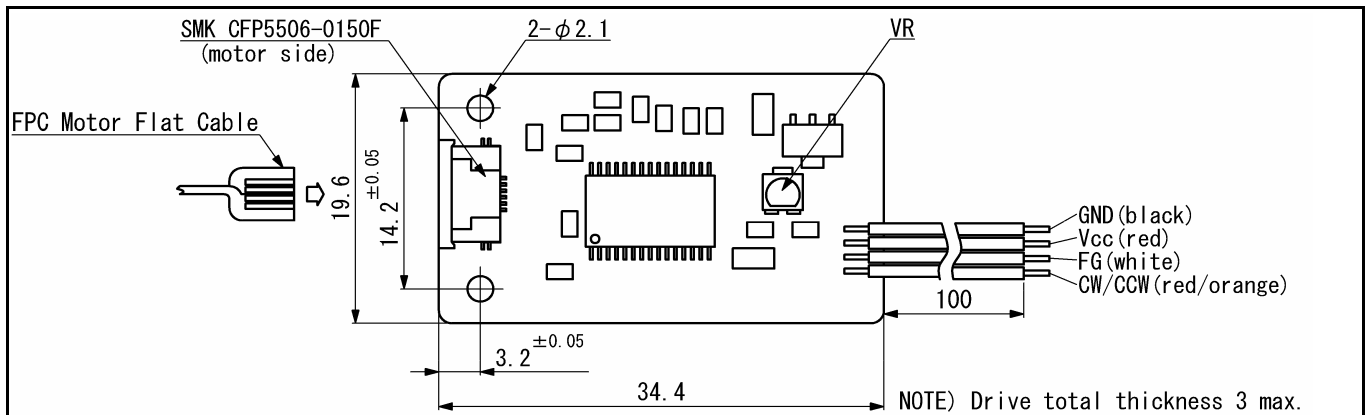
Ordering number	SBL02-06H1PG4.3	SBL02-06H1PG18	SBL02-06H1PG79	SBL02-06H1PG337
1 Nominal voltage	3	3	3	3 V
2 Terminal resistance	110	110	110	110 Ω
3 Gearhead reduction ratio	4.3	18	79	337 :1
4 Gearhead number of stage	1	2	3	4
5 Max. output power, gearhead output	0.0053	0.0044	0.0033	0.0028 W
6 Max. efficiency	11.5	11.5	11.5	11.5 %
7 No-load speed, gearhead output	12000	2900	650	160 rpm
8 No-load current	12	12	12	12 mA
9 Stall torque (2-points measurement), gearhead output	0.017	0.058	0.2	0.69 mNm
10 Friction torque	0.0132	0.0468	0.156	0.552 mNm
11 Back-EMF constant	0.14	0.57	2.7	10 mV/rpm
12 Torque constant	1.1	3.9	13	46 mNm/A
13 Coil inductance	110	110	110	110 μH
14 Mechanical time constant, motor only	6.2	6.2	6.2	6.2 ms
15 Gearhead length, L1	3.5	4.3	5	5.8 mm
16 Total length, L2	8.5	9.3	10	10.8 mm
17 Rotor inertia, motor only	4.3×10^{-5}	4.3×10^{-5}	4.3×10^{-5}	4.3×10^{-5} gcm ²
18 Total weight	190	210	230	245 mg

General data

19 Operating temperature range	-10 ... +50	°C
20 Max. temperature raise at stall	20	°C
21 Bearing type	Sintered sleeves	
22 Max. permissible press fit force, gearhead output	2.9	N
23 Max. radial play, gearhead output	0.06	mm
24 Max. axial play, gearhead output	0.1	mm

SSD04

Sensorless brushless motor drive circuit



For Micro DC brushless motors **SBL02-06** and **SBL04-08**

Description

SSD04 is a 3-phase sensorless drive circuit designed to operate brushless motor SBL02-06 and SBL04-08 exclusively. The operating voltage can be adjusted by VR trimmer and motor shaft direction can be reversed by connecting CW/CCW input to Vcc, if not connected the SBL02-06 runs CW while SBL04-08 CCW. FG (Frequency Generator) output provides a pulse per motor revolution. Internal thermal protection circuit included.

Specifications

	SSD04			
	Min.	Typ.	Max.	
Voltage supply	2.7		6.0	V
Output voltage			4.9	V
Output current			0.8	A
Operating temperature range	-20 ... +75			°C
Weight	1.9			g