

Manufactured with
hitectechnology



SG15BL

Engineered and Manufactured in South Korea

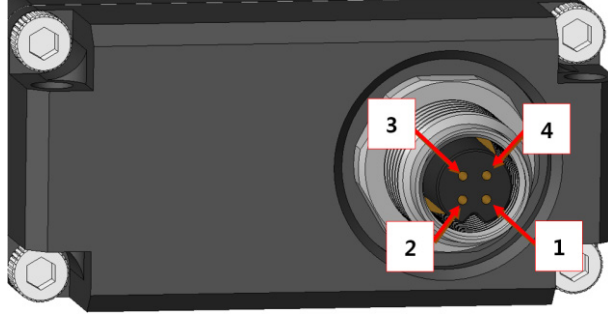
1 Performance Specification

Control System	CAN 2.0A,B / DroneCAN (UAVCAN v0)
Position Type	Contactless Magnetic Encoder
Motor Type	BLDC Motor
Operating Voltage Range	9.0V ~ 15.0V
Voltage	At 12.0V
No Load Speed	487.8 °/sec
	0.123 sec/60°
	81.3 RPM
Rated Torque	0.216 N·m (2.2 kgf·cm)
Peak Torque	1.08 N·m (11.0 kgf·cm)
Idle Current (At Stopped)	35mA
Running Current (At No Load)	200mA
Peak Current	2,000mA
Operating Travel	Servo Mode : ±60°(Default), ±150°(Programmable)
Multi-Turn	Turn Mode : ±32760 turns (DroneCAN: n/a)
Continuous Mode	n/a
Temperature Sensing	Able (MCU, Motor)
Voltage Sensing	Able
Current Sensing	Able
Humidity Sensing	Able
Servo Amplifier Type	32bit Programmable Digital

2 Mechanical Features

Dimensions	31.0 x 15.0 x 50.0mm (±0.2mm) / (1.220 x 0.590 x 1.969 inch)
Weight	40g (±10%)
Housing	Rugged Aluminum Alloy
Gear Reduction	5 Hardened Steel Gears
Bearing	8 Ball Bearing & 3 Needle Bearing & 1Thrust Bearing
Horn Gear Spline	Square 5.0 x 5.0
Gear Train Backlash	< 0.5°
Slip Clutch Release Momentum	-
Radial Load On Output Shaft	< 436N (44.46kgf)
Push Load On Output Shaft	< 1,025N (104.52kgf)

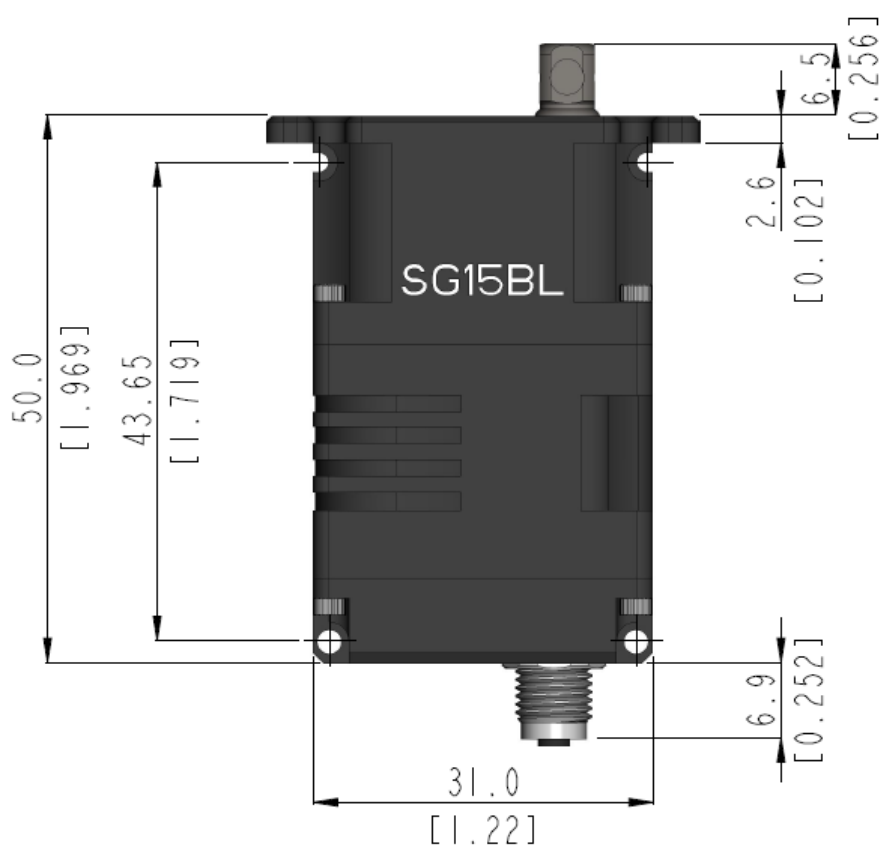
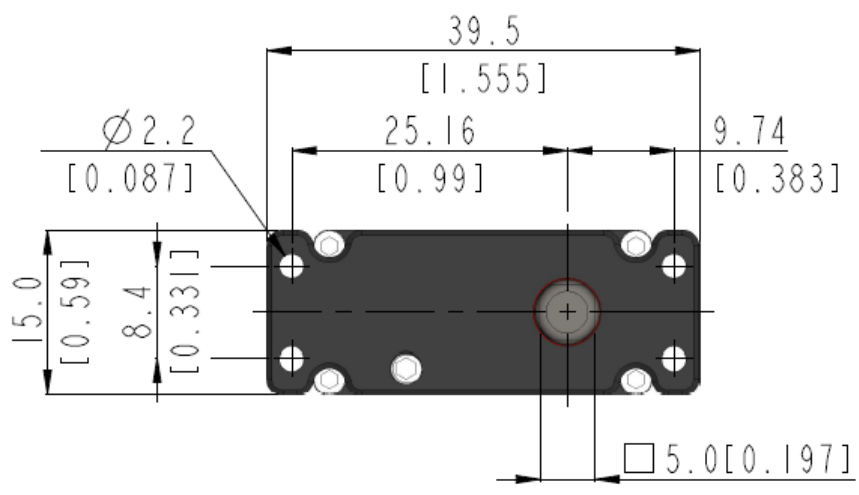
3 Connector

Manufacturer	Shenzhen Signal Electronics Co., Ltd		
Type	M5 4 Pins Female Panel Mount (M5*0.75 Front Fastened DIP) / 050004-04-007		
Mating	M5 4 Pins Male Assembly Connector, etc.		
Pin Assignment	Circular Type Connector		
		1	CAN HIGH
		2	CAN LOW
		3	VCC
		4	GND
		-	-

4 Environmental Specifications

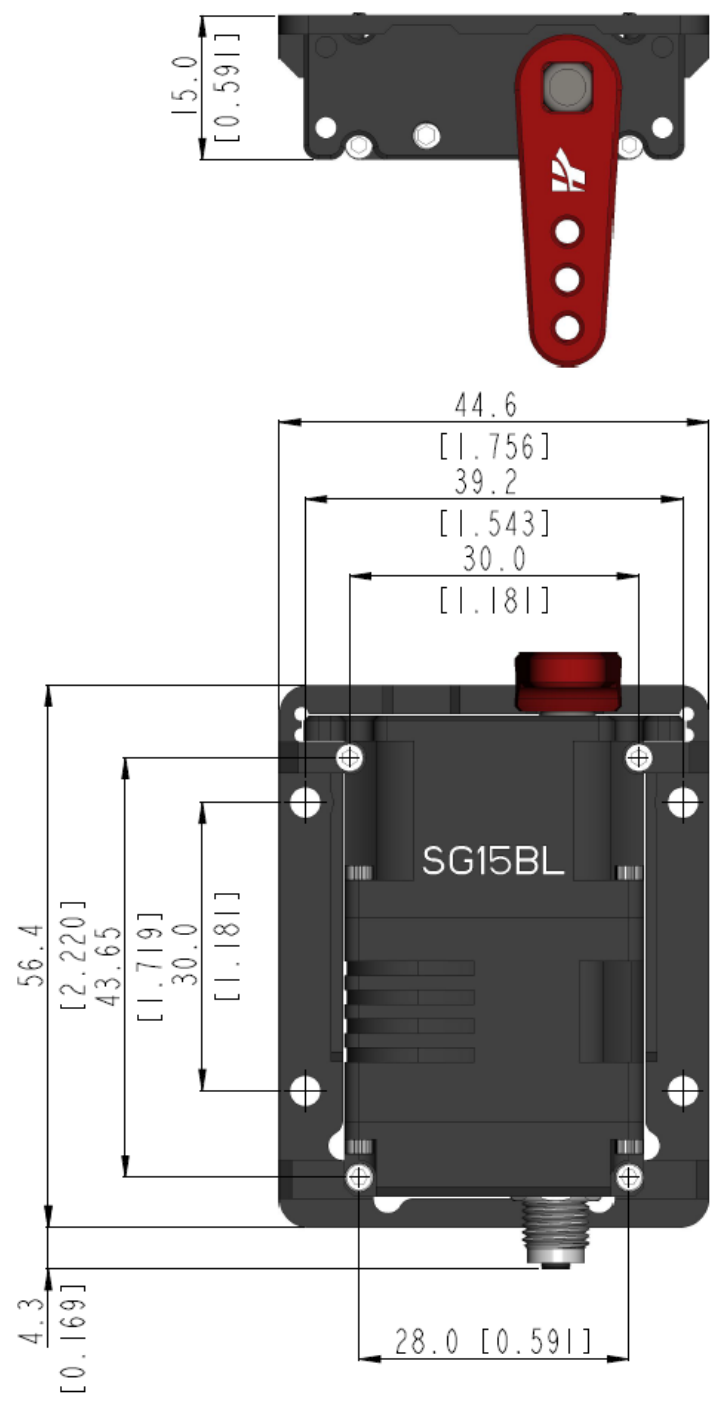
Operation Temperature	-30°C (-22°F)	MIL-STD-810G Method 502.5
	+70°C (+158°F)	MIL-STD-810G Method 501.5
Storage Temperature	-40°C (-40°F)	MIL-STD-810G Method 502.5
	+80°C (+176°F)	MIL-STD-810G Method 501.5
Humidity	95% @35°C ~ 60°C @300hours	MIL-STD-810G Method 507.5
IP-Rating	IP68	IEC 60529
Vibration	Orthogonal axes : ±X , ±Y, ±Z from 50 ~ 500Hz Duration : sweep 5min Acceleration 30G Displacement : 5mm	MIL-STD-810G 514.6C-VII EN 60068-2-6
Mechanical Shock	Procedure 1 - Functional shock 20g, 11ms, Sawtooth Waveform	MIL-STD-810G 516.6
EMC	EN 61000-4-2 EN 61000-4-3 EN 55016-2-1 EN 55016-2-3	EN 61000-6-2:2005+Cor.:2005 EN 61000-6-3:2007+A1:2011
MTTF	>1,000h	Test Condition Load : 20% of Max Torque 0.5Hz sweep(±60)

5 Dimensions



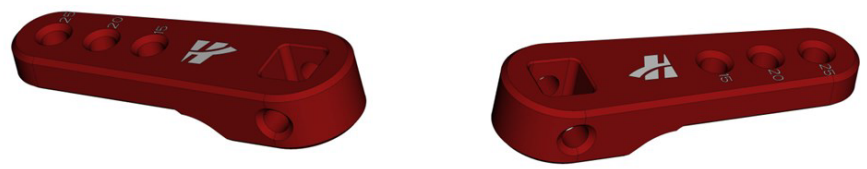
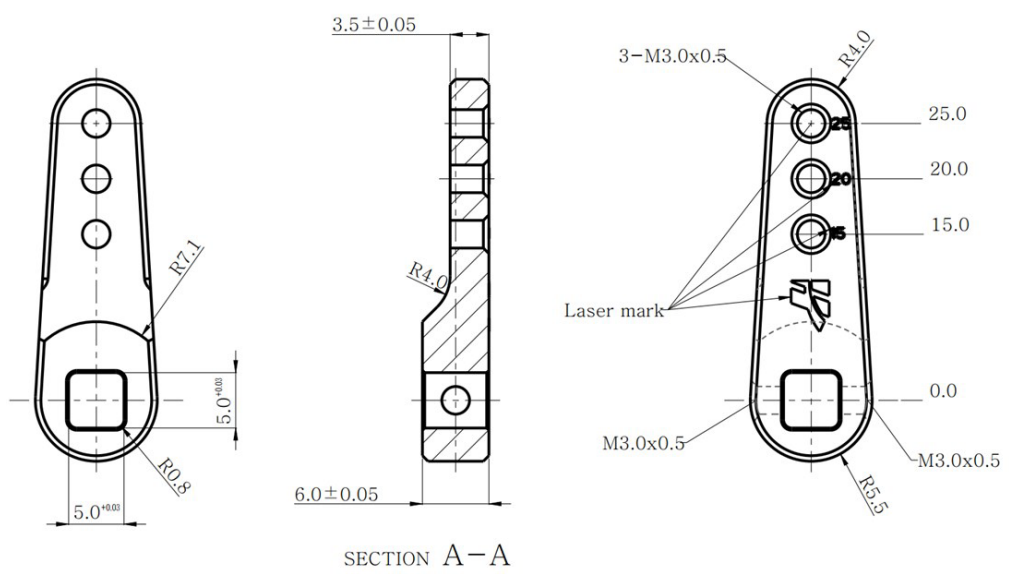
unit : mm [inch]

6 Dimensions– With Tray



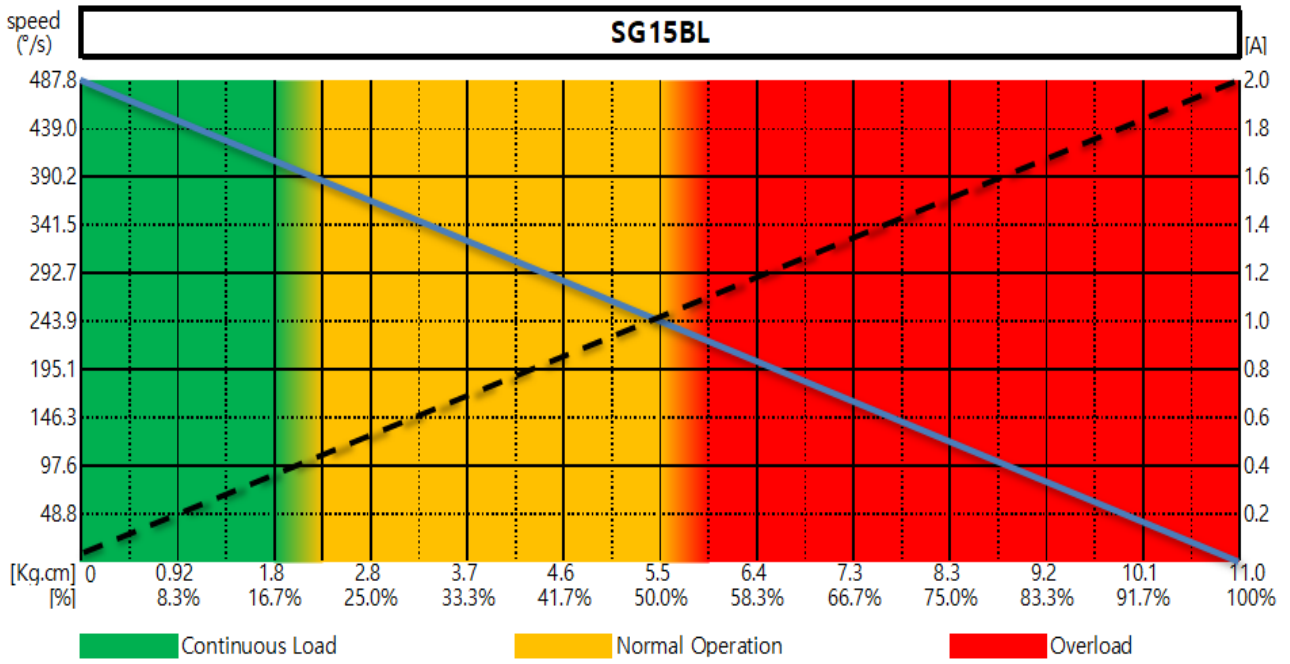
unit : mm [inch]

7 Dimensions – Accessory



unit : mm

8 Performance Graph



9 Changes

Data	Version	Updates
2023-01	2.00	-
2023-02	2.01	Fix wording and image errors

REFERENCES

- ✓ For the protocol manuals of CAN, DroneCAN, RS485 and TTL, please contact Hitec Commercial Solutions: Support@HitecGroupUSA.com

- ✓ If you would like to purchase additional industrial servos, please contact Hitec Commercial Solutions Sales Staff: <https://www.hiteccs.com/contact-us>

