

SG50 BL GENERAL SPECIFICATION



PERFORMANCE SPECIFICATIONS



<Features>

Contactless position sensor

Durable aluminum alloy case & Steel gears with ball bearing & Heat treatment

Waterproof & Dust resistance (IP68)

<Applications>

Industry

UAV

Robotics

Revision A : 20/11/08

SG50 BL GENERAL SPECIFICATION



Automation

	<u>SG50BL-24V</u>
Control system	CAN 2.0 A,B / UAVCAN
Operating voltage range	18.0 ~ 32.0V
Test voltage	At 24.0V
No - load speed	120°/sec
	0.5sec/60°
Rated torque	104.0kgf·cm (1444.288 ozf-in)
Stall torque	520.0kgf·cm (7221.441 ozf-in)
Idle current (At stopped)	45mA
Running current @no load	300mA
Peak current	10A
Input signal	CAN data protocol
Operating travel	Standard : ±150°
Multi turn	±32,760 Turn
Motor type	BLDC motor
Position type	Contactless
Connector	TE Connectivity : T4111002051-000

MECHANICAL FEATURES

Dimensions	100 x 50.0 x 105mm (±0.2mm) [3.93x1.968x4.13in]
Weight	1.45kg (±10%)
Housing	Rugged Aluminum Alloy

Revision A : 20/11/08

SG50 BL GENERAL SPECIFICATION



Gear reduction	Durable Hardened steel with Gear protection system
Ball Bearing	4 Angular Ball bearing & 9 Needle bearing
Horn gear spline	Square 12x12
Gear train backlash	< 0.5°

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 @300h	MIL-STD-810G Method 507.5
Water & Dust protected	IP68	IEC 60529
Variation	Orthogonal axes : $\pm X$, $\pm Y$, $\pm Z$ 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	-	CISPR 16-1,2 IEC 61000-4-2,4,6

Revision A : 20/11/08

SG50 BL

GENERAL SPECIFICATION

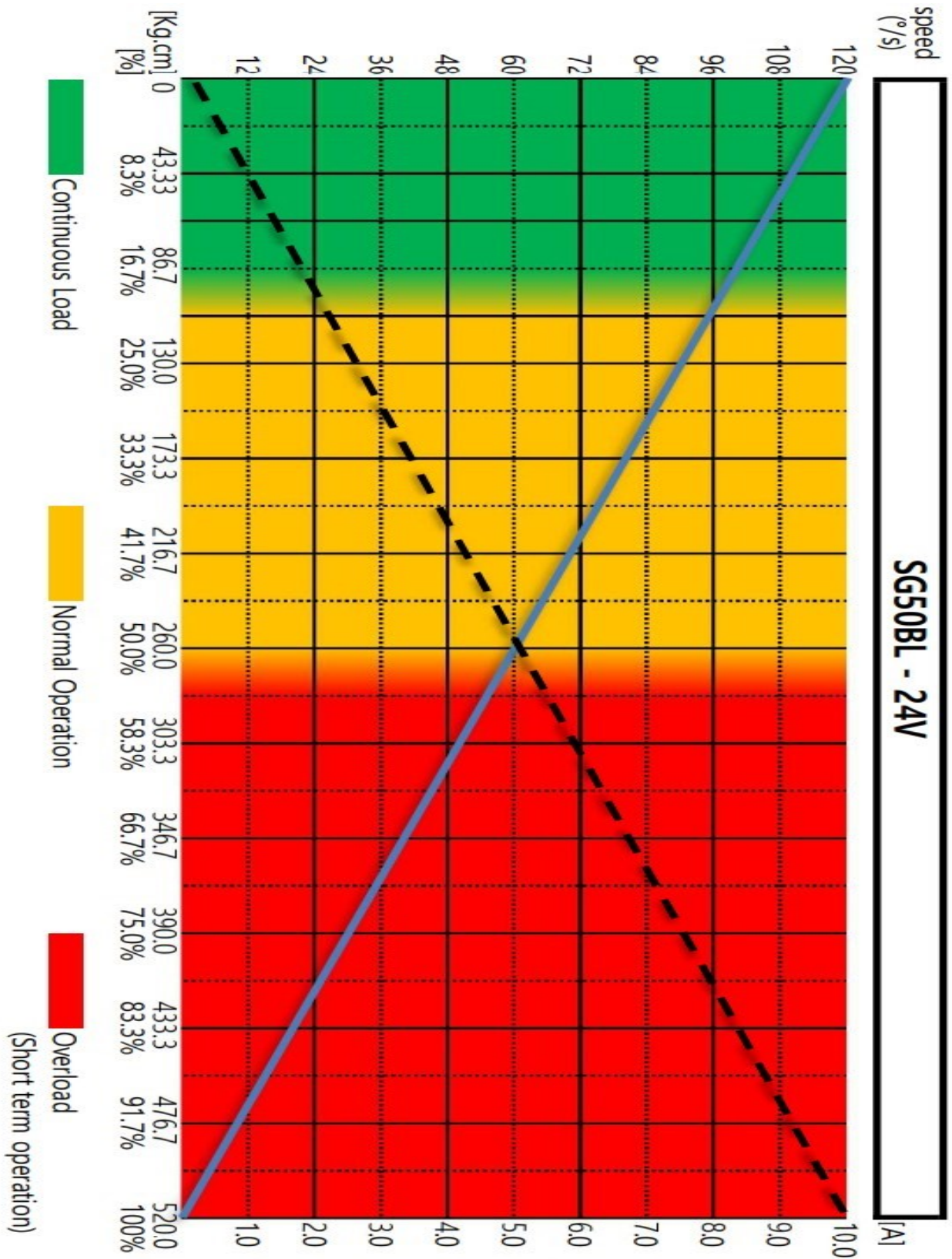


MTTF*	>500h	Test Condition Load : 20% of Max Torque 0.5Hz sweep(± 60)
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PERFORMANCE GRAPH

SG50 BL

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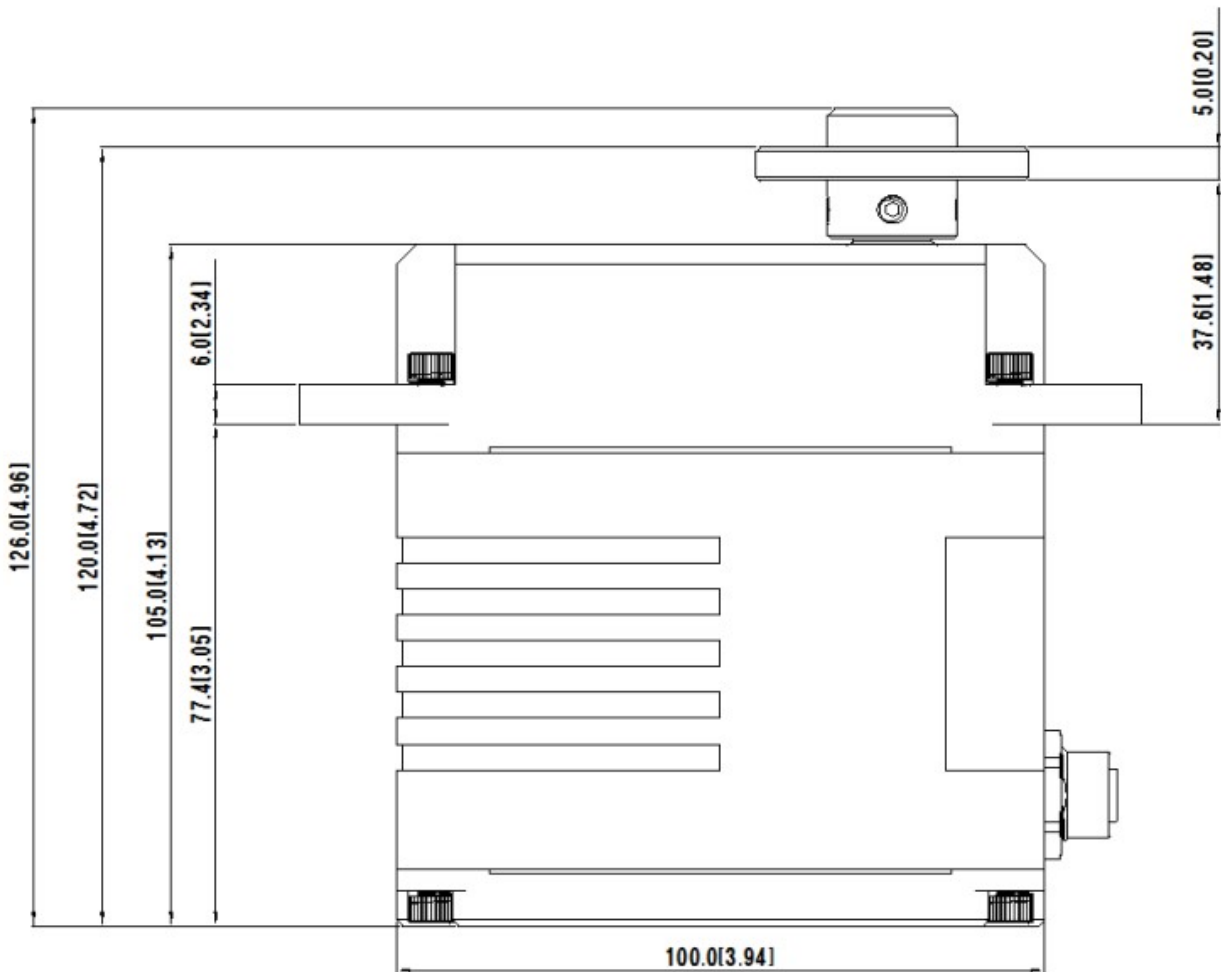
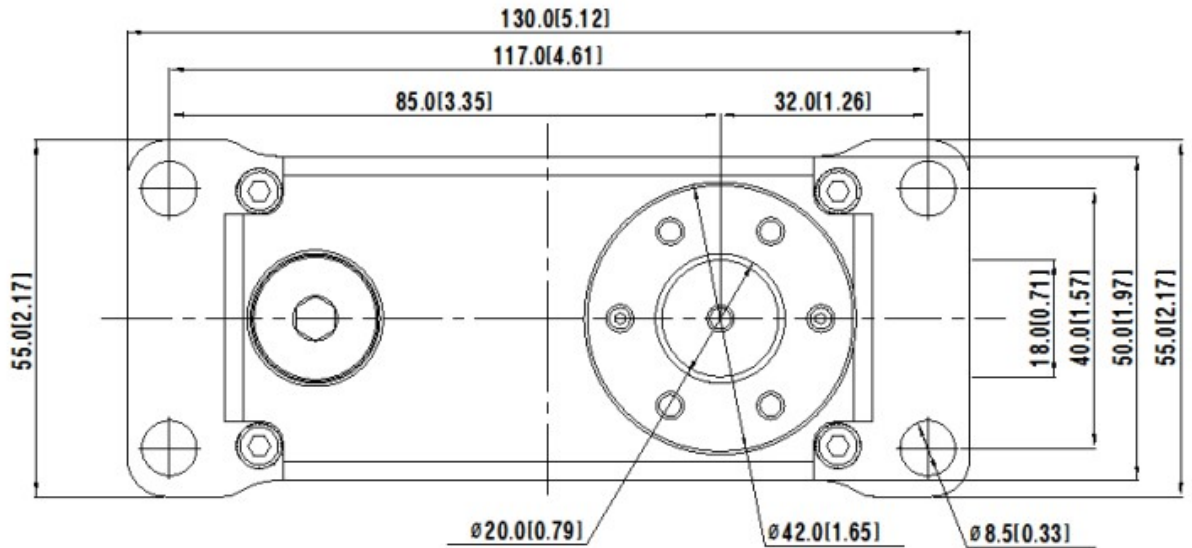
Revision A : 20/11/08

SG50 BL

GENERAL SPECIFICATION



OUT LINE DIMENSION



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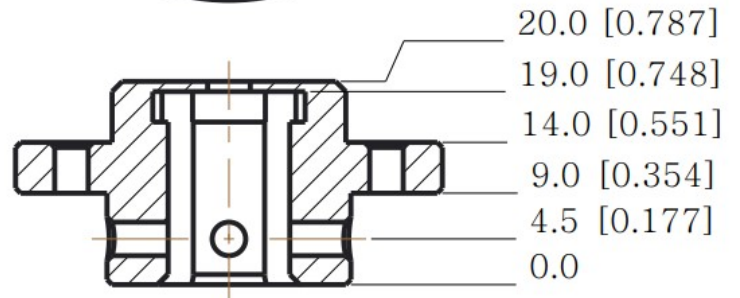
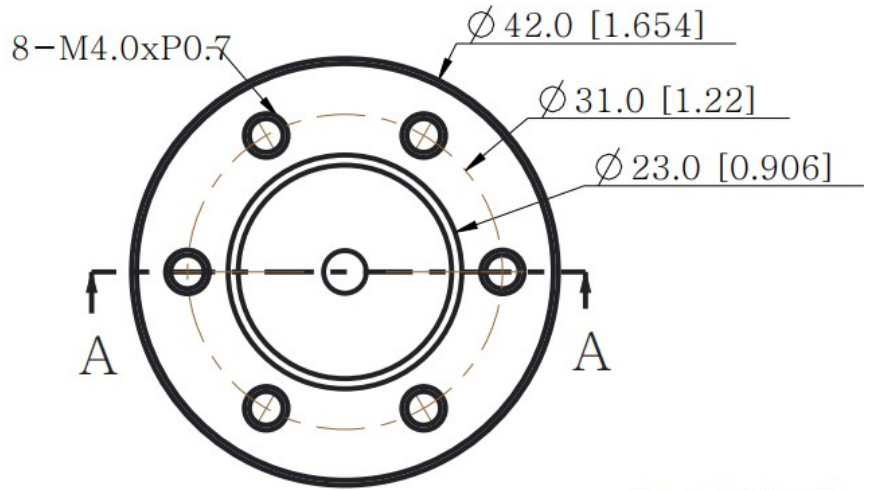
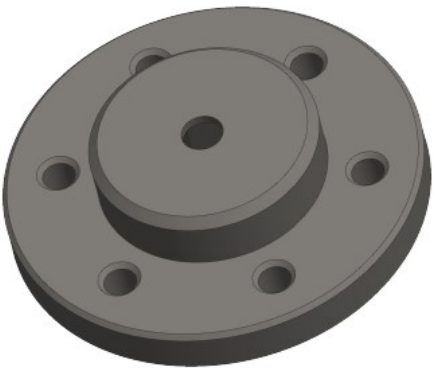
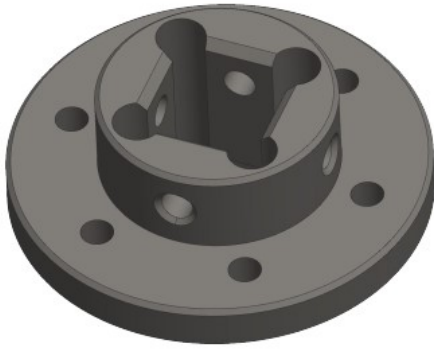
SG50 BL
GENERAL SPECIFICATION



Unit : mm [inch]

HORN DIMENSION

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GENERAL SPECIFICATION



SECTION A-A

