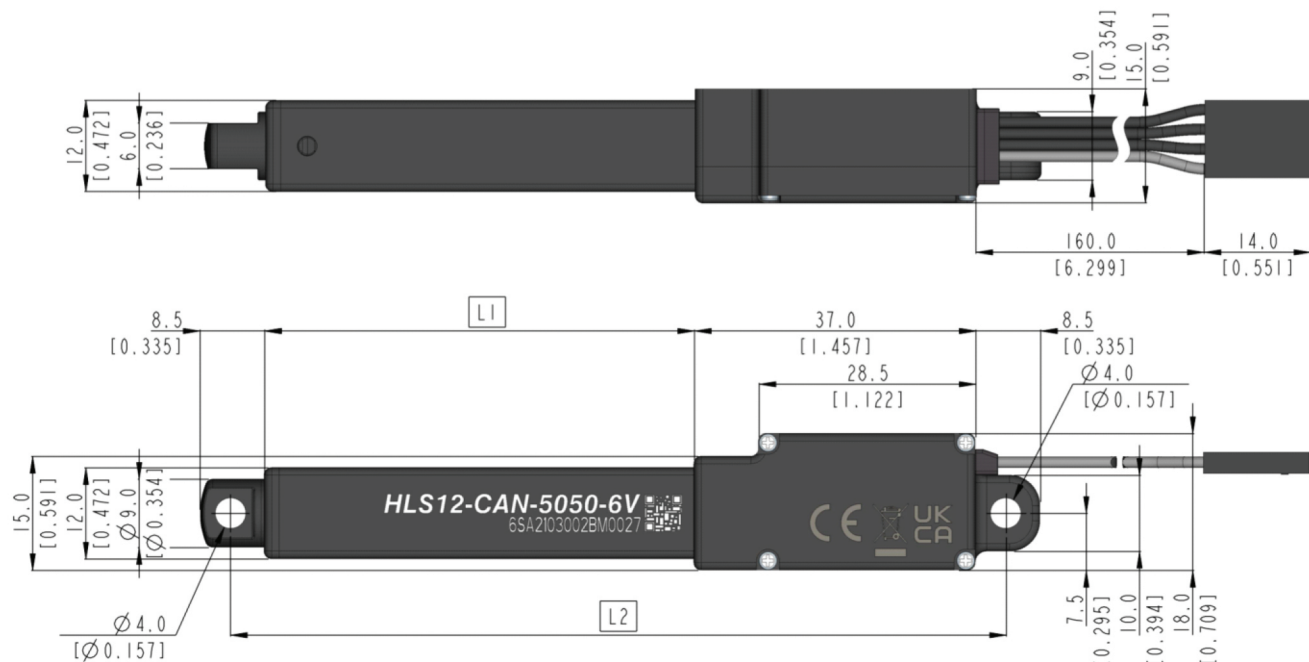


HLS12 (4.8V) General Specification.

Control System		CAN 2.0A/B & DroneCAN (UAVCAN v0)											At the Max voltage, it is recommended to be used only for a short time duration.	
Lead Screw		LEAD 5mm												
Motor Type		Cored Metal Brush												
Operating Voltage Range		4.0 ~ 8.4V												
Voltage		4.8V											At 25°C(±10%), 45%RH(±10%) <u>measurement environment</u>	
Gear Ratio		50:1			100:1			210:1			380:1			
No Load	Speed	20.0mm/s			10.4mm/s			4.9mm/s			2.6mm/s			
	Current	80mA												
Load Spec		Load	Speed	Current	Load	Speed	Current	Load	Speed	Current	Load	Speed		Current
Maximum Efficiency Point		0.8kgf (7.85N)	15.2mm/s	160mA	1.4kgf (13.34N)	8.2mm/s	160mA	2.9kgf (28.24N)	3.6mm/s	160mA	5.2kgf (50.99N)	2.0mm/s		160mA
Peak Power Point		1.4kgf (13.34N)	11.2mm/s	240mA	2.5kgf (24.32N)	5.6mm/s	240mA	5.0kgf (48.64N)	2.6mm/s	240mA	8.0kgf (78.45N)	1.5mm/s		240mA
Max Force (Lifted)		1.8kgf (17.26N)	5.3mm/s	320mA	3.4kgf (32.95N)	2.6mm/s	320mA	6.4kgf (62.76N)	1.8mm/s	320mA	9.6kgf (94.14N)	1.0mm/s		320mA
Stall Force		2.0kgf (19.61N)			4.0kgf (39.23N)			8.0kgf (78.45N)			14.4kgf (141.22N)			
Stall Current		400mA												
Max Static Force		16.32kgf (160N) (above)												
Stroke SPEC		30mm				50mm				100mm				-
Repeatability		±0.2mm				±0.3mm				±0.5mm				-
Max Side Load (Extended)		4.08kgf (40N)				3.06kgf (30N)				1.53kgf (15N)				-
Outline Dimensions		82.0mm x 15.0mm x 18.0mm (3.228inch x 0.591inch x 0.709inch)				102.0mm x 15.0mm x 18.0mm (4.016inch x 0.591inch x 0.709inch)				152.0mm x 15.0mm x 18.0mm (5.984inch x 0.591inch x 0.709inch)				General Tolerance ±0.1mm
Weight		34g (1.199oz)				40g(1.411oz)				56g (1.975oz)				Excluding the weight of Horn
Operating Temperature Range		-10°C ~ +50°C(+14°F ~ +122°F)											-	
Storage Temperature Range		-30°C ~ +80°C (-22°F ~ +176°F)											-	
Connector Wire Length		160mm(6.294inch)											 1. SIGNAL 2. VCC 3. GND	
Connector Wire Gauge		24AWG												
Bearing Type		Flange bearing											-	
Case Material		Engineering Plastic & Aluminum Pipe											-	
Gear Material		4 Metal Gears											-	
IP-Rating		IP4X											-	
Servo Amplifier Type		32bit programmable Digital											-	

HLS12-CAN-XXXX-XX [EX, HLS12-CAN-5050-6V]
 VOLTAGE OPTION
 GEARING OPTION
 STROKE OPTION

	L1	L2
HLS12-CAN-30-XX	36.5[1.437]	82.0[3.228]
HLS12-CAN-50-XX	56.5[2.224]	102.0[4.016]
HLS12-CAN-100-XX	106.5[4.193]	152.0[5.984]



1:1 scale (Unit : mm[inch])

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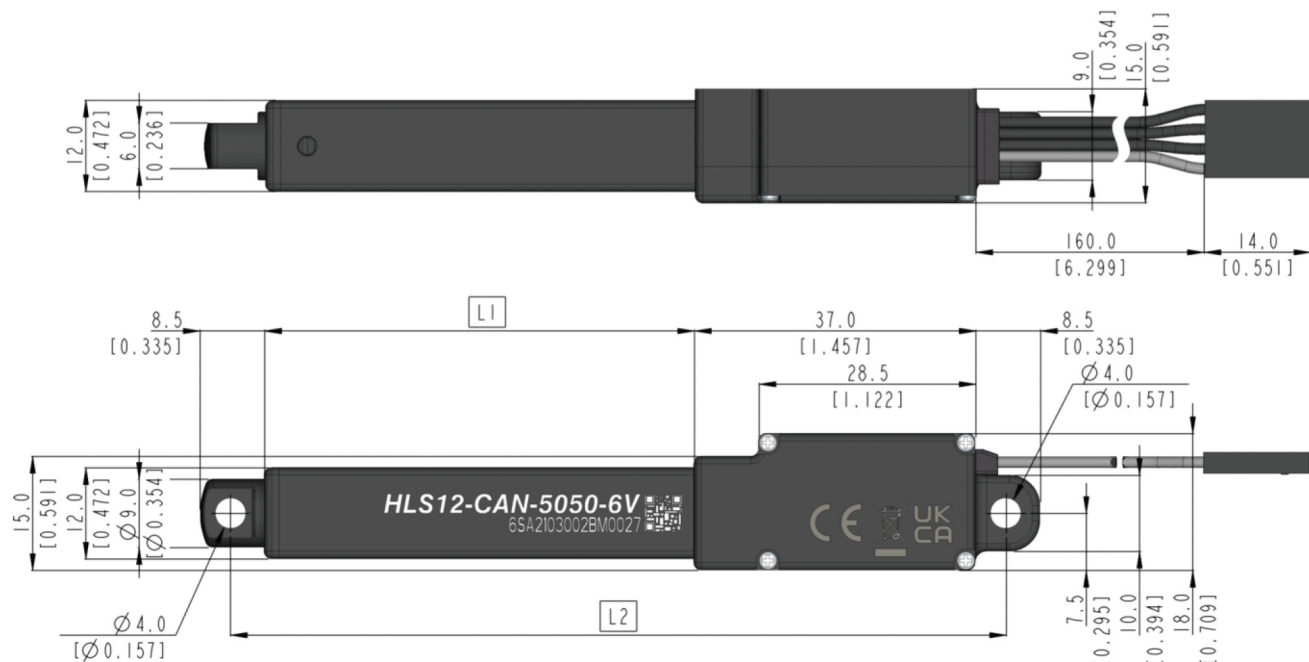


HLS12 (6V) General Specification.

Control System		CAN 2.0A/B & DroneCAN (UAVCAN v0)											At the Max voltage, it is recommended to be used only for a short time duration.	
Lead Screw		LEAD 5mm												
Motor Type		Cored Metal Brush												
Operating Voltage Range		4.0 ~ 8.4V												
Voltage		6.0V											At 25°C(±10%), 45%RH(±10%) <u>measurement environment</u>	
Gear Ratio		50:1			100:1			210:1			380:1			
No Load	Speed	25.0mm/s			13.0mm/s			6.1mm/s			3.3mm/s			
	Current	100mA												
Load Spec		Load	Speed	Current	Load	Speed	Current	Load	Speed	Current	Load	Speed		Current
Maximum Efficiency Point		1.0kgf (9.81N)	19.0mm/s	200mA	1.7kgf (16.67N)	10.3mm/s	200mA	3.6kgf (35.30N)	4.5mm/s	200mA	6.5kgf (63.74N)	2.5mm/s		200mA
Peak Power Point		1.7kgf (16.67N)	14.0mm/s	300mA	3.1kgf (30.40N)	7.0mm/s	300mA	6.2kgf (60.80N)	3.2mm/s	300mA	10.0kgf (98.07N)	1.9mm/s		300mA
Max Force (Lifted)		2.2kgf (21.57N)	6.7mm/s	400mA	4.2kgf (41.19N)	3.2mm/s	400mA	8.0kgf (78.45N)	2.3mm/s	400mA	12.0kgf (117.68N)	1.2mm/s		400mA
Stall Force		2.5kgf (24.52N)			5.0kgf (49.03N)			10.0kgf (98.07N)			18.0kgf (176.52N)			
Stall Current		500mA												
Max Static Force		20.39kgf (200N) (above)												
Stroke SPEC		30mm			50mm			100mm						-
Repeatability		±0.2mm			±0.3mm			±0.5mm						-
Max Side Load (Extended)		4.08kgf (40N)			3.06kgf (30N)			1.53kgf (15N)						-
Outline Dimensions		82.0mm x 15.0mm x 18.0mm (3.228inch x 0.591inch x 0.709inch)			102.0mm x 15.0mm x 18.0mm (4.016inch x 0.591inch x 0.709inch)			152.0mm x 15.0mm x 18.0mm (5.984inch x 0.591inch x 0.709inch)						General Tolerance ±0.1mm
Weight		34g (1.199oz)			40g(1.411oz)			56g (1.975oz)						Excluding the weight of Horn
Operating Temperature Range		-10°C ~ +50°C(+14°F ~ +122°F)											-	
Storage Temperature Range		-30°C ~ +80°C (-22°F ~ +176°F)											-	
Connector Wire Length		160mm(6.294inch)												1. SIGNAL 2. VCC 3. GND
Connector Wire Gauge		24AWG												
Bearing Type		Flange bearing											-	
Case Material		Engineering Plastic & Aluminum Pipe											-	
Gear Material		4 Metal Gears											-	
IP-Rating		IP4X											-	
Servo Amplifier Type		32bit programmable Digital											-	

HLS12-CAN-XXXX-XX [EX, HLS12-CAN-5050-6V]
 VOLTAGE OPTION
 GEARING OPTION
 STROKE OPTION

	L1	L2
HLS12-CAN-30-XX	36.5[1.437]	82.0[3.228]
HLS12-CAN-50-XX	56.5[2.224]	102.0[4.016]
HLS12-CAN-100-XX	106.5[4.193]	152.0[5.984]



1:1 scale (Unit : mm[inch])

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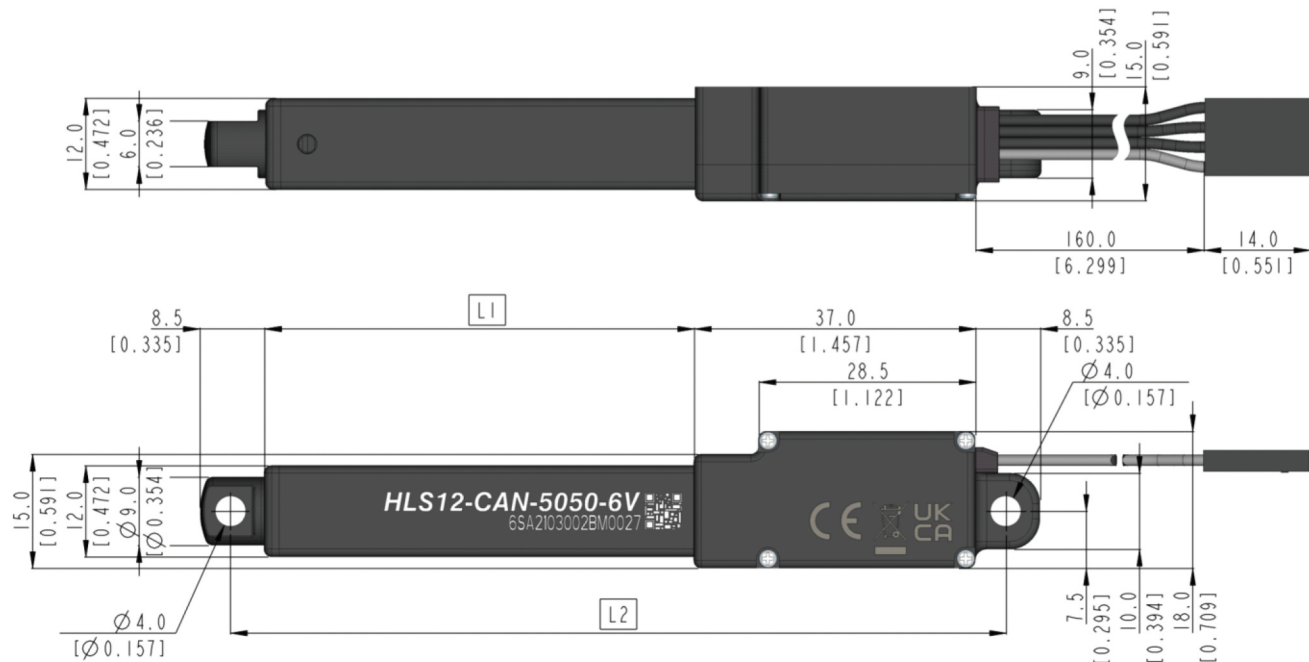
HLS12 (7.4V) General Specification.



Control System		CAN 2.0A/B & DroneCAN (UAVCAN v0)											At the Max voltage, it is recommended to be used only for a short time duration.		
Lead Screw		LEAD 5mm													
Motor Type		Cored Metal Brush													
Operating Voltage Range		4.0 ~ 8.4V													
Voltage		7.4V											At 25°C(±10%), 45%RH(±10%) <u>measurement</u> <u>environment</u>		
Gear Ratio		50:1			100:1			210:1			380:1				
No Load	Speed	30.9mm/s			16.1mm/s			7.5mm/s			4.1mm/s				
	Current	130mA													
Load Spec		Load	Speed	Current	Load	Speed	Current	Load	Speed	Current	Load	Speed			Current
Maximum Efficiency Point		1.2kgf (12.11N)	23.5mm/s	250mA	2.1kgf (20.59N)	12.7mm/s	250mA	4.4kgf (43.60N)	5.6mm/s	250mA	8.0kgf (78.72N)	3.1mm/s			250mA
Peak Power Point		2.1kgf (20.59N)	17.3mm/s	370mA	3.8kgf (37.54N)	8.6mm/s	370mA	7.7kgf (75.09N)	4.0mm/s	370mA	12.4kgf (121.11N)	2.3mm/s			370mA
Max Force (Lifted)		2.7kgf (26.64N)	8.2mm/s	490mA	5.2kgf (50.87N)	4.0mm/s	490mA	9.9kgf (96.89N)	2.8mm/s	490mA	14.8kgf (145.33N)	1.5mm/s			490mA
Stall Force		3.1kgf (30.28N)			6.2kgf (60.56N)			12.4kgf (121.11N)			22.2kgf (218.00N)				
Stall Current		620mA													
Max Static Force		25.19kgf (247N) (above)													
Stroke SPEC		30mm			50mm			100mm					-		
Repeatability		±0.2mm			±0.3mm			±0.5mm					-		
Max Side Load (Extended)		4.08kgf (40N)			3.06kgf (30N)			1.53kgf (15N)					-		
Outline Dimensions		82.0mm x 15.0mm x 18.0mm (3.228inch x 0.591inch x 0.709inch)			102.0mm x 15.0mm x 18.0mm (4.016inch x 0.591inch x 0.709inch)			152.0mm x 15.0mm x 18.0mm (5.984inch x 0.591inch x 0.709inch)					General Tolerance ±0.1mm		
Weight		34g (1.199oz)			40g(1.411oz)			56g (1.975oz)					Excluding the weight of Horn		
Operating Temperature Range		-10°C ~ +50°C(+14°F ~ +122°F)											-		
Storage Temperature Range		-30°C ~ +80°C (-22°F ~ +176°F)											-		
Connector Wire Length		160mm(6.294inch)												1. SIGNAL 2. VCC 3. GND	
Connector Wire Gauge		24AWG													
Bearing Type		Flange bearing											-		
Case Material		Engineering Plastic & Aluminum Pipe											-		
Gear Material		4 Metal Gears											-		
IP-Rating		IP4X											-		
Servo Amplifier Type		32bit programmable Digital											-		

HLS12-CAN-XXXX-XX [EX, HLS12-CAN-5050-6V]
 VOLTAGE OPTION
 GEARING OPTION
 STROKE OPTION

	L1	L2
HLS12-CAN-30-XX	36.5[1.437]	82.0[3.228]
HLS12-CAN-50-XX	56.5[2.224]	102.0[4.016]
HLS12-CAN-100-XX	106.5[4.193]	152.0[5.984]



1:1 scale (Unit : mm[inch])

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