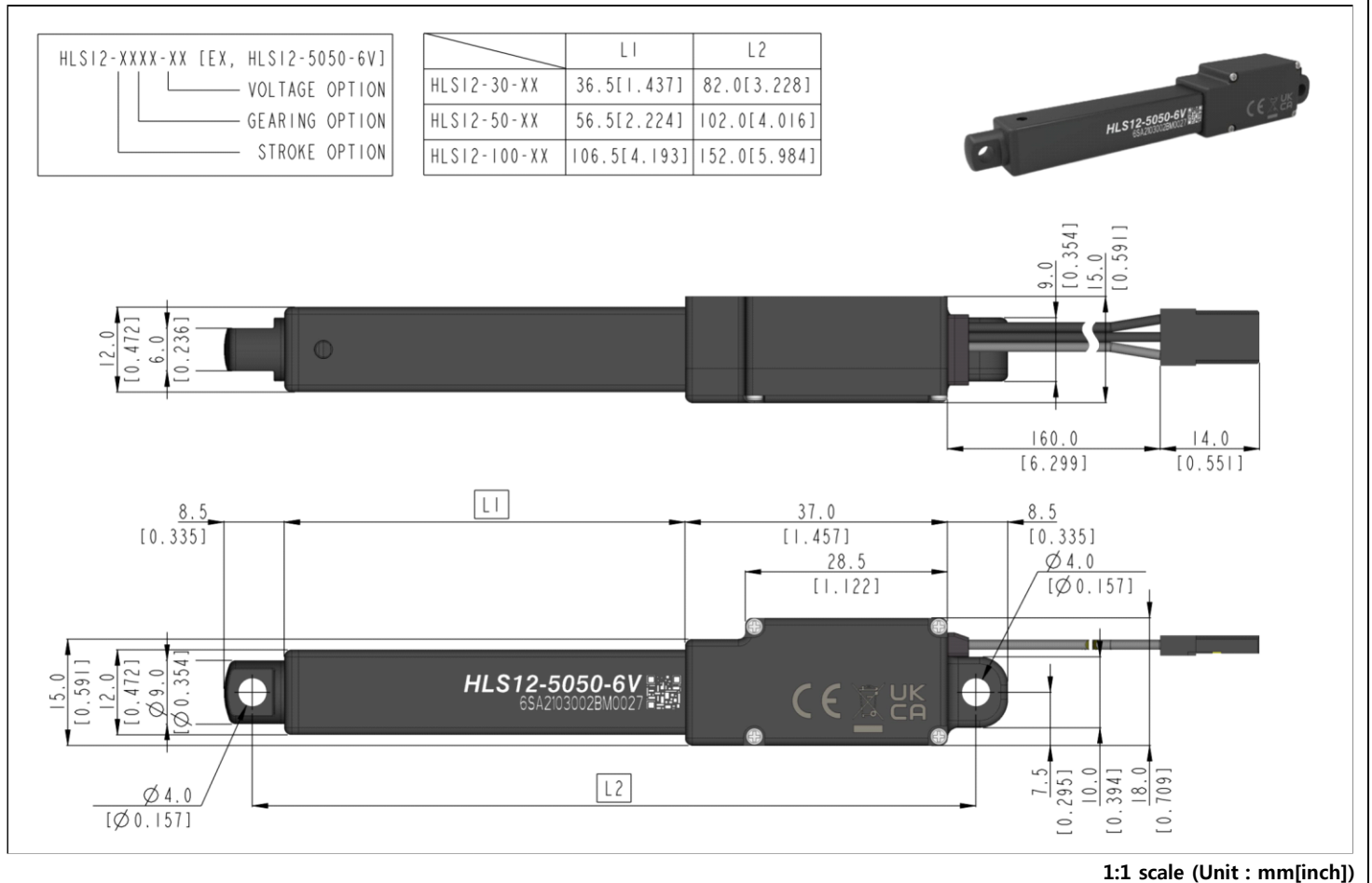


HLS12 (4.8V) General Specification.

Control System		PWM											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</u> <u>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											-	



- This product should not be used directly on the human body for medical purposes.
- This product should not be used for war weapons.
- All specifications are subject to change without notice.

