

SLD-6



1. Application

This electric damper is primarily used to control the rotational movement of products within specific ranges, such as smart toilets, washing machines, water purifiers, and other devices.

2. Specification

No.	Torque	Direction
SLD-20L(R)	20kgf.cm	CCW(L./R)
SLD-30L(R)	30kgf.cm	CCW(L./R)
SLD-40L(R)	40kgf.cm	CCW(L./R)

3. Product Parameters

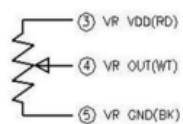
Parameters	Data	
Rotation Range	0°~120°(when excess angle included: -5~120)	
Rated Voltage	12VDC	24VDC
Rated Current	Max800mA	Max500mA
Open/Close Torque	Max 45 Kgf.cm	
Open Time	Max 3.0 sec	
Output Shaft Speed	6 rpm	
Operating Environment	0~40°	
Storage Temperature	-10° ~50°	
Weight	210g(wires included)	

4. Basic Performance

Item	Spec.	Remark
Rated Voltage	DC12V	
Power Consumption	12W Max	
Operating Temperature	0° C~40° C	Ice free& Dew Free
Storage Temperature	-10° C~50C°	Ice free& Dew Free
Storage Humidity	40~90%RH	Ice free& Dew Free
Operating Angle	125° Max	

Rotation Direction	CW	R: CLOSE, L:OPEN DIRECTION
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5. Electrical Performance

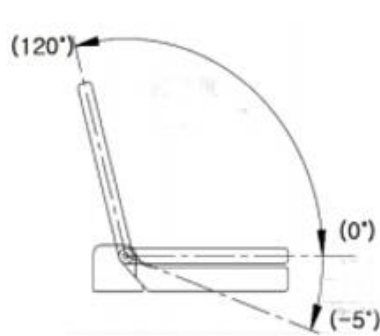
Item	Spec.		
Insulation Class	Class A		
Rated Voltage	DC12V+10%		
Operating Current	1A Max		
No-load Rotation Speed	19.5RPM		
Open Time	3sec Max		
Close Time	1sec Min		
Sensor Resistance	CLOSE	OPEN	meet the combined control conditions
R30	(6.7kQ+30%)	(3.1kQ+30%)	Meet SET control conditions
L30	(3.3kQ+30%)	(6.9kQ+30%)	Murata (Sv01) Linearity: $\pm 2\%$ (参考值) 

SET Necessary conditions for control program:

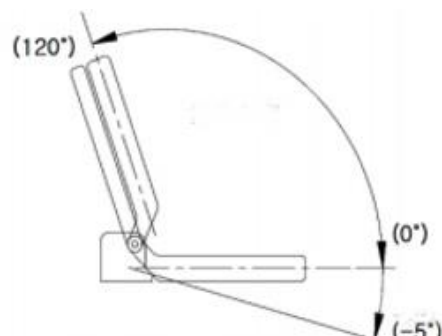
- 1.Detection of abnormal load: Power should be cut off if abnormal torque (TORQUE) is detected after the switch is turned on.
- 2.Drive speed control: Implement deceleration before full opening to prevent impact noise.

6. Mechanical Performance

Item	R30 Cover	L30 Seat	Remark
Open/Close Angle	120° ~0° [-5°]		Refer to the diagram for [] excess angle
Operating Direction	Close- CW	Open-CW	Rated Voltage
TORQUE (open)	30 Kgf.cm Max	40 Kgf.cm Max	
Noise	50dB Max		At 50cm
Second Gear Clutch TORQ.	60~120 kgf.cm		Power Shaft



COVER



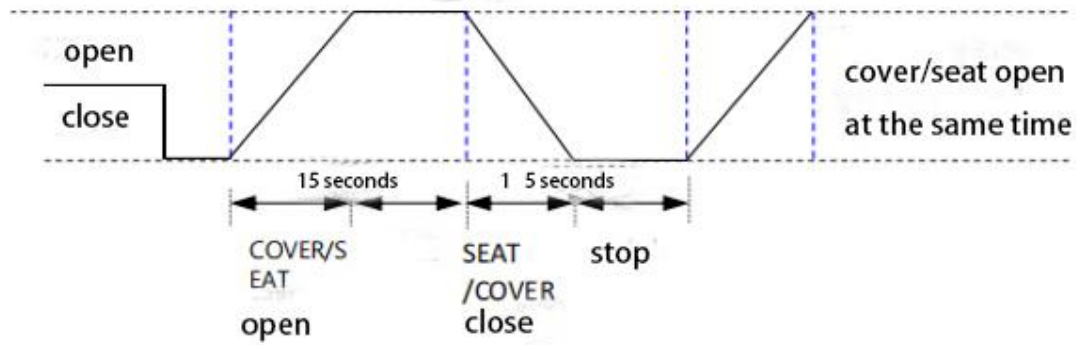
SEAT

7. Environmental Performance

Item	Instruction	Test Result	Remark
Heat Resistance Test	After a unit is left for 48 hours in 70° C, test the basic performance	Normal Operation when no accessories damaged	Measurements within 1-2h after reaching normal temperature
Cold Resistance Test	After a unit is left for 48 hours in -20 ° C, test the basic performance	Normal Operation when no accessories damaged	Measurements within 1-2h after reaching normal temperature
Humidity Test	After a unit is left for 48 hours in 40°C and 95 %RH, test the basic performance	Normal Operation when no accessories damaged	Measurements within 1-2h after reaching normal temperature
Thermal Shock Test	After 5 repetitions of the cycle (50°C for 6 hours, 23°C for 6 hours, -20°C for 6 hours), test the basic performance.	Normal Operation when no accessories damaged	Measurements within 1-2h after reaching normal temperature

8. Life Performance

Item	Instruction	Test Result	Remark
Electric opening	Using a durable JIG to manually open 50,000 times	Normal operation, no damage to appearance.	Open: 2 times/min
Auto opening	COVER/SEAT as a set, perform automatic opening 50,000 times	Normal operation, no damage to appearance.	Please refer to the test cycle diagram below.
Forced opening and closing life	Under standard test conditions, after applying the rated load (3N • m) using a dedicated fixture, drive the product with a special drive circuit. Manually force it to close 10 times at a speed of 0.5 seconds when flipped open to 60 degrees	It should operate normally without any jamming or improper flipping	



9. Notes and Operating Instructions

- (1) There is a risk of motor blockage and product burning caused by external loads. Be sure to set up a protective circuit.
- (2) Do not immerse the product in water. This product is not waterproof.
- (3) Do not insert wires and motor terminals into household sockets to avoid the risk of electric shock. After the product is powered on, do not touch the terminals and other conductive parts to avoid the risk of electric shock.
- (4) After the product is powered on, do not touch the rotating parts, including accessories, to avoid the risk of injury.
- (5) The operating conditions of the product (installation status, load, environmental temperature) can cause the motor to heat up. Be careful of burns.
- (6) Do not disassemble the product.
- (7) Do not drop the product. Do not use the product after it has fallen.
- (8) Set up a protective circuit to avoid risks when exceeding the maximum load.
- (9) Continuous operation can cause the motor to heat up. Set an appropriate stop time.
- (10) The product's output shaft can operate within the internal mechanical stop point range (0° - 120°), but there is a possibility of damage to the contacting parts when the output shaft contacts the mechanical stop point. Use within the operating range.
- (11) Do not pull wires and connectors with a force exceeding 10N.
- (12) Pay attention to the correct wiring of terminals.