

# **LA Series**

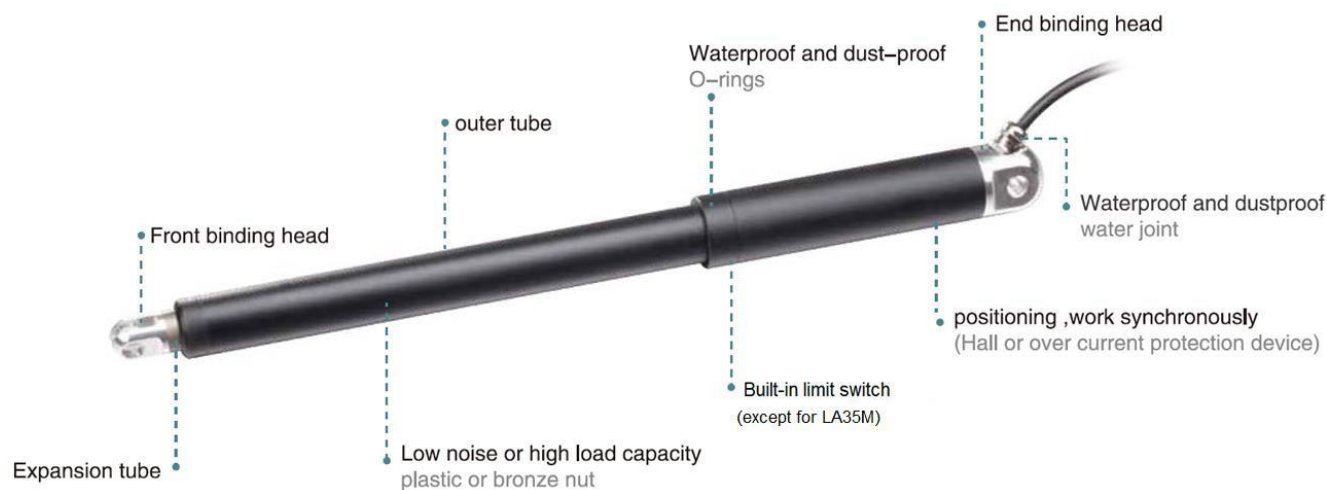
## **In-line Linear Actuators**

**Innovative, patented design for better life**



- ✓ **Stainless Steel or aluminium**
- ✓ **5 size in diameter available: 16mm, 26mm, 35mm, 38mm, 52mm**
- ✓ **High load capacity with precision and synchronous control**
- ✓ **IP Protection up to IP69K; water and dust proof (optional)**
- ✓ **Low energy consumption, low noise**
- ✓ **Suitable applications including home automation, medical devices, transportation and industrial automation**

## Product Overview



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## Actuator Part Number Configuration

LA 35 M – S/S – L12 – 120 – 33 – 100 – H – W – O  
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

- ① **Series name**
- ② **Diameter:** 16= Φ16mm; 26N= Φ26mm; 35= Φ35mm; 38= Φ38mm; 52= Φ52mm  
**Outer Tube Material<sup>1</sup>:**
- ③ **AL=** T6063 Aluminium (black)  
**S/S=** 304 or 316 Stainless steel (silver)  
**Model Option:**  
**L=** low-noise model (Only available on **LA35M** and **LA38M**, depending on the loading capacity.  
 Also the loaded speed will be changed slightly. *Please contact our technical support for details before placing your order.*
- ④ **N** = normal version
- ⑤ **Input voltage:** 12= 12VDC; 24=24VDC
- ⑥ **Load capacity (N)**
- ⑦ **Load speed (mm/s)**
- ⑧ **Stroke (mm)**
- ⑨ **Added Function<sup>2</sup>:**  
**C** = Over-Current Protection  
**H** = Hall Sensor  
**LSN** = Limit Switch  
**LSS** = Limit Switch with output signal  
**LSH** = Limit Switch + Hall Sensor  
**LSC** = Limit Switch + Over Current Protection  
**N**= None
- ⑩ **Protection Class<sup>3</sup>:**  
**K** = IP69K  
**W** = IP67M  
**N** = IP66  
**M** = IP65
- ⑪ **Mounting<sup>4</sup>:**  
**O** = O type                      **B** = Ball Joint  
**C** = Clevis                        **U** = Universal

### Notes

- 1:** Not all materials listed are available on each model. Please refer to the specifications table for each model for details); any question, please contact our sales team for more details before placing the order.  
**(LA35M, LA38M and LA52M are available in Stainless Steel)**
- 2:** Over-current protection function and Hall sensor function are **not** available at the same time; **LA16M** only has limit switch and hall sensor function;  
**Built-in limit switch is NOT available on LA35M series actuator.**
- 3:** **LA16M** is only available in IP65, choose **M**  
**IP69K** is available on the LA26NM, LA35M, LA38M and LA52M
- 4:** O type and Clevis mount are standard options. Ball Joint and Universal could have a MOQ. Other options are available upon request. Contact us for more information.

## LA16M In-line Linear Actuator

### Ø16mm

#### FEATURES

- Integrated with high-efficiency 12VDC brush motor and planetary gearbox
- Compact size and elegant design
- Wire types: flying leads; cable with 4-pin connector or 6-pin connector
- IP65 protection class
- With built-in limit switch
- Applications: unmanned planes, robots and auto-louvres



<b>Voltage</b>	12VDC	<b>Inner tube material</b>	304 stainless steel
<b>Max. power</b>	5W	<b>Outer tube material</b>	6063 Aluminium
<b>Backlash</b>	0.4mm	<b>Lead screw material</b>	Trapezoid, steel
<b>Operating temperature</b>	-20°C to +60°C	<b>Nut material</b>	Plastic
<b>Storage temperature</b>	-40°C to +70°C	<b>Noise on load</b>	55dB
<b>Lifetime (cycle)</b>	≥ 10k	<b>End mounting</b>	O-type
<b>Duty cycle</b>	2 minutes in use followed by 18 min rest	<b>Wire length &amp; option</b>	0.5m length <ul style="list-style-type: none"> <li>• Flying leads</li> <li>• With 4-pin connector</li> <li>• With 6-pin connector</li> </ul>

#### TECHNICAL SPECIFICATIONS

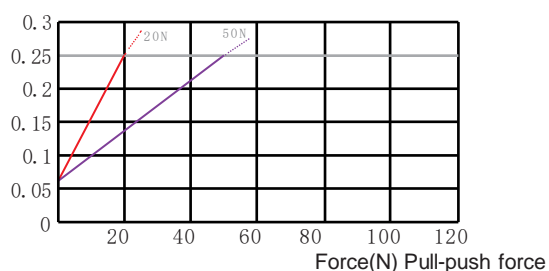
Max. load (N)	20		50	
Self-locking force (N)	30		75	
No-load speed (mm/s)	15		7.5	
Load speed (mm/s)	11		5.8	
Standard stroke* (mm)	50	100	50	100
Weight (kg)	0.1		0.2	
No-load current (A)	≤0.06			
Load current (A)	≤0.3			

\* Customised stroke may be available upon request. Available from minimum stroke 20mm to maximum stroke 100mm, precision: ±2mm

#### PERFORMANCE CURVES

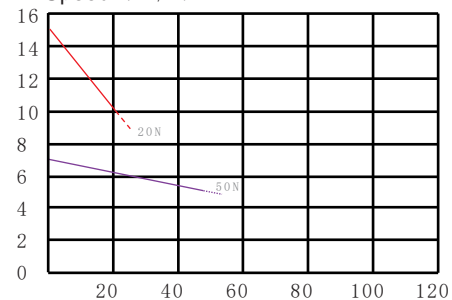
CURVE(Force/ current)

Current (12V)



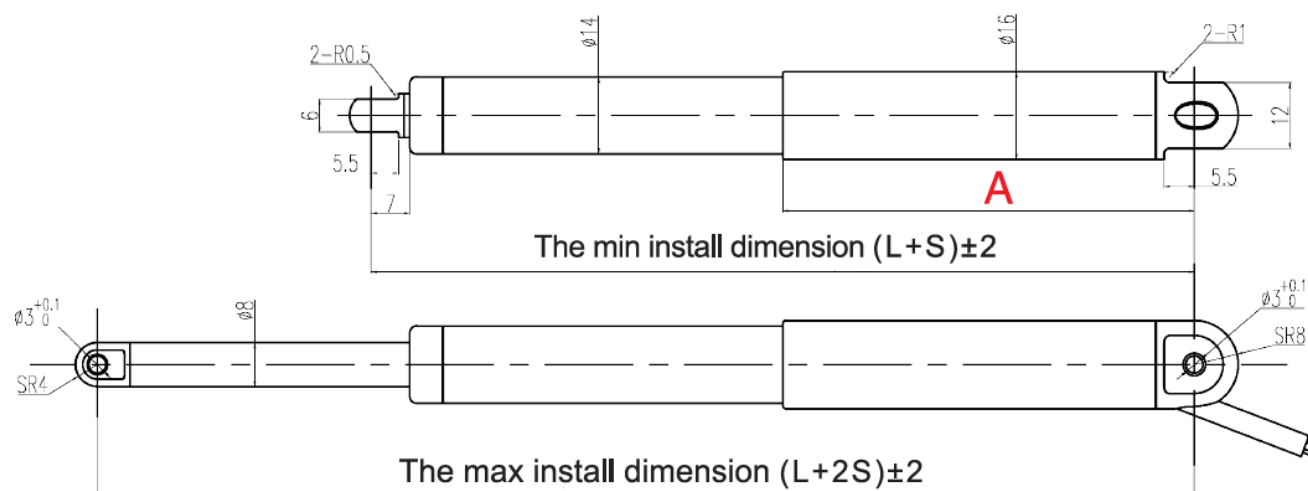
CURVE(Speed/force)

Speed (mm/s)



Note: Accuracy of speed or current: ±10%. In general, applications in the dashed area are not recommended

## LA16M MECHANICAL DIMENSIONS (Unit: mm)



Notes: 1) S= Stroke

2) Dimensions above for reference only. Please contact us for accurate drawing information for each model before placing the order.

Dimensions (S= Stroke )	Unit	Limit switch	Hall sensor
L+S	mm	100+S	120+S
A	mm	75	95

**Note:** Over-current protection and Hall sensor **cannot** be fitted in the same time in the actuator. The only way is to connect the over-current protection on the wiring or in the controlbox

## MATCHED CONTROL BOX

		
Single-Actuator Controlbox	Duo-actuators Controlbox	Triple-actuators Controlbox

# LA26M In-line Linear Actuator

## Ø26mm

### FEATURES

- Integrated with high-efficiency 12 / 24VDC brush motor and planetary gearbox
- Compact size and elegant design
- Up to IP67 protection class
- With optional built-in limit switch
- Wire types: flying leads; cable with 4-pin connector or 6-pin connector
- Applications: Ship/Yacht, window opening, furniture, industrial automation



<b>Voltage</b>	12VDC / 24VDC	<b>Inner tube material</b>	316 Stainless steel
<b>Max. power</b>	14,5W	<b>Outer tube material</b>	6063 Aluminium
<b>Backlash</b>	0.4mm	<b>Lead screw material</b>	Trapezoid, steel
<b>Operating temperature</b>	-20°C to +60°C	<b>Nut material</b>	Plastic
<b>Storage temperature</b>	-20°C to +60°C	<b>Noise on load</b>	62dB
<b>Lifetime (cycle)</b>	≥ 10k	<b>End mounting</b>	O-type
<b>Duty cycle</b>	2 minutes in use followed by 18 min rest	<b>Wire length &amp; option</b>	1.5m length <ul style="list-style-type: none"> <li>• Flying leads</li> <li>• With 4-pin connector</li> <li>• With 6-pin connector</li> </ul>

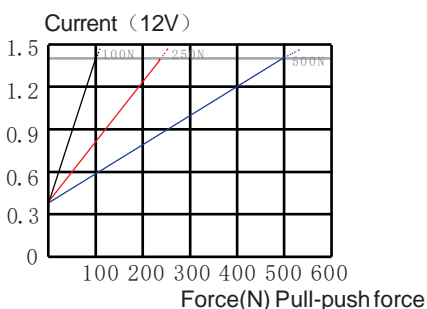
### TECHNICAL SPECIFICATIONS

<b>Maximum load (N)</b>	100 <sup>1</sup>				250				500			
<b>Self-locking force (N)</b>	150				375				500			
<b>No-load speed (mm/s)</b>	16				11				6			
<b>Load speed (mm/s)</b>	11,5				7,5				4			
<b>Standard stroke* (mm)</b>	50	100	150	200	50	100	150	200	50	100	150	200
<b>Weight (kg)</b>	0.35	0.4	0.45	0.5	0.35	0.4	0.45	0.5	0.35	0.4	0.45	0.5
<b>No-load current (A)</b>	≤0.4 @ 12VDC / ≤0.2 @ 24VDC											
<b>Load current (A)</b>	≤1.3 @ 12VDC / ≤0.7 @ 24VDC											

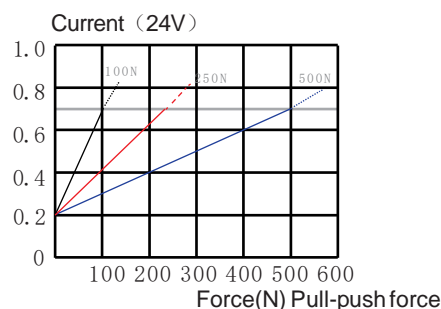
\* Customised stroke may be available upon request. Available from minimum stroke 20mm to maximum stroke 200mm, precision: ±2mm

### PERFORMANCE CURVES

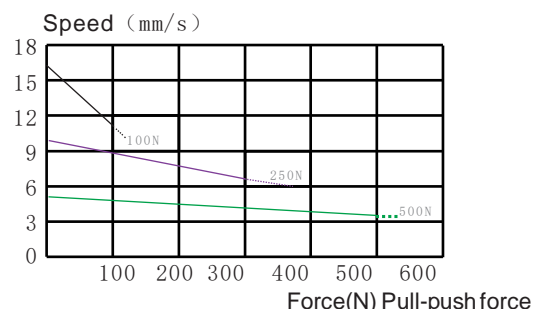
CURVE(Force/ current)



CURVE(Force/ current)



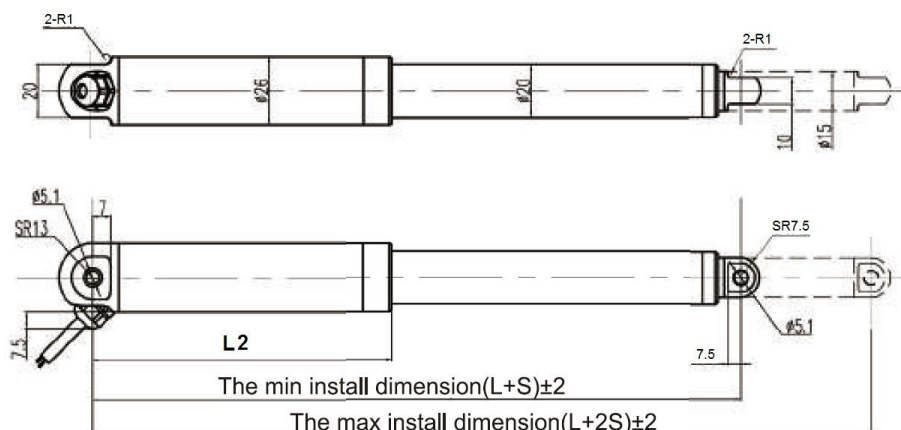
CURVE(Speed/force)



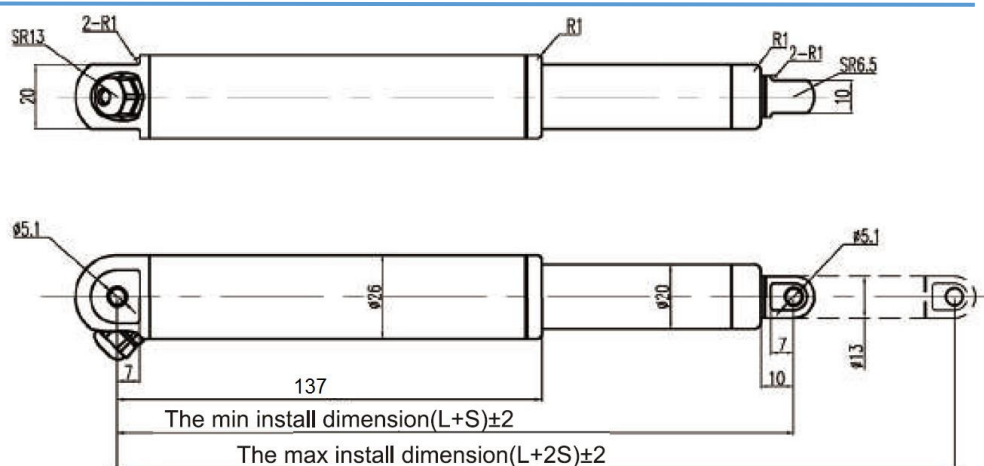
Note: Accuracy of speed or current: ±10%. In general, applications in the dashed area are not recommended

<sup>1</sup> 100N load option is not available when choosing limit switch function

## LA26M MECHANICAL DIMENSIONS (Unit: mm)



Model with  
limit switch



Notes: 1) S= Stroke

2) Dimensions above for reference only. Please contact us for accurate drawing information for each model before placing the order.

Dimensions (S= Stroke)	Unit	L
Standard (Without any additional function)	mm	170+S
With over-current protection	mm	190+S
With Hall Sensor	mm	190+S
With Limit Switch	mm	170+S

**Note:** For IP67 / IP69K, the minimum installation length will be 15 mm longer.

**Note:** Over-current protection and Hall sensor **cannot** be fitted at the same time in the actuator. The only way is to connect the over-current protection on the wiring or in the controlbox

## MATCHED CONTROL BOX



Single-Actuator Controlbox



Duo-actuators Controlbox



Triple-actuators Controlbox

## LA35M In-line Linear Actuator

Ø35mm

### FEATURES

- Compact size and elegant design
- IP66 or IP67M protection class
- Integrated with high-efficiency DC motor and planetary gearbox
- Hall sensors for precision control
- Wire types: flying leads; cable with 4-pin connector or 6-pin connector
- Applications: boats, vehicle lifting, window opening



<b>Voltage</b>	12VDC / 24VDC	<b>Max. power</b>	60W
<b>Duty cycle</b>	2 minutes in use followed by 18 min rest	<b>Outer tube material</b>	<ul style="list-style-type: none"> <li>• 6063 Aluminium</li> <li>• 316 Stainless steel</li> </ul>
<b>Life time (cycle)</b>	≥ 10k	<b>Inner tube material</b>	316 Stainless steel
<b>Backlash</b>	0.5 - 1mm	<b>Lead screw material</b>	Trapezoid, steel
<b>Operating temperature</b>	-20°C to +60°C	<b>Nut material</b>	Copper / Plastic
<b>Storage temperature</b>	-40°C to +70°C	<b>Wire length</b>	1.5m length
<b>Noise on load <sup>(1)</sup></b>	60dB <sup>(1)</sup>	<b>End mounting</b>	O-type

<sup>(1)</sup> For low-noise model, the noise level is **53dB** (However, low-noise model is NOT available on the actuators over 800N load capacity)

### TECHNICAL SPECIFICATIONS

<b>Maximum load (N) <sup>(2)</sup></b>	100	300	400	600	800	1200	1800	2300
<b>Self-locking force (N)</b>	150	600	600	1600	1600	1800	3600	3450
<b>No-load speed (mm/s)</b>	35	25	18	12	12	6.8	4.5	3.5
<b>Load speed <sup>(3)</sup> (mm/s)</b>	30 <sup>(2)</sup>	17	14	9	8	5	3	2.5
<b>Standard stroke <sup>(4)</sup> (mm)</b>	50 / 100 / 150 / 200 / 250 / 300 / 350 / 400							
<b>No-load current (A)</b>	≤0.6 @ 12VDC / ≤0.3 @ 24VDC							
<b>Load current (A)</b>	≤3.8 @ 12VDC / ≤1.8 @ 24VDC							

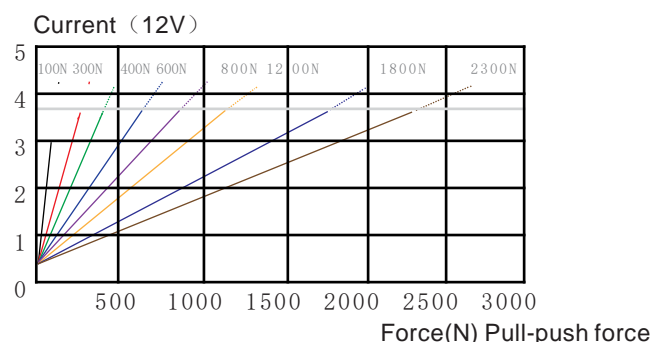
<sup>(2)</sup> Load capacity over 800N is NOT available for low-noise version

<sup>(3)</sup> Low noise speed is different, available on request

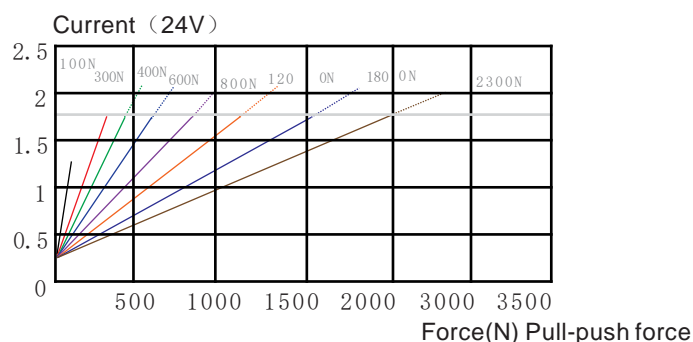
<sup>(4)</sup> Customised stroke may be available upon request. Available from minimum stroke 10mm to maximum stroke 500mm, precision: ±2mm

### PERFORMANCE CURVES

CURVE(Force/ current)



CURVE(Force/ current)

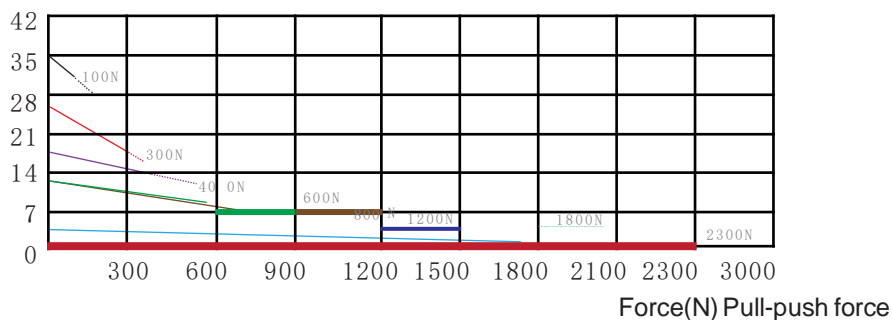


Note: Accuracy of speed or current: ±10%. In general, applications in the dashed area are not recommended

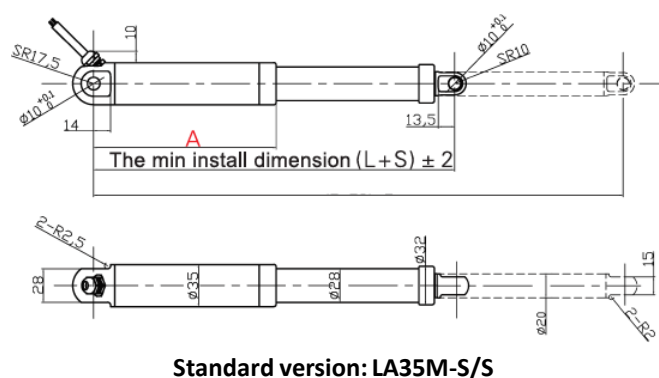
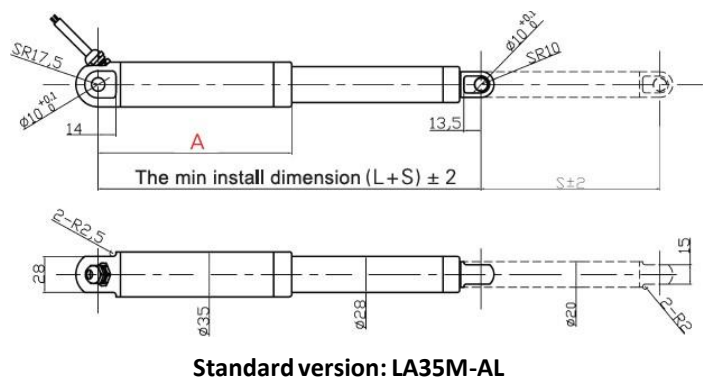


CURVE(Speed/force)

Speed (mm/s)



## LA35M OUTLINE DIMENSIONS (Unit: mm)



**Notes: 1) S= Stroke**

**2) Dimensions above for standard version only without any extra functions (e.g. over-current protection, hall sensor, limit switch. Please contact us for accurate drawing information for each different model (e.g. S/S version, low-noise version etc.) before placing the order.**

LA35M	Unit	Dimensions	Standard		Model with Hall Sensor		Model with Over-current Protection	
			Waterproof & Normal version	Low-noise version	Waterproof & Normal version	Low-noise version	Waterproof & Normal version	Low-noise version
Max. Load ≤800N	mm	L+S	178+5	188+5	200+5	200+5	200+5	208+5
		A	121.5	131.5	143.5	143.5	143.5	151.5
Max. Load >800N	mm	L+S	188+5		208+5		208+5	-
		A	131.5		151.5		151.5	-

- Note:**
1. Stroke over 400 mm, longer minimum installation length, on request
  2. For IP67M and IP69K, minimum installation length will be 13 mm longer
  3. **LA35M model has NO built-in limit switch.**
  4. Over-current protection and Hall sensor cannot be fitted at the same time in the actuator.  
The only way is to connect the over-current protection on the wiring or in the controlbox.
  5. Low-noise version only available up to 800N.

## MATCHED CONTROL BOX



### Single-Actuator Controlbox



## Duo-actuators Controlbox



### Triple-actuators Controlbox

## LA38M In-line Linear Actuator

Φ38mm

### FEATURES

- Compact size and elegant design in aluminium or 304 Stainless Steel
- IP66/IP67M/IP69K protection class
- Optional built-in Hall sensor <sup>(1)</sup> for precision control
- Positioning control<sup>(1)</sup> is available as an option
- With optional built-in limit switch
- Over-current circuit protection as an option
- Wire types: flying leads; cable with 4-pin connector or 6-pin connector
- Applications: industrial automation, vehicle lifting, window opening



<sup>(1)</sup> **Notes:** Hall sensor function and positioning control are not available in the same actuator;  
If Positioning control is chosen to control more than one actuator, actuators can only work synchronously

<b>Voltage</b>	12VDC / 24VDC	<b>Max. power</b>	60W
<b>Duty cycle</b>	2 minutes in use followed by 18 min rest	<b>Outer tube material</b>	<ul style="list-style-type: none"> <li>• 6063 Aluminium</li> <li>• 316 Stainless steel</li> </ul>
<b>Life time (cycle)</b>	10k	<b>Inner tube material</b>	316 Stainless steel
<b>Backlash</b>	0.5 - 1mm	<b>Lead screw material</b>	Trapezoid, steel
<b>Operating temperature</b>	-20°C to +60°C	<b>Nut material</b>	Plastic
<b>Storage temperature</b>	-40°C to +70°C	<b>Wire length</b>	1.5m
<b>Noise on load <sup>(2)</sup></b>	60dB <sup>(2)</sup>	<b>End mounting</b>	O-type

<sup>(2)</sup> For low-noise model, the noise level is 53dB

### TECHNICAL SPECIFICATIONS

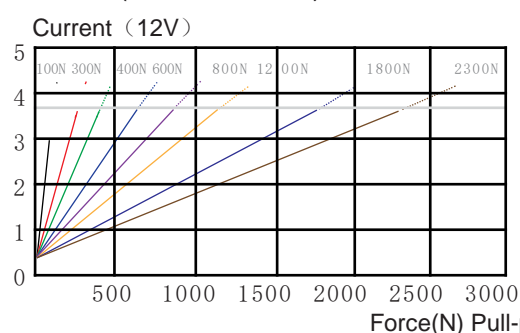
<b>Maximum load (N)</b>	100	300	400	600	800	1200	1800	2300
<b>Self-locking force (N)</b>	150	600	600	1600	1600	1800	3600	3450
<b>No-load speed (mm/s)</b>	35	25	18	12	12	6.8	4.5	3.5
<b>Load speed (mm/s)</b>	30 <sup>(3)</sup>	17	14	9	8	5	3	2.5
<b>Standard stroke<sup>(4)</sup> (mm)</b>	50 / 100 / 150 / 200 / 250 / 300 / 350 / 400							
<b>No-load current (A)</b>	≤0.6 @ 12VDC / ≤0.3 @ 24VDC							
<b>Load current (A)</b>	≤3.8 @ 12VDC / ≤1.8 @ 24VDC							

<sup>(3)</sup> Load speed is different with low noise actuator, available upon request

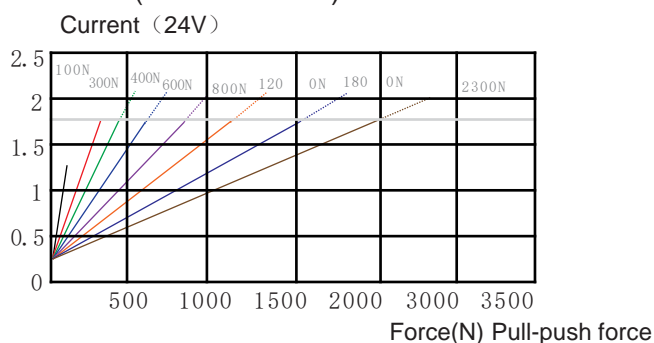
<sup>(4)</sup> Customised stroke may be available upon request, available from 20mm to maximum 800mm, precision: ±2mm

### PERFORMANCE CURVES

CURVE(Force/ current)

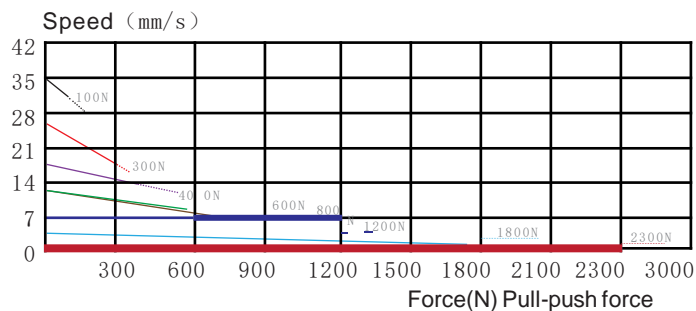


CURVE(Force/ current)

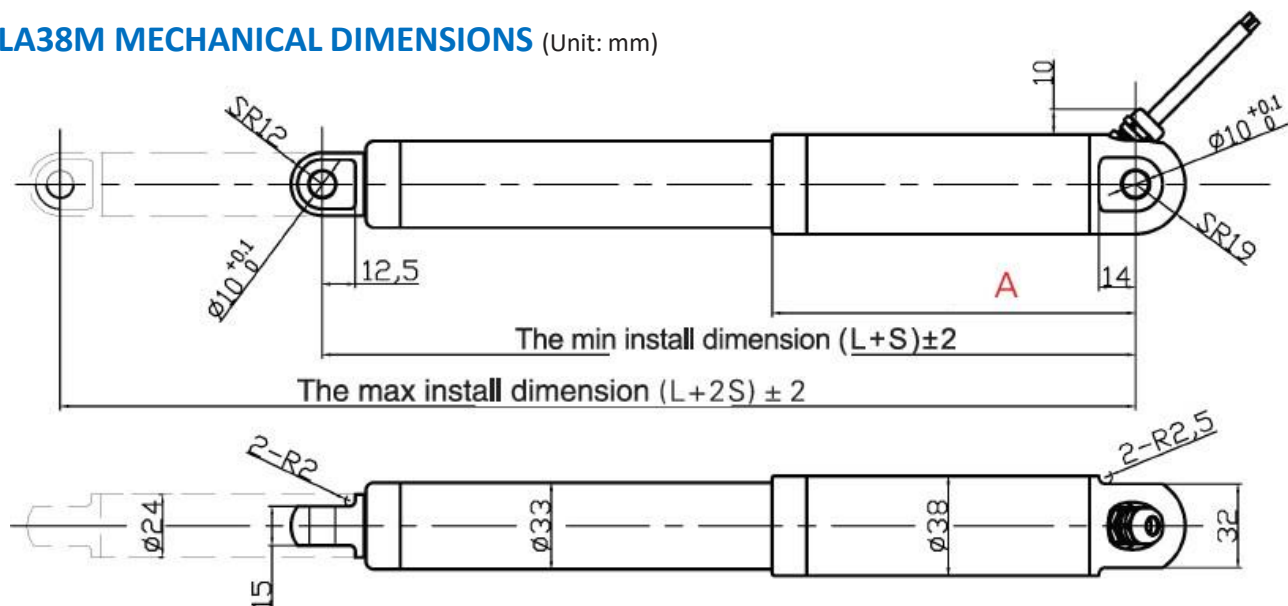


Note: Accuracy of speed or current: ±10%. In general, applications in the dashed area are not recommended

## CURVE(Speed/force)



## LA38M MECHANICAL DIMENSIONS (Unit: mm)



Notes: 1) S= Stroke

2) Dimensions above is for standard version and for reference only. Please contact us for accurate drawing information for each model before placing the order.

LA38M	Unit	Dimensions	Model with limit switch		Model with Hall Sensor		Model with Over-current Protection	
			Normal version	Low-noise version	Normal version	Low-noise version	Normal version	Low-noise version
Max. Load ≤800N	mm	L+S	200+S	210+S	220+S	220+S	220+S	230+S
		A	128.5	138.5	148.5	148.5	148.5	158.5
Max. Load >800N	mm	L+S	210+S	220+S	230+S	230+S	230+S	240+S
		A	138.5	148.5	158.5	158.5	158.5	168.5

- Notes:
1. For IP67M/IP69K the min. install length will be 20 mm longer.
  2. Stroke over 400 mm, longer minimum installation length, on request
  3. Over-current protection and Hall sensor **cannot** be fitted at the same time in the actuator. The only way is to connect the over-current protection on the wiring or in the controlbox

## MATCHED CONTROL BOX



## LA52M In-line Linear Actuator

### Ø52mm

#### FEATURES

- Compact size and elegant design
- IP66, IP67M or IP69K
- Stainless Steel 316 Option
- Optional Hall sensors for precision control
- With optional built-in limit switch
- IP66 protection class
- Applications: industrial machinery automation, smart home



<b>Voltage</b>	12VDC / 24VDC	<b>Max. power</b>	150W
<b>Duty cycle</b>	2 minutes in use followed by 18 min rest	<b>Outer tube material</b>	<ul style="list-style-type: none"> <li>• 6063 Aluminium</li> <li>• 316 Stainless steel</li> </ul>
<b>Life time (cycle)</b>	≥ 10k	<b>Inner tube material</b>	304 stainless steel
<b>Backlash</b>	0.5 - 1mm	<b>Lead screw material</b>	Trapezoid, steel
<b>Operating temperature</b>	-20°C to +60°C	<b>Nut material</b>	Plastic
<b>Storage temperature</b>	-40°C to +70°C	<b>Wire length</b>	1.5m
<b>Noise on load</b>	75dB	<b>End mounting</b>	O-type

#### TECHNICAL SPECIFICATIONS

<b>Maximum load (N)</b>	300	1200	1800	3000	4500	5000 <sup>(1)</sup>	6000
<b>Self-locking force (N)</b>	600	2400	3600	6000	8000	7500	8000
<b>No-load speed (mm/s)</b>	88	24	16	9.6	6.4	4.8	4.8
<b>Load speed (mm/s)</b>	55	15	10	6	4.5	3.3	3
<b>Standard stroke<sup>(2)</sup> (mm)</b>	50 / 100 / 150 / 200 / 250 / 300 / 350 / 400						
<b>No-load current (A)</b>	≤1.6 @ 12VDC / ≤0.8 @ 24VDC						
<b>Load current (A)</b>	≤10 @ 12VDC / ≤5 @ 24VDC						

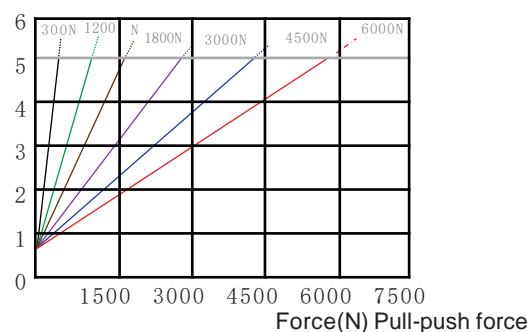
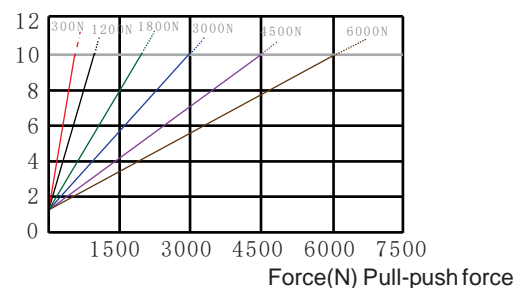
<sup>(1)</sup> 12VDC model has max. load of 5000N

<sup>(2)</sup> Customised stroke may be available upon request. Available from minimum stroke 20mm to maximum stroke 800mm, precision: ±2mm

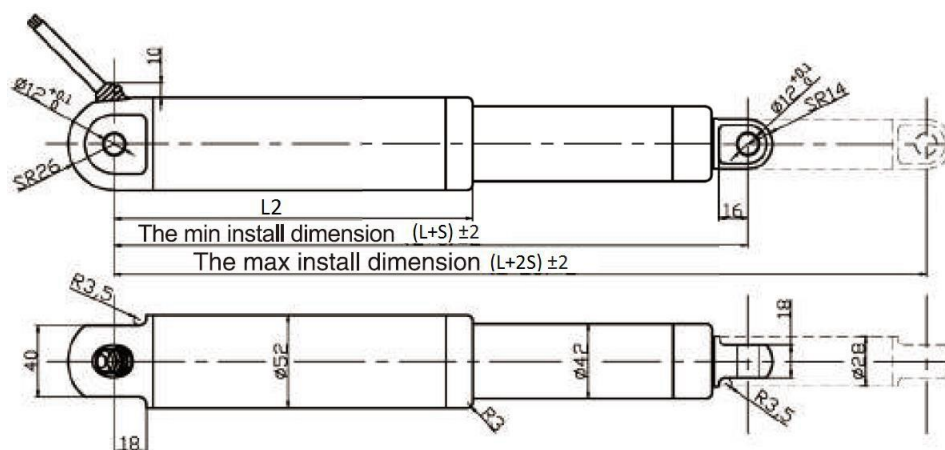
#### PERFORMANCE CURVES

CURVE(Force/ current)

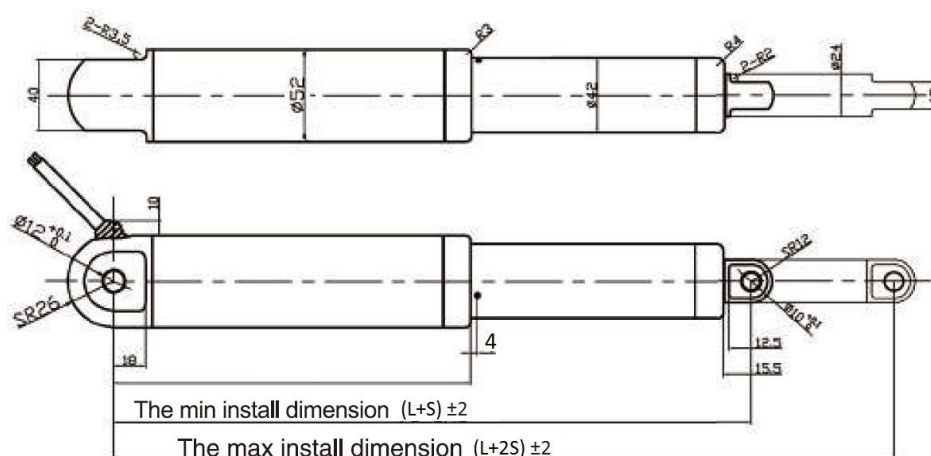
Current (12V)



*Note: Accuracy of speed or current: ±10%. In general, applications in the dashed area are not recommended*



## Model with limit switch



2) Dimensions above for reference only. Please contact us for accurate drawing information for each model before placing the order.

LA52M	Unit	Dimensions	Model with limit switch	Model with Hall Sensor	Model with Over-current Protection
	mm	L+S	305+S	325+S	325+S
		L2	201	221	221

**Note:** 1. For IP67M/IP69K the min. install length will be 20 mm longer.

## MATCHED CONTROL BOX



### Single-Actuator Controlbox



## Duo-actuators Controlbox



### Triple-actuators Controlbox





## Over-current Protection

Over current protection device is used to protect the motor from burning out when the actuator is in stall status for a long time. With over current protection, no damage will be occurred when the actuator travels to the end position. Over current protection can be used to disconnect the power supply when the actuator is over loaded.



### TECHNICAL SPECIFICATIONS

Model	Circuit Breaking Current		
	LA26M	LA35M / LA38M	LA52M
12VDC	1.5A	5.0 - 5.5A	14.0A
24VDC	0.7-0.8A	2.5 – 3.0A	7.0A

#### Notes:

1. The anode (+) and cathode (-) for input and output circuit can be interchangeable, input voltage is 12VDC or 24VDC.
2. The circuit breaking response time is 0.1-0.5s
3. The ambient temperature range is - 20°C to +60°C, and storage temperature is -40°C to +70°C
4. Max duty cycle is 10% or 2 minutes in use followed by 18 minutes rest
5. Over-loaded current protection function and Hall sensor function are not available at the same time.

## Limit Switch

A limit switch is used to test whether an object moves to the limit position. The principle is that when the object touches the limit switch, the normally open point of the switch closes and the normally closed point turns off to control circuit or receive signals.

#### Notes:

1. Actuator size varies and to be advised separately upon request
2. Special accessories can be customised as required
3. Built-in limit switch function is NOT available on LA35M series actuators.

## Accessories- Controlbox & Handset

### PART NUMBER CONFIGURATION

ST01 - S 2 - D 12 - 12 - W  
 ① ② ③ ④ ⑤ ⑥ ⑦

① **Controlbox** Three options: ST01, ST02, ST03

② **Control function\***

S: synchronous control, A: independent control;  
 P: stroke positioning control)

③ **Number of actuators being controlled:**

1: One actuator; 2: Two actuators;  
 3: three actuators

④ **Model Type:** B\*\*: Rechargeable battery type;

D: DC Power input/output type;

T: Transformer AC power input type

⑤ **Input voltage:** 12VDC, 24VDC, 110VAC, 220-240VAC

⑥ **Output voltage:** 12VDC, 24VDC

⑦ **Handset (optional):** W: Wired

WL: Wireless

**Notes:** \*: Maximum three actuators can be controlled (independently) via one controlbox.




Two actuators can be controlled (either synchronously or independently) via one controlbox.

**Stroke positioning control is ONLY available on LA38M actuators.**




**\*\*:** Battery type controlbox is ONLY available on LA16M, LA26M, LA35M & LA38M models.

### MODEL OVERVIEW

#### Controlbox Models

		
<b>ST01</b> VDC input/output type (to control 1x actuator / 2x actuators)	<b>ST02</b> (with optional battery level indicator) Built-in battery or AC transformer (to control 1x actuator / 2x actuators)	<b>ST03</b> (with optional battery level indicator) Built-in battery or AC transformer (to control 1x actuator / 2x actuators / 3x actuators)

#### Handset Models

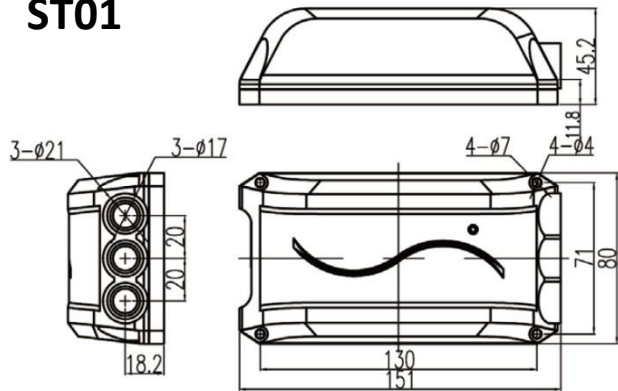
			
<b>HS01</b> Wireless handset To control: <ul style="list-style-type: none"> <li>1x actuator</li> <li>2x actuators synchronously</li> <li>3x actuators independently</li> </ul>	<b>HS02</b> Wireless handset To control: <ul style="list-style-type: none"> <li>2x actuators independently</li> </ul>	<b>HS05</b> Wired handset To control: <ul style="list-style-type: none"> <li>1x actuator</li> <li>2x actuators synchronously</li> </ul>	



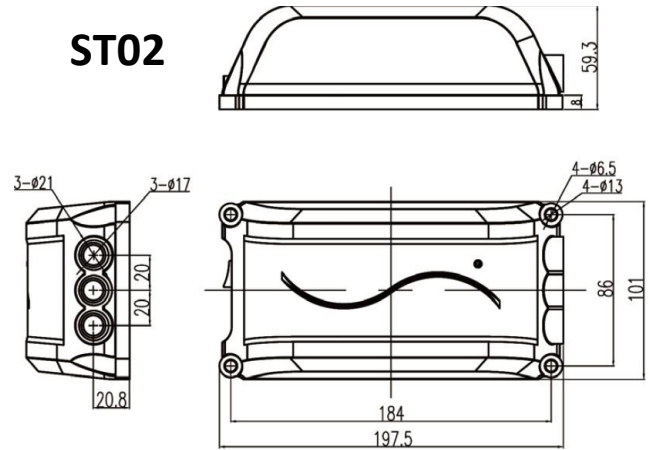
## DIMENSIONS

(in mm)

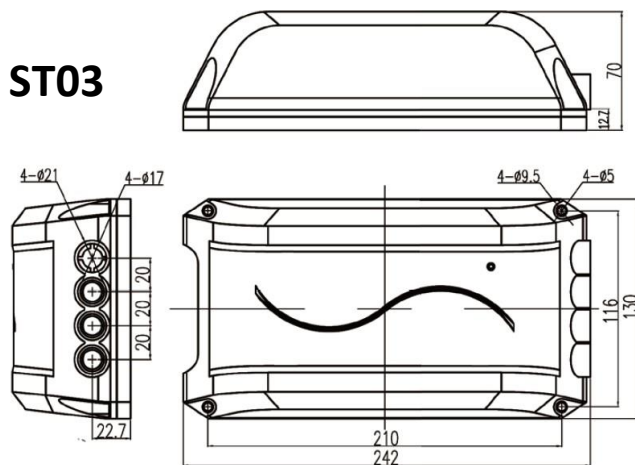
### ST01



### ST02



### ST03



## MODEL SPECIFICATIONS

### • Single-Actuator Controlbox

#### CONTROLBOX

- **General function:**  
Control the raising and lowering of the actuator. It has a light to show the power on or off
- **Rechargeable battery version:**
  1. Battery is built-in
  2. Battery capacity display function is available
- **Stroke positioning function option**  
Preset the upper and lower limit position of the actuator. The accuracy is 1% of the actuator stroke length. The actuator can only work within the pre-set range.
- **Protection function:**  
The controlbox has an over-current protection function. It will protect the actuator with no damage when there is a short circuit and the actuator will automatically recover after the short circuit fault is removed.

Controlbox Type	DC Power Input	Rechargeable Battery	Transformer AC Power Input
Available Model <sup>1</sup>	ST01-A1-D	ST02-A1-B	ST02-A1-T / ST03-A1-T
Controlbox Dimensions <sup>1</sup>	ST01	ST02	ST02 / ST03
Input Voltage	12/24 (VDC)	12/24 (VDC)	110-240VAC
Output voltage (VDC)	12/24	12/24	12/24
Output Power <sup>1</sup>	-	-	60W / 120W
Frequency	-	-	50-60Hz
Output ripple noise	-	-	≤ 280 mV p-p
Output voltage accuracy	95 (%)	95 (%)	95 (%)
Voltage regulation	± 5 (%)	± 5 (%)	± 5 (%)
Load Regulation	± 5 (%)	± 5 (%)	± 5 (%)
Work efficiency	85 (%)	85 (%)	85 (%)
Control accuracy <sup>2</sup>	-	-	-
Use frequency	10%	10%	10%
Number of actuator controlled	1 piece	1 piece	1 piece
Ambient Temperature	5°C to 40°C	5°C to 40°C	5°C to 40°C
IP Protection Class	IP54	IP54	IP54
Case Material	Non-flammable ABS	Non-flammable ABS	Non-flammable ABS
Actuator output connector <sup>2</sup>	Big DIN4P	Big DIN4P	Big DIN4P
Controlbox power input connector	-	-	8 suffix power cable
Remote handset frequency	433MH	433MH	433MH
Remote-control distance	≤ 10m	≤ 10m	≤ 10m
Wireless Remote Control Model <sup>2</sup>	HS1		
Handset Connector	Big DIN	Big DIN	Big DIN
Handset Wire Length (m)	≤ 1.5m	≤ 1.5m	≤ 1.5m
Wired Handset Model	HS5		

NOTES: 1. ST02-A1-T with output power of 60W is suitable for **LA26M**, **LA35M** and **LA38M** model  
ST03-A1-T with output power of 120W is suitable for **LA52M** model

2. If for stroke positioning control, some parameters are changed to:

Control Accuracy: ± 1 %; Actuator output connector: Big DIN6P;

matched handset: HS4 (wired)

3. Wireless remote control handset and wired handset are optional

4. The charging voltage for the battery is 110vac-240vac; battery capacity: 2200mAh and is ONLY available on **LA16M**, **LA26M**, **LA35M** & **LA38M** models

- **Duo-Actuator Controlbox (for synchronous control)**

## CONTROLBOX

- **General function:**  
Control two actuators working synchronously;  
Control the raising and lowering of the actuator. It has a light to show the power on or off
- **Rechargeable battery version:**
  - Battery is built-in
  - Battery capacity display function is available
- **Protection function:**  
The controlbox has an over-current protection function. It will protect the actuator with no damage when there is a short circuit and the actuator will automatically recover after the short circuit fault is removed.

Controlbox Type	DC Power Input	Rechargeable Battery	Transformer AC Power Input
Available model <sup>1</sup>	ST01-S2-D	ST02-S2-B	ST02-S2-T / ST03-S2-T
Controlbox dimensions	ST01	ST02	ST02 / ST03
Input voltage	12/24 (VDC)	12/24 (VDC)	110-240VAC
Output voltage (VDC)	12/24	12/24	12/24
Output power	-	-	60W /120W/ 250W
Frequency	-	-	50-60HZ
Output ripple noise	-	-	≤ 280 mV p-p
Output voltage accuracy	95 (%)	95 (%)	95 (%)
Voltage regulation	± 5 (%)	± 5 (%)	± 5 (%)
Load regulation	± 5 (%)	± 5 (%)	± 5 (%)
Work efficiency	85 (%)	85 (%)	85 (%)
Control accuracy	± 1 (%)	± 1 (%)	± 1 (%)
Use frequency	10%	10%	10%
Number of actuator controlled	2 pieces	2 pieces	2 pieces
Ambient temperature	5°C to 40°C	5°C to 40°C	5°C to 40°C
IP grade	IP54	IP54	IP54
Material	Non-flammable ABS	Non-flammable ABS	Non-flammable ABS
Actuator output connector	Big DIN6P	Big DIN6P	Big DIN6P
Controlbox power input connector	-	-	8 suffix power cable
Remote handset frequency	433MH	433MH	433MH
Remote-control distance	≤ 10m	≤ 10m	≤ 10m
Wireless remote control handset	HS03	HS03	HS03
DIN6P Handset connector	Big DIN	Big DIN	Big DIN
Matched wired handset	HS05	HS05	HS05
Handset wire length (m)	≤ 1.5m	≤ 1.5m	≤ 1.5m

### NOTES:

1. ST02-S2-T with output power of 60W is suitable for **LA26M**  
ST03-S2-T with output power of 120W is suitable for **LA35M** and **LA38M** model  
ST03-S2-T with output power of 250W is suitable for **LA52M** model
2. Wireless remote control handset and wired handset are optional
3. The charging voltage for the battery is 110vac-240vac; battery capacity: 2200mAH and is **ONLY** available on **LA16M, LA26M, LA35M & LA38M** models

- **Due-Actuator Controlbox (for independent control)**

## CONTROLBOX

- **General function:**  
Control two actuators working asynchronously;  
Control the raising and lowering of the actuator. It has a light to show the power on or off
- **Rechargeable battery version:**
  - Battery is built-in
  - Battery capacity display function is available
- **Protection function:**  
The controlbox has an over-current protection function. It will protect the actuator with no damage when there is a short circuit and the actuator will automatically recover after the short circuit fault is removed.

Controlbox Type	DC Power Input	Rechargeable Battery	Transformer AC Power Input
Available Model <sup>1</sup>	ST01-A2-D	ST02-A2-B	ST02-A2-T / ST03-A2-T
Controlbox Dimensions	ST01	ST02	ST02 / ST03
Input Voltage	12/24 (VDC)	12/24 (VDC)	110-240VAC
Output voltage (VDC)	12 / 24	12 / 24	12 / 24
Output Power	-	-	60W / 120W
Frequency	-	-	50-60HZ
Output ripple noise	-	-	≤ 280 mV p-p
Output voltage accuracy	95 (%)	95 (%)	95 (%)
Voltage regulation	± 5 (%)	± 5 (%)	± 5 (%)
Load Regulation	± 5 (%)	± 5 (%)	± 5 (%)
Work efficiency	85 (%)	85 (%)	85 (%)
Control accuracy	-	-	-
Use frequency	10%	10%	10%
Number of actuator controlled	2 pieces	2 pieces	2 pieces
Ambient Temp	5°C to 40°C	5°C to 40°C	5°C to 40°C
IP grade	IP54	IP54	IP54
Material	Non-flammable ABS	Non-flammable ABS	Non-flammable ABS
Actuator output connector type	Big DIN4P	Big DIN4P	Big DIN4P
Controlbox power input connector	-	-	8 suffix power cable
Remote handset frequency	433MH	433MH	433MH
Remote-control distance	≤ 10m	≤ 10m	≤ 10m
Wireless Remote Control Model	HS01		

### NOTES:

1. ST02-A2-T controlbox with output power of 60W is suitable for **LA26M**, **LA35M** and **LA38M** model  
ST03-A2-T controlbox with output power of 120W is suitable for **LA52M** model
2. Wireless remote control handset is optional
3. The charging voltage for the battery is 110vac-240vac; battery capacity: 2200mAH and is ONLY available on **LA16M**, **LA26M**, **LA35M** & **LA38M** models

- **Triple-Actuator Controlbox (for independent control)**

## CONTROLBOX

- **General function:**  
Control three actuators working independently;  
Control the raising and lowering of the actuator. It has a light to show the power on or off
- **Rechargeable battery version:**
  - Battery is built-in
  - Battery capacity display function is available
- **Protection function:**  
The controlbox has an over-current protection function. It will protect the actuator with no damage when there is a short circuit and the actuator will automatically recover after the short circuit fault is removed.

Controlbox Type	DC Power Input	Rechargeable Battery	Transformer AC Power Input
Available Model	ST03-A3-D	ST03-A3-B	ST03-A3-T
Controlbox Dimensions	ST03	ST03	ST03
Input Voltage	12/24 (VDC)	12/24 (VDC)	110-240VAC
Output voltage (VDC)	12 / 24	12 / 24	12 / 24
Output Power	-	-	120W
Frequency	-	-	50-60HZ
Output ripple noise	-	-	≤ 280 mV p-p
Output voltage accuracy	95 (%)	95 (%)	95 (%)
Voltage regulation	± 5 (%)	± 5 (%)	± 5 (%)
Load Regulation	± 5 (%)	± 5 (%)	± 5 (%)
Work efficiency	85 (%)	85 (%)	85 (%)
Control accuracy	-	-	-
Use frequency	10%	10%	10%
Number of actuator controlled	3 pieces	3 pieces	3 pieces
Ambient Temp	5°C to 40°C	5°C to 40°C	5°C to 40°C
IP grade	IP54	IP54	IP54
Material	Non-flammable ABS	Non-flammable ABS	Non-flammable ABS
Actuator output connector	Big DIN4P	Big DIN4P	Big DIN4P
Controlbox power input connector	-	-	8 suffix power cable
Remote handset frequency	433MH	433MH	433MH
Remote-control distance	≤ 10m	≤ 10m	≤ 10m
Wireless Remote Control Model	HS01		

### NOTES:

- The charging voltage for the battery is 110vac -240vac, battery capacity: 2200mAh and is ONLY available on **LA16M, LA26M, LA35M & LA38M** models

## Accessories- Others

### Connectors



4-pin connector for standard (limit switch) or over-current protection models



6-pin connector for Hall function model

### Binding Head Types



C type  
(front)

(Standard type for LA35M model)



Universal joint type  
(front)

(Optional)



O type  
(front)

(Standard type for LA16/26/38/45/52M models)



Ball joint type  
(front)

(Optional)



End  
(Standard)

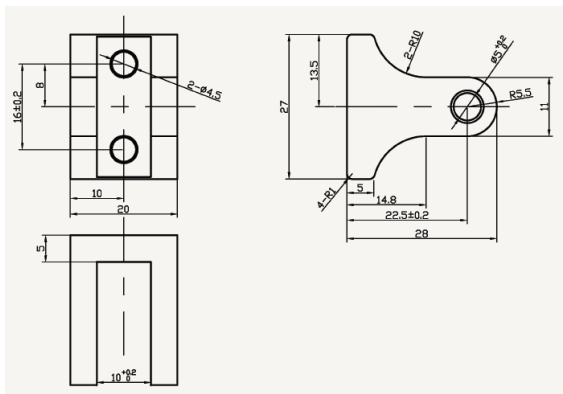
Notes: Standard type will be chosen and supplied by default, if the binding head type is not specified with the order.

### Mounting Bracket

#### Model

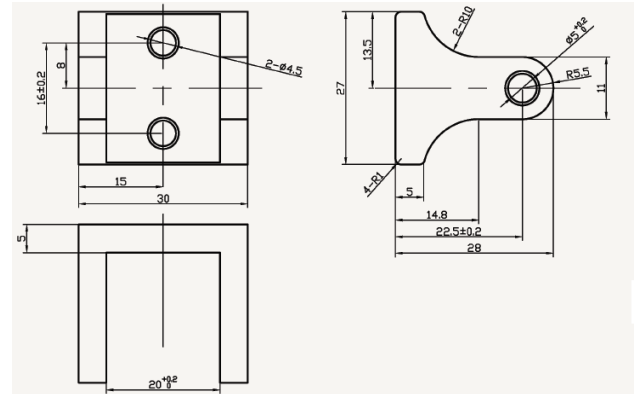
#### Front-end mounting bracket

LA26M



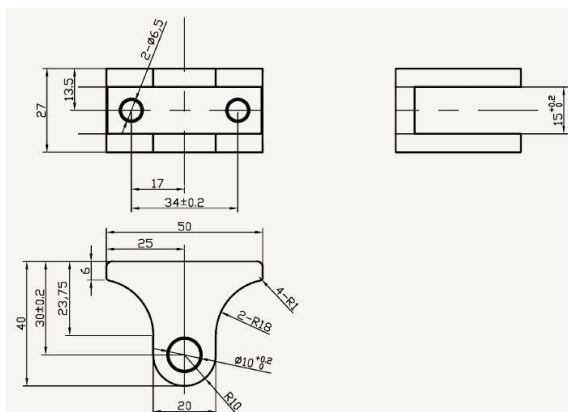
Part No.: 26F

#### Rear-end mounting bracket

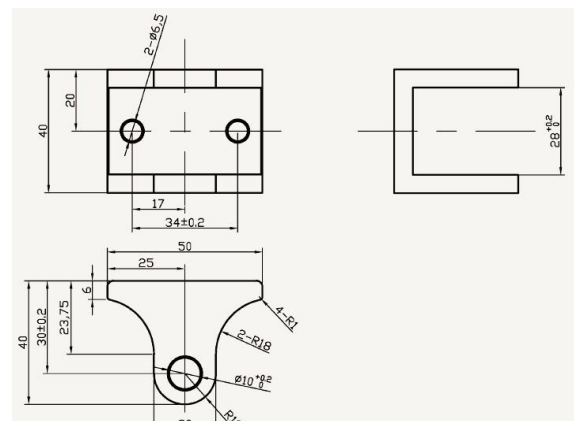


Part No.: 26R

LA35M



Part No.: 35F



Part No.: 35R

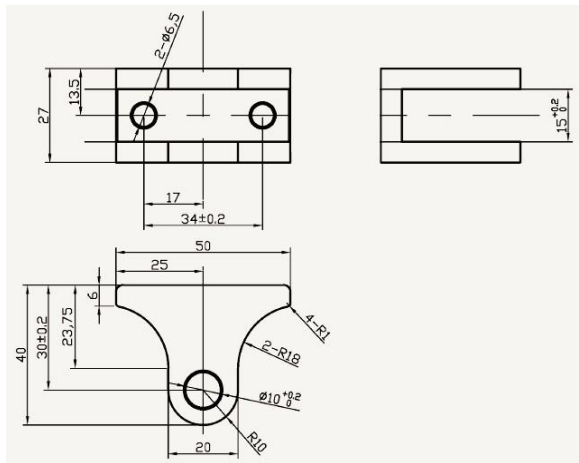
## Mounting Bracket

Model

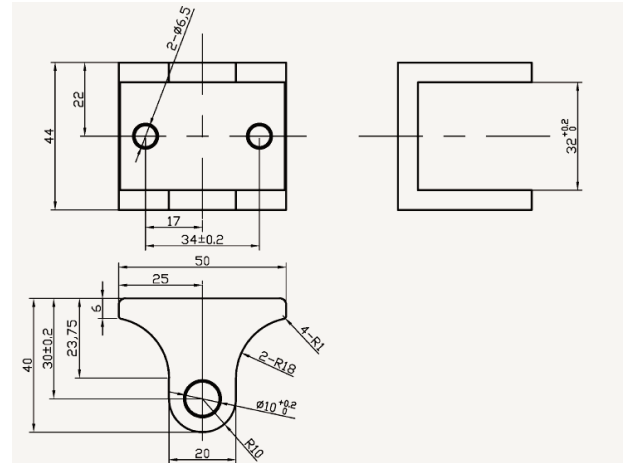
Front-end mounting bracket

Rear-end mounting bracket

LA38M

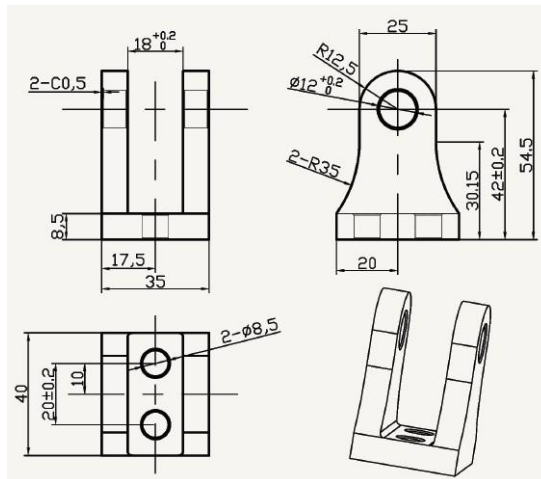


Part No.: 38F

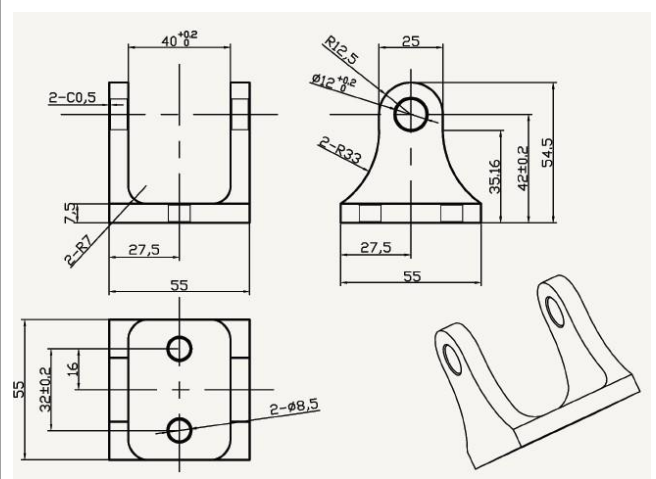


Part No.: 38R

LA52M



Part No.: 52F



Part No.: 52R