



# Linear Actuator

Literature



Linear Motion Products & Technology

High speed High precision

Multifunctional integration

Ecology first

Humanistic technology



TAIWAN EXCELLENCE GOLD AWARD 2005

### Ball screw

- For Heavy-Load Drive



TAIWAN EXCELLENCE 2004

### Positioning Guideway



TAIWAN EXCELLENCE GOLD AWARD 2004

### Linear Synchronous Motor

- Coreless Type (LMC)



TAIWAN EXCELLENCE 2002

### Linear Actuator

- LAN for Hospital
- LAM for Industrial
- LAS Compact Size
- LAK Controller



TAIWAN EXCELLENCE GOLD AWARD 2003

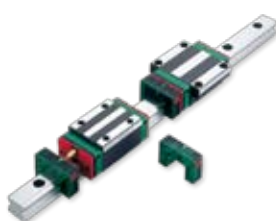
### Single Axis Robot

- For Semiconductor & Electronic (KK Robot)
- For Automation (KS, KA Robot)



### Linear Synchronous Motor

- Iron-core Type (LMS)



TAIWAN EXCELLENCE SILVER AWARD 2007, 2002

### Linear Guideway

- HG/EG/RG/MG Type
- Self-Lubricating (E2)
  - Low Noise (Q1)
  - Air Jet (A1)



### Positioning Measurement System



TAIWAN EXCELLENCE SILVER AWARD 2006, 2001, 1993

### Ball screws

- Ground/Rolled
- High Speed (High Dm-N Value/Super S Series)
  - Heavy Load (Cool type II)
  - Self-Lubricating (E2)
  - Rotating Nut (R1)



### Linear Motor X-Y Robot



TAIWAN EXCELLENCE SILVER AWARD 2006

### TMS Direct-Driven Positioning System



### Linear Motor Gantry

# ***HIWIN***<sup>®</sup>

## **Linear Actuator**

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\*\* The specifications in this catalog are subject to change without notification.



# 1.

## Sizing of *HIWIN* Linear Actuator

### Step 1: Determine the load and speed

Consider the operating environment, compare the specifications of various types of Hiwin Linear Actuators and select the most appropriate model.

### Step 2: Stroke and retracted length sizing

Consider the dimensions of the operating area and select the appropriate actuator.

### Step 3: Duty cycle

Duty cycles should not exceed 10%. If the duty cycle exceeds 10%, the life of the actuator can be reduced. Users should make sure that no torsion or impact forces are acting upon the actuator.

### Step 4: Controller Sizing

The selection of controller should be made according to the power requirements of the actuator. Other considerations are number of axes, type of limit switches and the version of keypad.

# 2.

## Installation of *HIWIN* Linear Actuator

1. Please ensure that the extension tube is at the "lowest position". The term "lowest position" refers to the position where there is no further movement towards the DC motor while the actuator is powered on.
2. The front and end joints of the linear actuator should be mounted onto two fixed positions on the main chassis. Locations of these fixed positions should be chosen according to the stroke length of the linear actuator.
3. After the fixed positions have been selected, install the fixtures onto these selected positions of the main chassis. These fixtures are used to fix the front and end joints of the linear actuator.
4. Assemble the front and end joints of the linear actuator onto the two fixtures using fixture bolts. Please ensure that the fixture bolts rotate freely when this step is completed. Also, please ensure that the fixture bolts do not become "loose" and fall off during operation.
5. The chassis of the linear actuator should be mounted in the horizontal direction if it is going to be operated in this direction and likewise for vertical operation. Damages could occur to the actuator if these instructions are not followed.
6. Users of Hiwin actuators please make sure that:
  - The travel distance of the actuator matches the design requirements.
  - The upper and lower limit switches are functioning.
  - The motor stops when the extension tube reaches the upper and lower limit switches.

\* If the actuator does not operate as described above, please repeat steps 2 thru 4 to make sure that the installation is correct.

\*\* All *HIWIN* linear actuators and control boxes have to be grounded.

# 3.

## **Safety Operating Regulation of *HIWIN* Linear Actuators**

1. A no-load operation may damage the actuator, especially if the actuator has external limit switches installed.
2. Please make sure actuators are not installed where the motor or any mechanical parts can be damaged due to dangerous environments.
3. Make sure the DC voltage supplied to the actuator matches the specifications on the actuator. The power supply should supply enough power under maximum load.
4. Under extreme load situations the motor will try to draw more than the rated current. It is the operator's duty to ensure that the power supply does not provide more current than specified on the actuator. Excessive current will cause wiring damage and possible failure to the actuator. Unless otherwise specified, our actuators have a duty cycle rating of 10%. The duty cycle is defined as two minutes continuous operation, followed by 18 minutes of non-operation. If the duty cycle exceeds 10%, please consider over-current protection measures by installing protection devices such as fuses or an over-current detection between power supply and actuator input end. Detection signals are to be used for operation interruption or shut down of the actuators.
5. Thermal protection is included on some linear actuator models by shutting down the motor when over-heated.
6. If the actuator was purchased without limit switches, please install appropriate limit switches that comply with the power supply and over-current protection devices that are used.
7. Actuator's motors are DC driven. When the motor is not in operation, please short the ends of the power input to provide additional locking power. Make sure the controller power is shut off prior to shorting the motor inputs. The movement of the extension tube can be reversed by changing the polarity of voltage supplied.
8. Make sure the actuator operates within its stroke length if it is not supplied with limit switches or over load protection devices.
9. The actuator should operate within the rated load specifications.
10. Please make sure the actuator is operating within the IP rating for dust and water.
11. For applications requiring high accuracy and tight speed requirements please inquire about Hiwin's KK-series linear stages.
12. Electrical self locking should be implemented if the Hiwin controller is not being used, to increase the actuator's locking force.

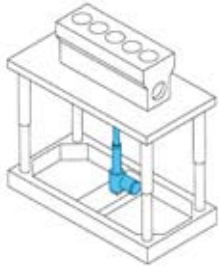
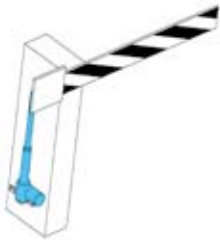
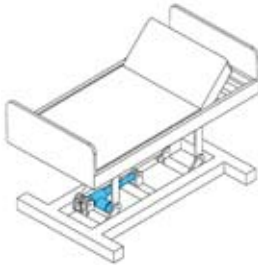
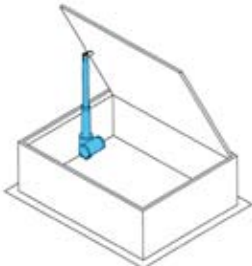

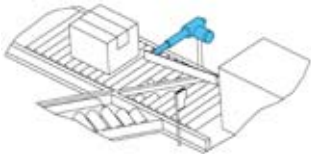


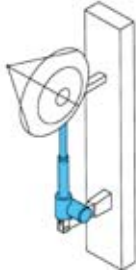
# 4.

## Features & Applications

### 4-1 Features of Linear Actuator

- |                                       |                      |
|---------------------------------------|----------------------|
| 1. Light weight and compact structure | 4. Low noise         |
| 2. User friendly                      | 5. High rigidity     |
| 3. Simple installation                | 6. Competitive price |

### 4-2 Applications

		
		<ul style="list-style-type: none"> <li>● Automation equipment</li> <li>● Automatic windows and doors</li> <li>● Automatic cupboard</li> <li>● Automatic satellite antenna</li> <li>● Automatic wheel chair</li> <li>● Automatic hospital bed</li> <li>● Entertainment facilities</li> <li>● Household appliances</li> <li>● Automatic drawing table</li> <li>● Home care facilities</li> <li>● Patient lifter</li> <li>● Massage chair</li> <li>● Traffic facilities</li> <li>● Office automation</li> <li>● Automatic PC desk</li> <li>● Hospitals and rehabilitation centers</li> <li>● Nursing homes</li> </ul>
		
		

# 5.

## HIWIN LAM Series (1)

**LAM**

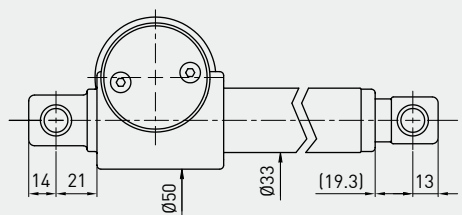
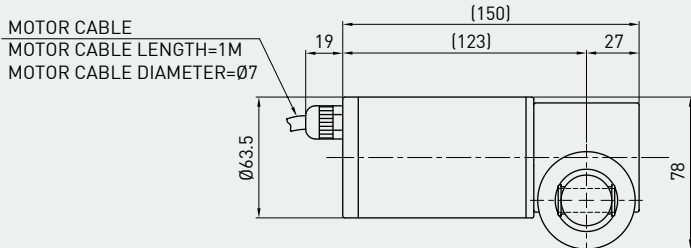
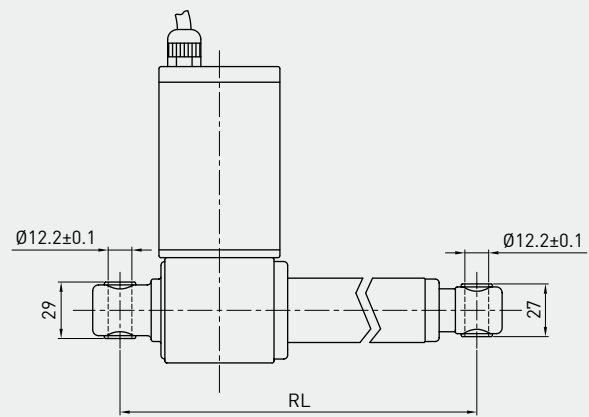
CE



Screw type	Ball screw / ACME
Weight*	2.31 kg
Protection	IP 54
Compatible controller	LAK2/LAK2LR
Working temp	+5°C ~40°C

- \* Stroke length 100 mm
- \* Option: (1) IP65
  - (2) Gear box material : Steel (Standard: AL)
  - (3) Gear box housing turned 90°
  - (4) 36VDC motor

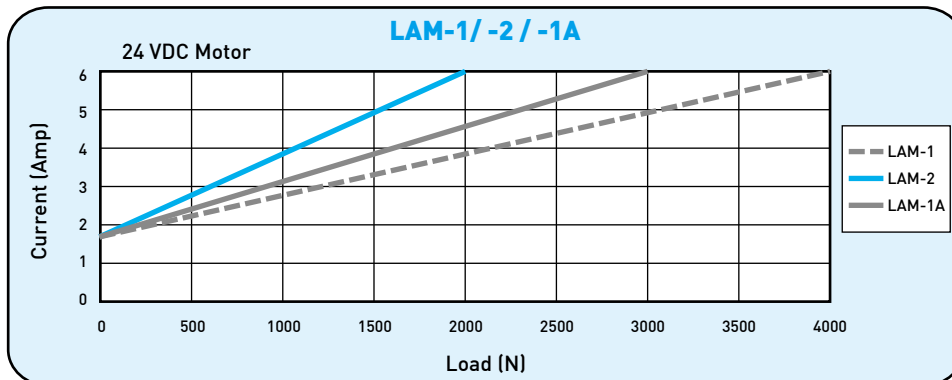
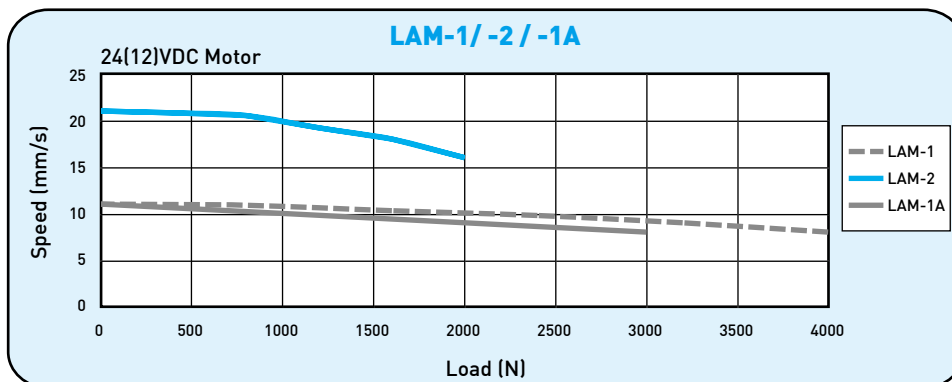
• RL=S+153 (LAM-1/-2)  
 RL=S+162 (LAM-1A)  
 RL:Retracted length  
 S:Stroke length



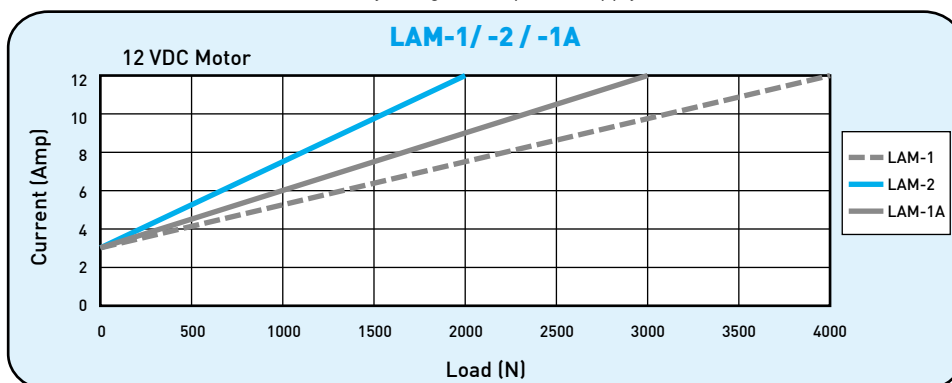


## LAM Specifications

Model	Screw type	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S							Duty cycle %	Max.current (A)	
					Load=Max.	Load=0	100	150	200	250	300	350	400		12VDC	24VDC
LAM-1	Ballscrew	4000	3000	4000	8	11	100	150	200	250	300	350	400	10	12	6
LAM-2	Ballscrew	2000	2000	1200	16	21	100	150	200	250	300	350	400	10	12	6
LAM-1A	ACME	3000	3000	3000	8	11	100	150	200	250	300	350	400	10	12	6

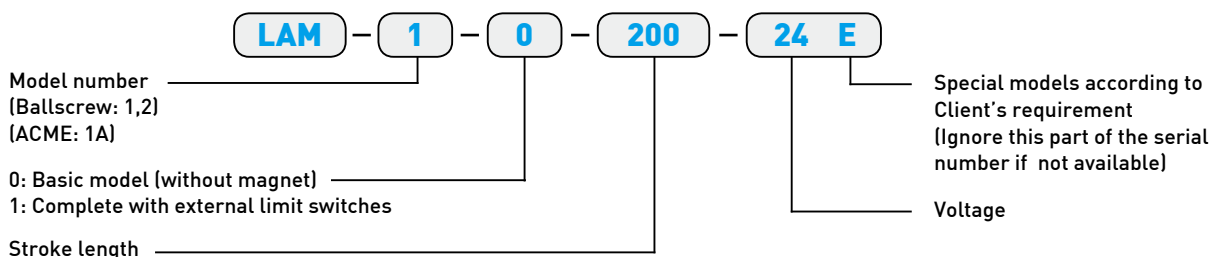


\*\*Note: The test results are obtained by using 24VDC power supply.



\*\*Note: The test results are obtained by using 12VDC power supply.

## Ordering Information



# 5.

## HIWIN LAM Series (2)

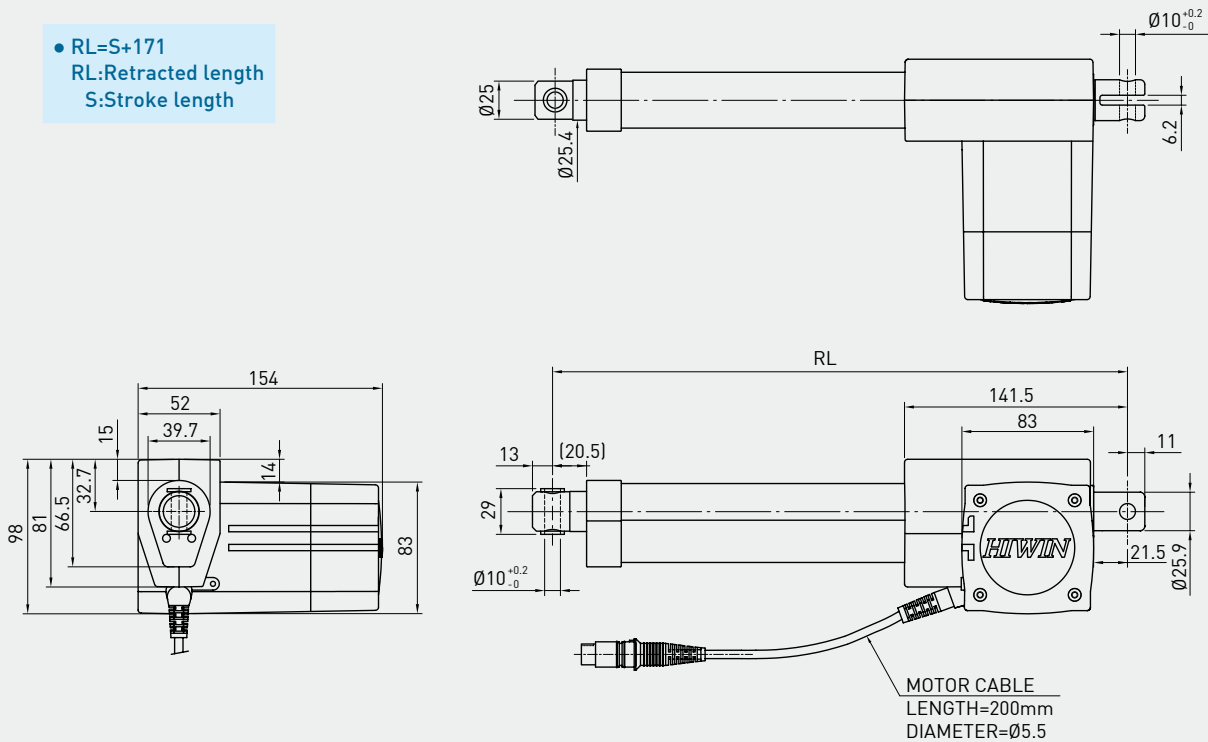
### LAM3



Screw type	ACME
Weight*	2.95 kg
Protection	IP 54
Compatible controller	LAK2D/LAK2B LAK4/LAK6B
Working temp	+5°C ~-40°C

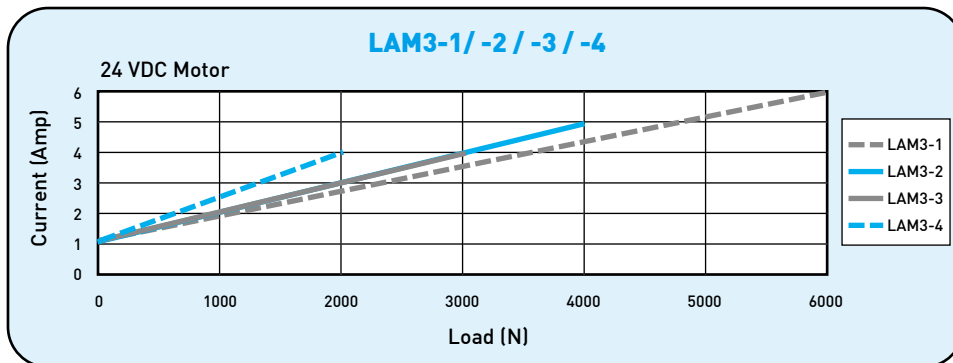
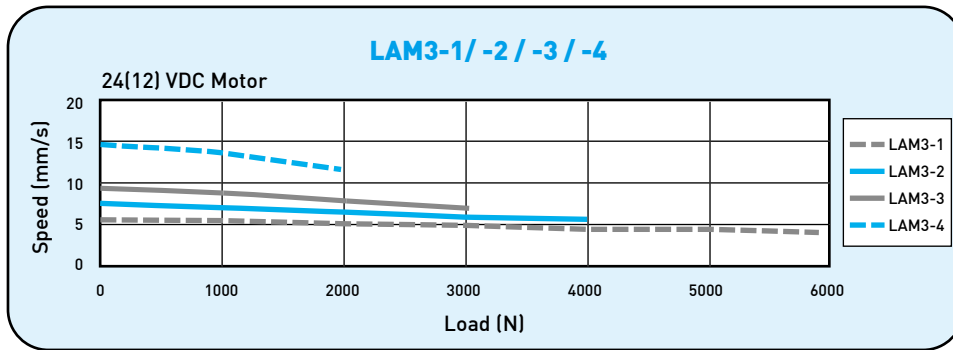
- \* Stroke length 200 mm
- \* Option: (1) IP 66  
(2) Safety Nut (RL=S+183)  
(3) Back fixture turned 90°

• RL=S+171  
RL: Retracted length  
S: Stroke length

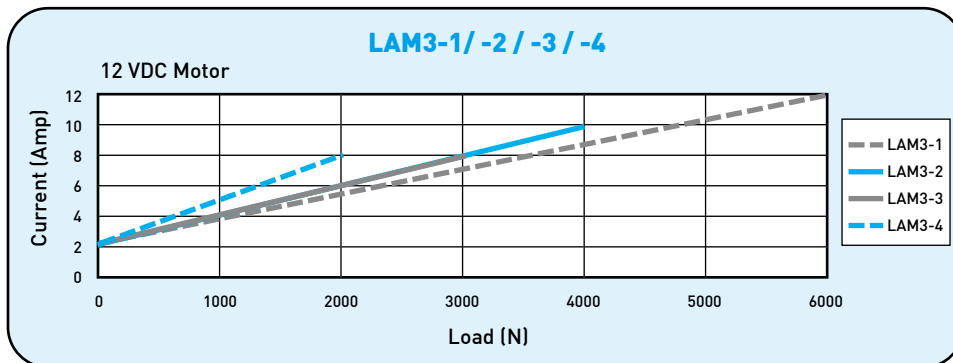


## • LAM3 Specifications

Model	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S							Duty cycle %	Max.current (A)	
				Load=Max.	Load=0	100	150	200	250	300	350	400		24VDC	12VDC
LAM3-1	6000	5000	5000	4	5.5	100	150	200	250	300	350	400	10	6	12
LAM3-2	4000	4000	4000	5.5	7.5	100	150	200	250	300	350	400	10	5	10
LAM3-3	3000	3000	3000	7	9	100	150	200	250	300	350	400	10	4	8
LAM3-4	2000	2000	1500	11.5	14.5	100	150	200	250	300	350	400	10	4	8

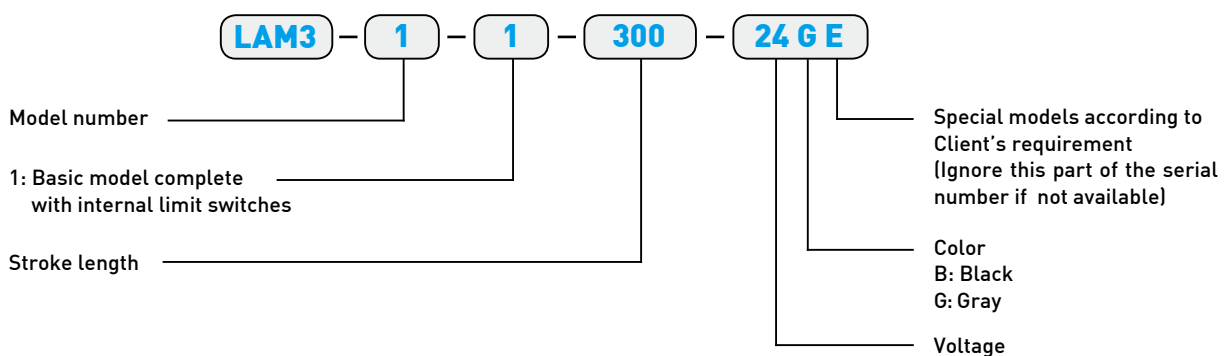


\*\*Note: The test results are obtained by using 24VDC power supply.



\*\*Note: The test results are obtained by using 12VDC power supply.

## • Ordering Information



# 6.

## HIWIN LAI Series

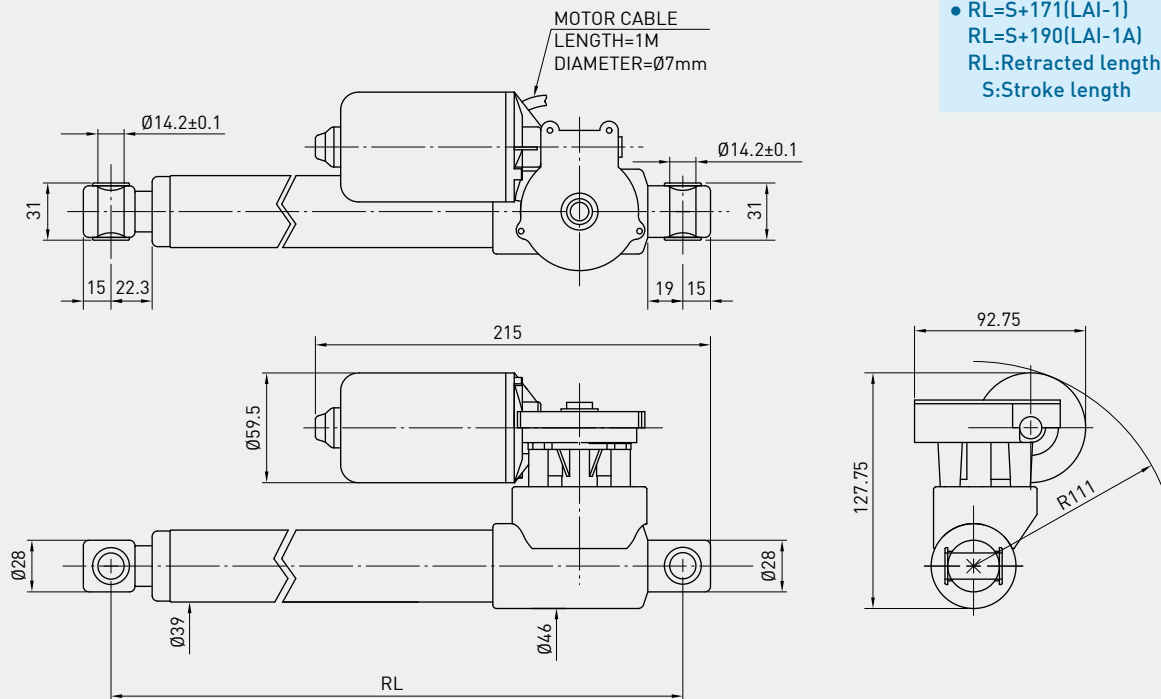
### LAI



Screw type	Ball screw / ACME
Weight*	2.4 kg
Protection	IP 20
Compatible controller	LAK2/LAK2LR LAK2B/LAK6B
Working temp	+5°C ~-40°C

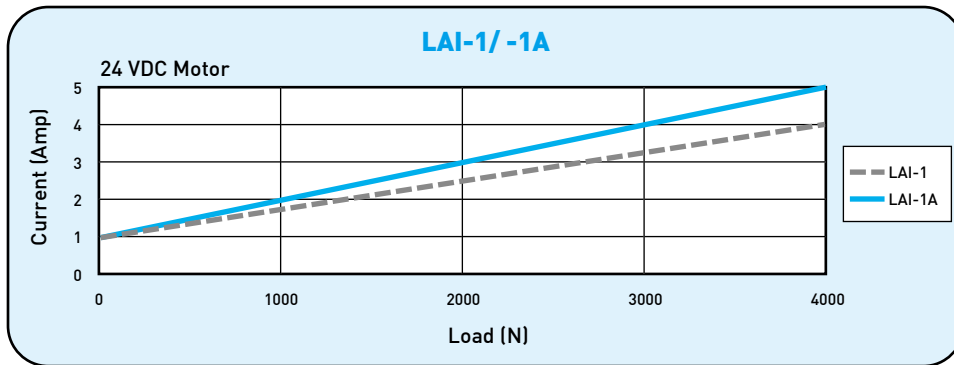
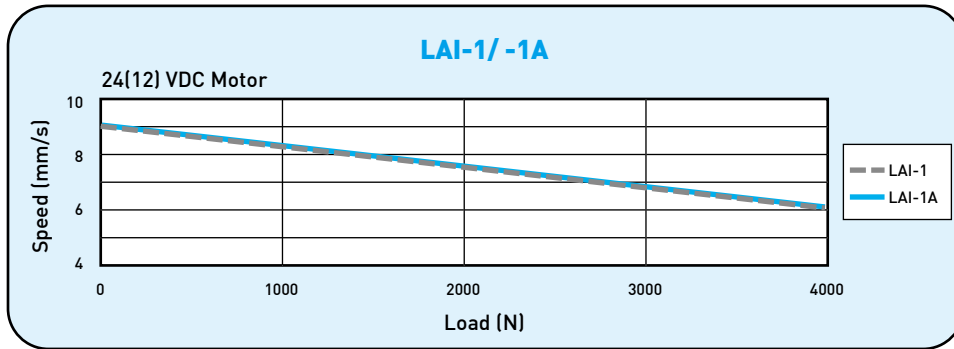
\* Stroke length 200 mm

\* Option: IP 66

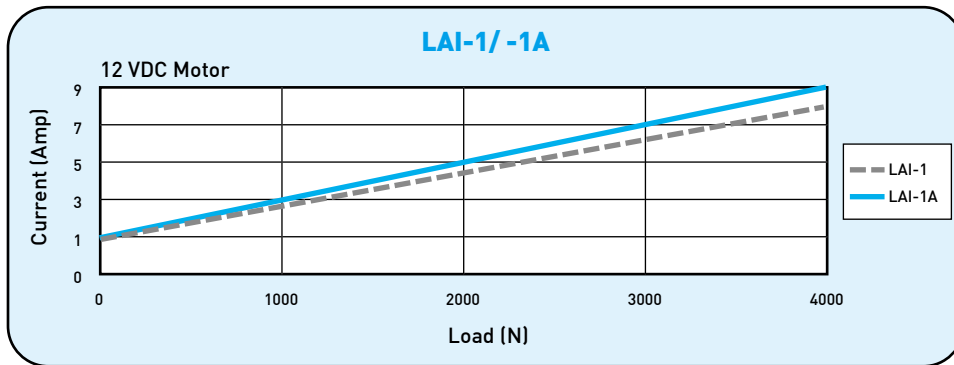


## • LAI Specifications

Model	Screw type	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S				Duty cycle %	Max.current (A)		
					Load=Max.	Load=0	100	150	200	250		300	12VDC	24VDC
LAI-1	Ballscrew	4000	4000	1200	6	9	100	150	200	250	300	10	8	4
LAI-1A	ACME	4000	4000	3000	6	9	100	150	200	250	300	10	9	5

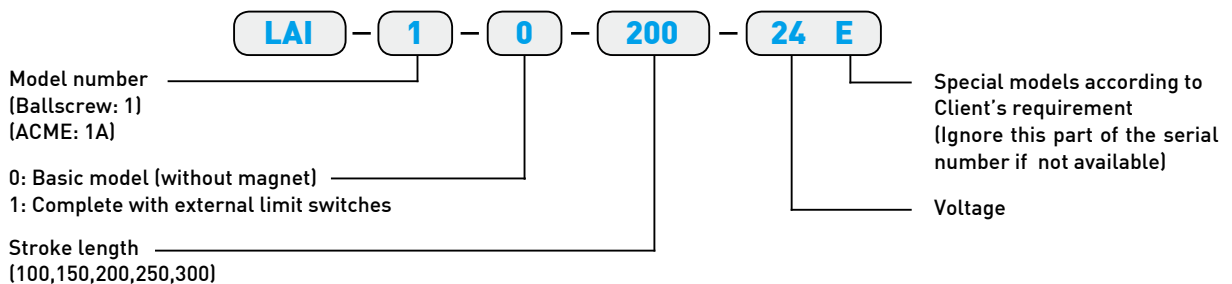


\*\*Note: The test results are obtained by using 24VDC power supply.



\*\*Note: The test results are obtained by using 12VDC power supply.

## • Ordering Information



# 7.

## HIWIN LAS Series (1)

**LAS**



Screw type	ACME
Weight*	1.04 kg
Protection	IP 54
Compatible controller	LAK2
Working temp	+5°C ~40°C

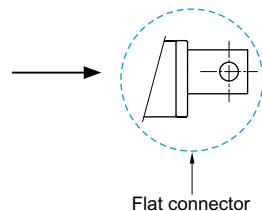
\* Stroke length 200 mm

\* Option: (1) IP65

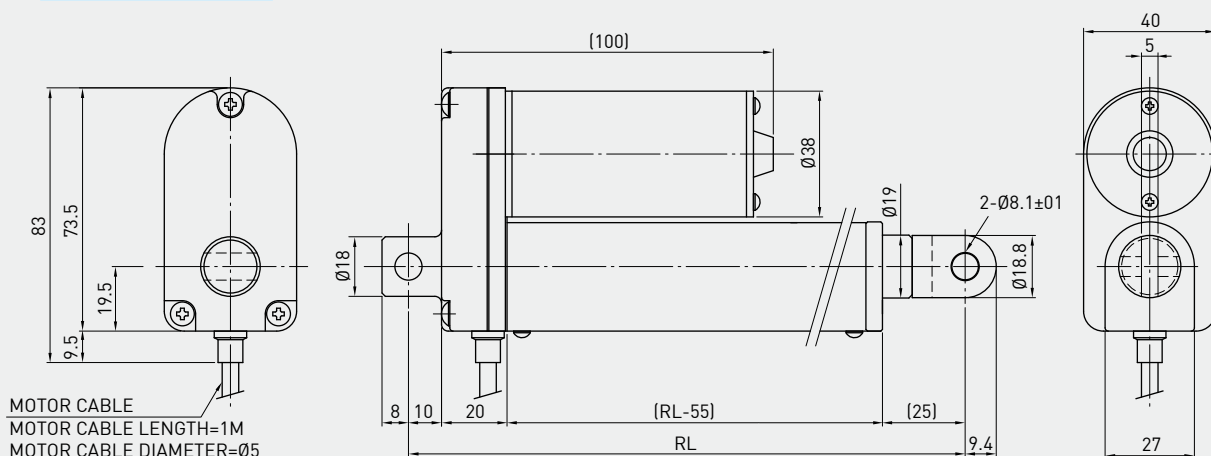
(2) Gear box housing turned 90°

(3) Rod end with flat connector (RL=S+110)

(4) 36VDC motor

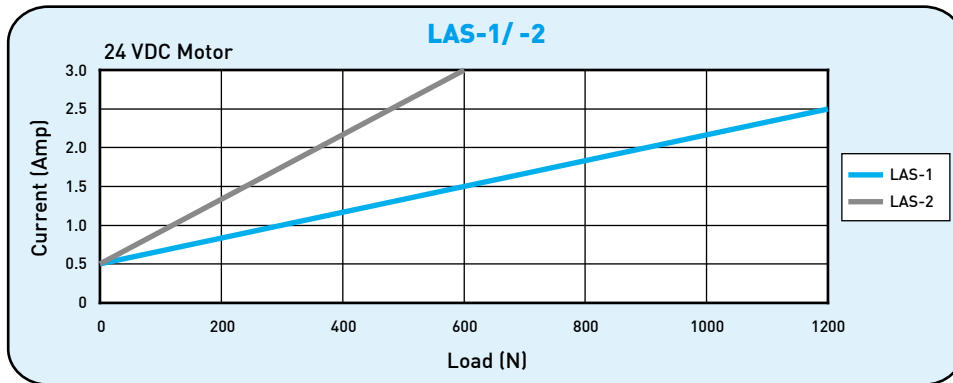
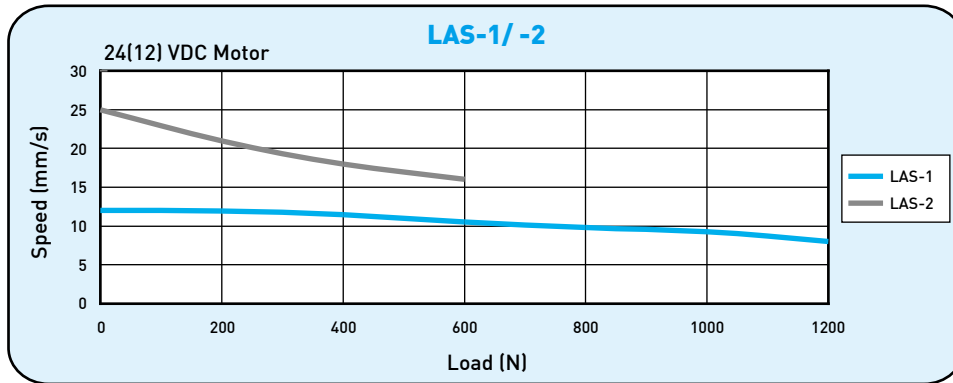


- RL=S+119  
RL: Retracted length  
S: Stroke length

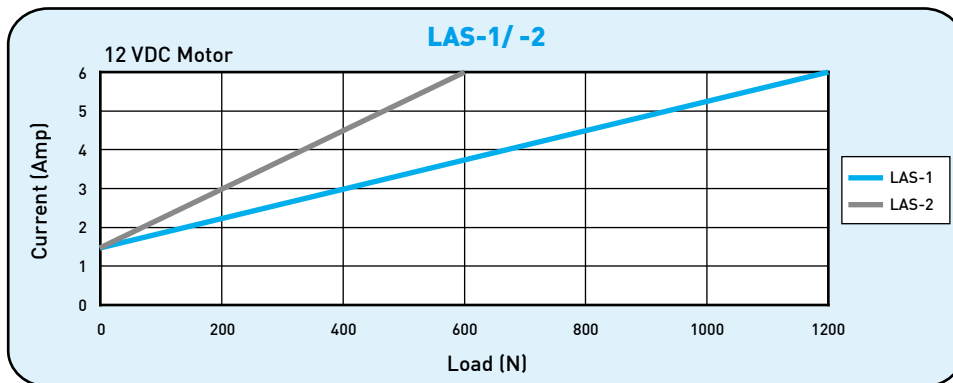


## • LAS Specifications

Model	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S					Duty cycle %	Max.current (A)	
				Load=Max.	Load=0	50	100	150	200	250		12VDC	24VDC
LAS-1	1200	1200	800	8	12	50	100	150	200	250	10	6	2.5
LAS-2	600	600	300	16	25	50	100	150	200	250	10	6	3

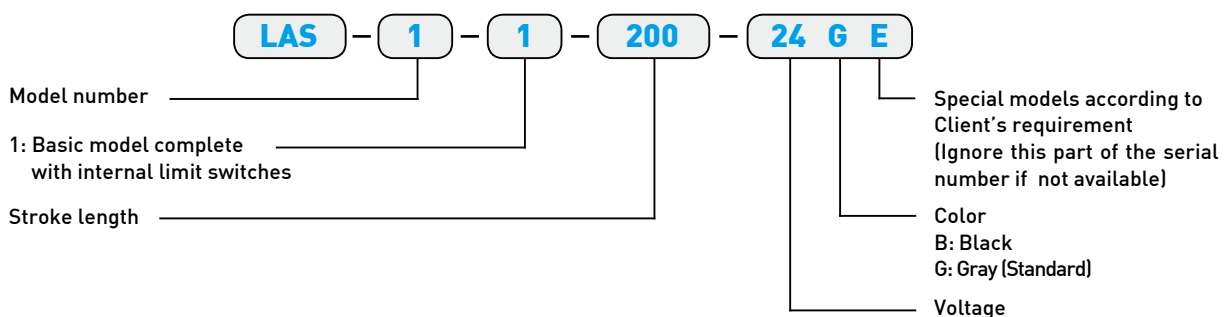


\*\*Note: The test results are obtained by using 24VDC power supply.



\*\*Note: The test results are obtained by using 12VDC power supply.

## • Ordering Information



# 7.

## HIWIN LAS Series (2)

**LAS3**



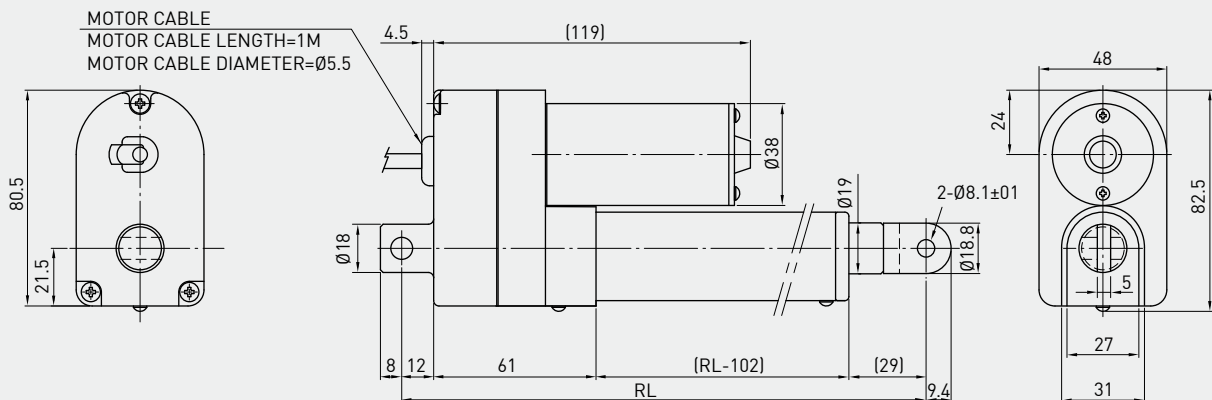
Screw type	ACME
Weight*	1.27 kg
Protection	IP 54
Compatible controller	LAK2
Working temp	+5°C ~-40°C

Position feedback specifications (Optical Sensor)		
Supply voltage	24VDC	12VDC
Output	High level 24VDC Low level 0.2v/40mA PNP* PS. Open collector	High level 12VDC Low level 0.2v/40mA PNP* PS. Open collector

\* Stroke length 200 mm

- \* Option: (1) IP65  
 (2) position feedback  
 (3) Potentiometer 10k ohm (RL=S+154)  
 (4) NPN output (Optical sensor)  
 (5) TTL output (Optical sensor)  
 (6) 36VDC motor

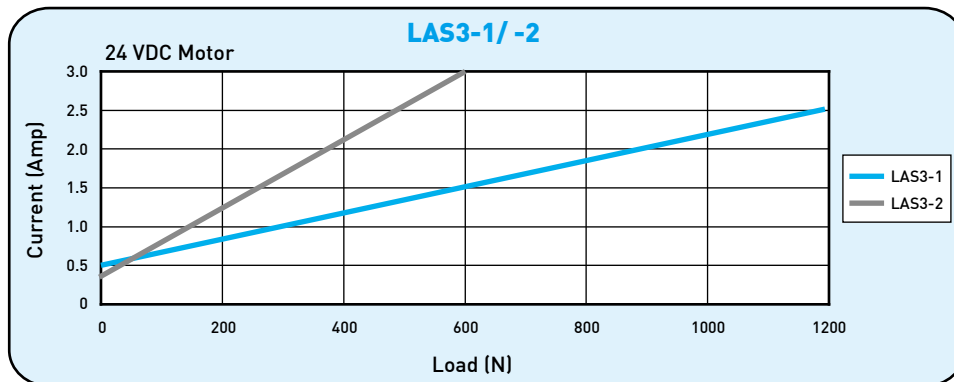
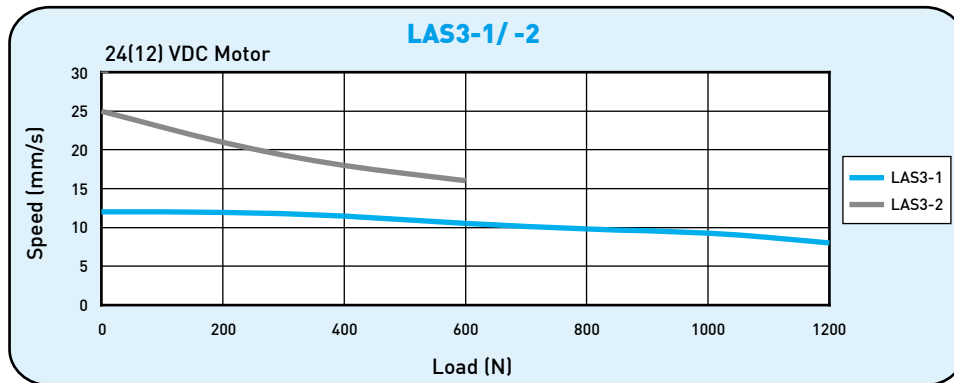
• RL=S+146  
 RL: Retracted length  
 S: Stroke length



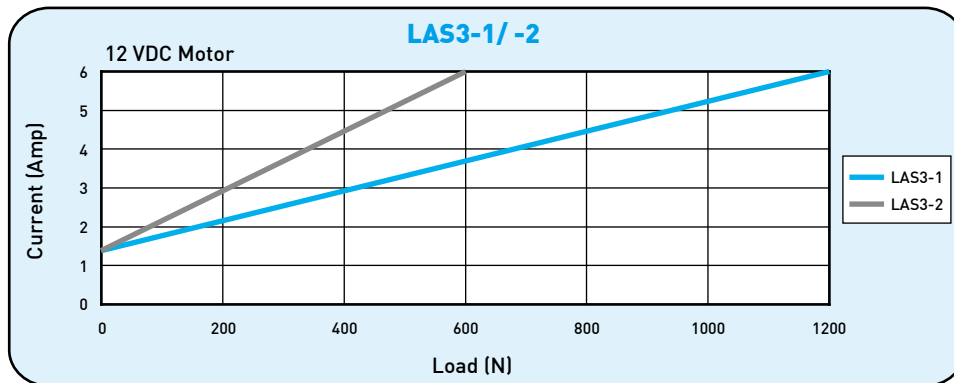


### • LAS3 Specifications

Model	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S				Duty cycle %	Max.current (A)		Optical Sensor Resolution (mm/pulse)	Potentiometer Resolution (Ohm/mm)	
				Load=Max.	Load=0	50	100	150	200		250	12VDC			24VDC
LAS3-1	1200	1200	800	8	12	50	100	150	200	250	10	6	2.5	0.3175	21
LAS3-2	600	600	300	16	25	50	100	150	200	250	10	6	3	0.635	10.5

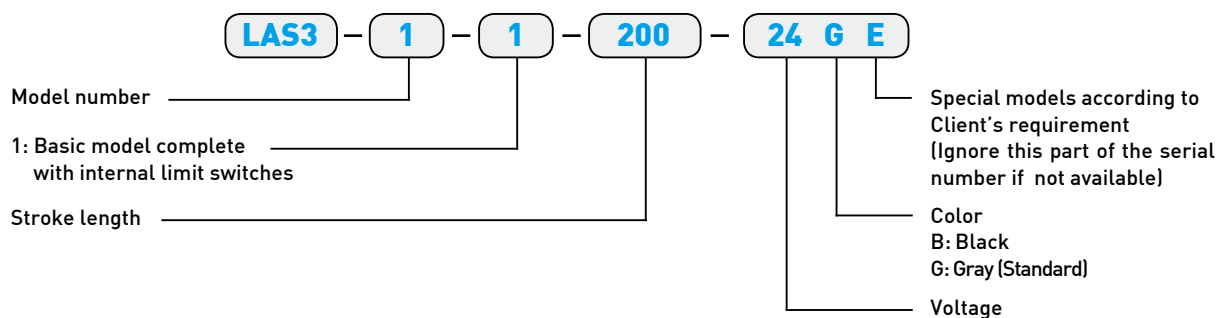


\*\*Note: The test results are obtained by using 24VDC power supply.



\*\*Note: The test results are obtained by using 12VDC power supply.

### • Ordering Information



# 7.

## HIWIN LAS4 Series

### LAS4

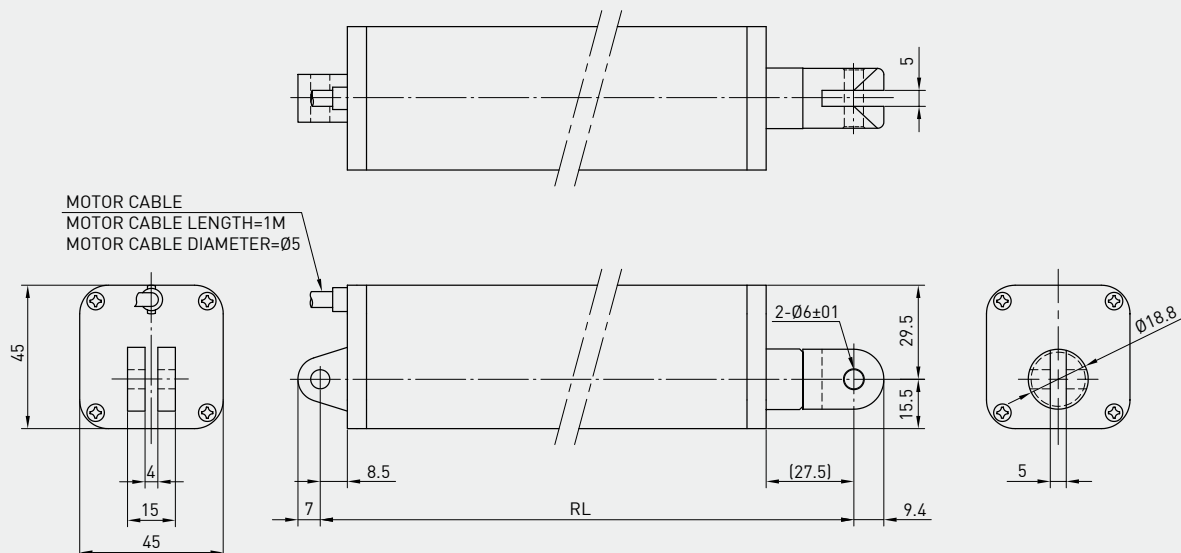


Screw type	ACME
Weight*	1.36 kg
Protection	IP 54
Compatible controller	LAK2
Working temp	+5°C ~40°C

\* Stroke length 200 mm

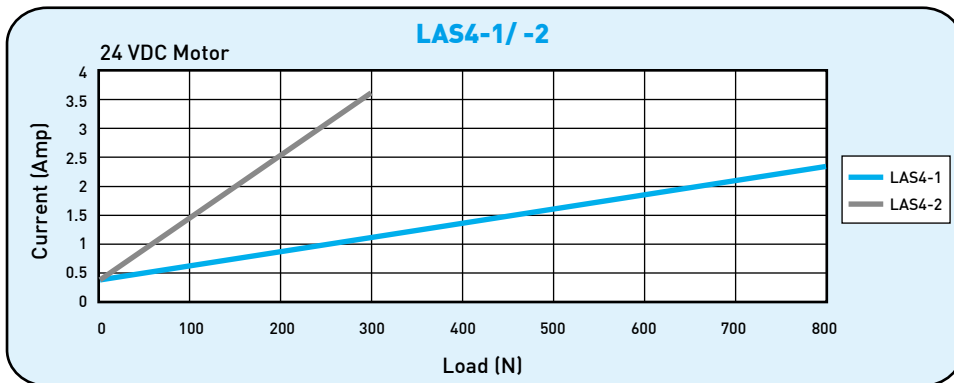
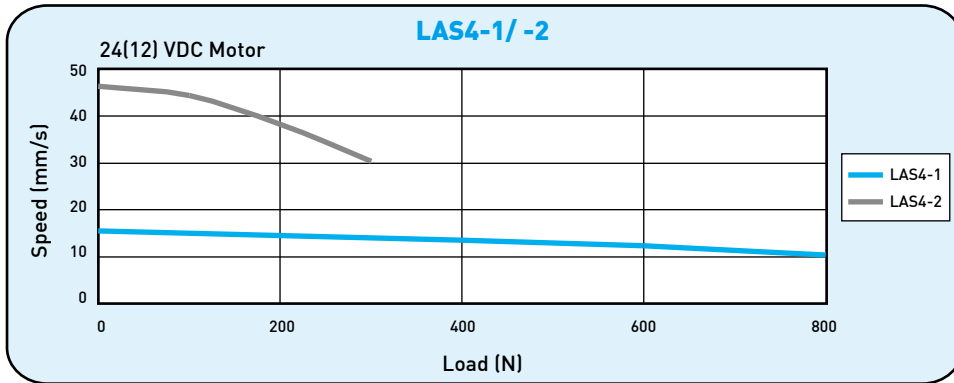
\* Option: (1) IP65

- $RL=S+222.5$   
RL: Retracted length  
S: Stroke length

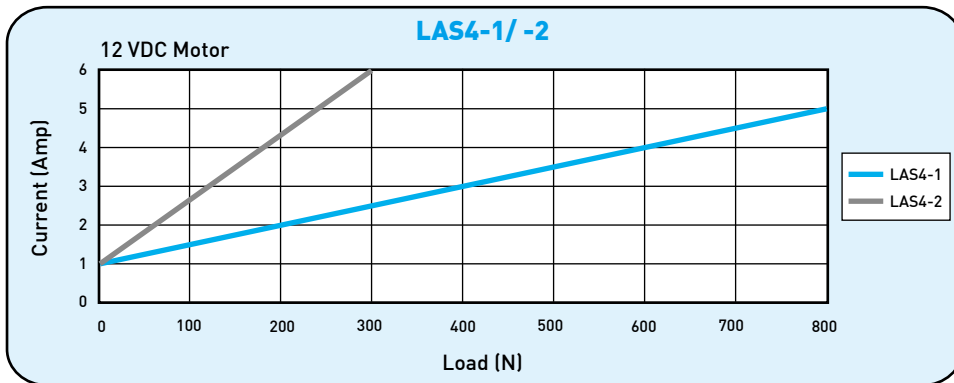


## • LAS4 Specifications

Model	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S					Duty cycle %	Max.current (A)	
				Load=Max.	Load=0	100	150	200	250	300		12VDC	24VDC
LAS4-1	800	800	600	10	15	100	150	200	250	300	10	5	2.3
LAS4-2	300	300	200	30	46	100	150	200	250	300	10	6	3.6

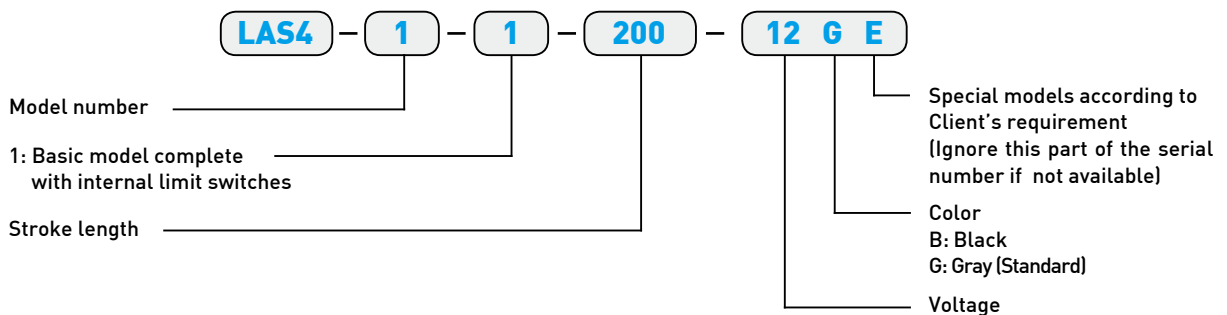


\*\*Note: The test results are obtained by using 24VDC power supply.



\*\*Note: The test results are obtained by using 12VDC power supply.

## • Ordering Information



# 8.

## HIWIN LAN Series (1)

**LAN1**

**CE**



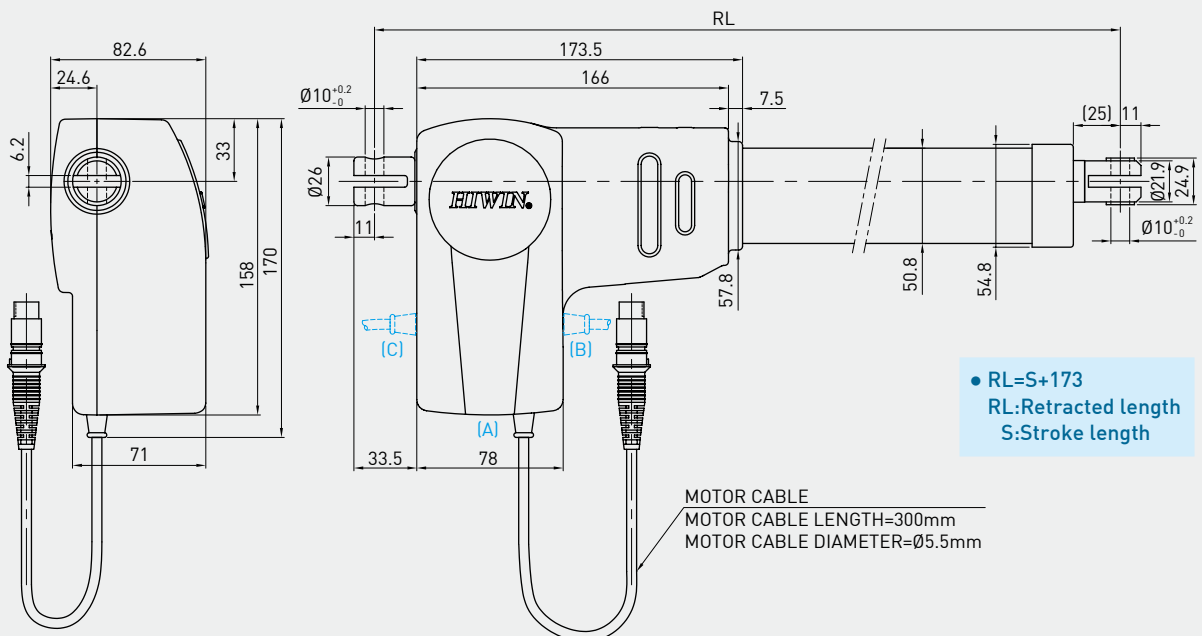
Screw type	ACME
Weight*	2.6 kg
Protection	IP 54
Compatible controller	LAK2B/LAK2D LAK4/LAK6B
Working temp	+5°C ~-40°C

Position feedback specifications (Hall Sensor)			
Supply voltage	24VDC	12VDC	5VDC
Output	High level 24VDC Low level 0.2v/10mA sink (NPN)	High level 12VDC Low level 0.2v/10mA sink (NPN)	TTL

\* Stroke length 200 mm

\* Option: (1) IP66

- (2) Position feedback
- (3) Safety nut ( RL=S+185)
- (4) Mechanical Spline (push only)( RL=S+223)
- (5) Back fixture turned 90°
- (6) Mechanical quick release(RL=S+230), Only for LAN1-4
- (7) Motor cable outlet : (A)Standard (B)Front (C)Back.
- (8) 36VDC motor

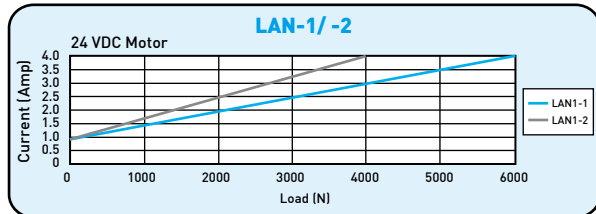
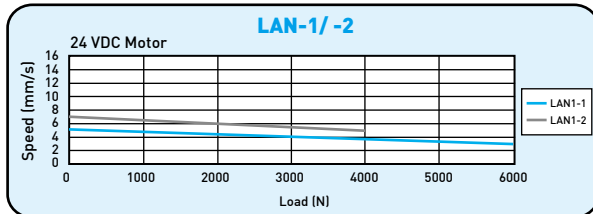


## • LAN1 Specifications

### Standard Motor

Model	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S					Duty cycle %	Max.current (A) 24VDC	Hall Sensor Resolution (mm/pulse)
				Load=Max.	Load=0	100	150	200	250	300			
LAN1-1	6000	5000	5000	2.7	5	100	150	200	250	300	10	4	0.3
LAN1-2	4000	4000	4000	5	7	100	150	200	250	300	10	4	0.5

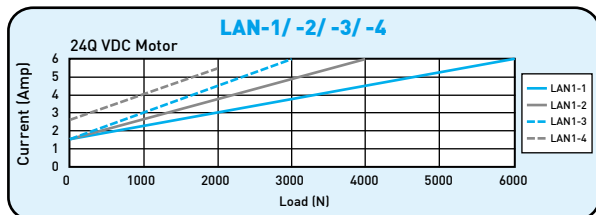
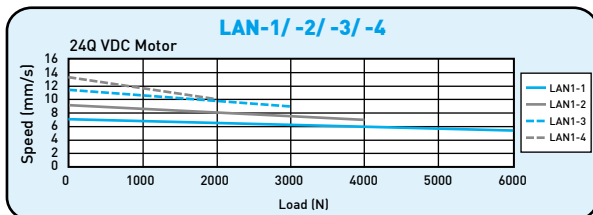
\*\*Note: The test results are obtained by using 24VDC power supply.



### Fast Motor 24Q

Model	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S					Duty cycle %	Max.current (A) 24VDC	Hall Sensor Resolution (mm/pulse)
				Load=Max.	Load=0	100	150	200	250	300			
LAN1-1	6000	5000	5000	5	7	100	150	200	250	300	10	6	0.3
LAN1-2	4000	4000	4000	7	9	100	150	200	250	300	10	6	0.4
LAN1-3	3000	3000	3000	9	11.5	100	150	200	250	300	10	6	0.5
LAN1-4	2000	2000	2000	12	17	100	150	200	250	300	10	5.5	0.8

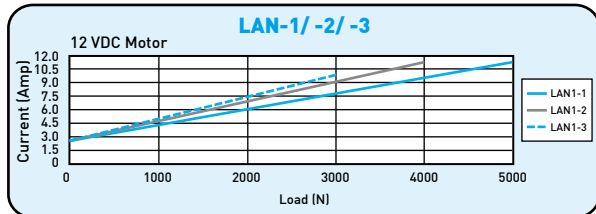
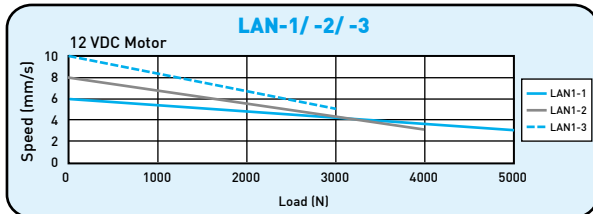
\*\*Note: The test results are obtained by using 24VDC power supply.



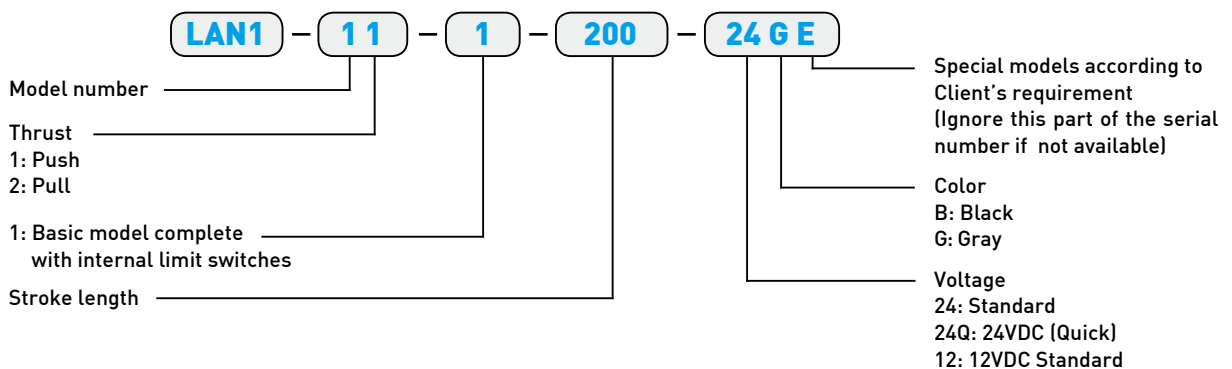
### 12VDC Motor

Model	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S					Duty cycle %	Max.current (A) 12VDC	Hall Sensor Resolution (mm/pulse)
				Load=Max.	Load=0	100	150	200	250	300			
LAN1-1	5000	5000	5000	3	6	100	150	200	250	300	10	11	0.3
LAN1-2	4000	4000	4000	3	8	100	150	200	250	300	10	11	0.4
LAN1-3	3000	3000	3000	5	10	100	150	200	250	300	10	10	0.5

\*\*Note: The test results are obtained by using 12VDC power supply.



## • Ordering Information



# 8.

## HIWIN LAN Series (2)

### LAN2



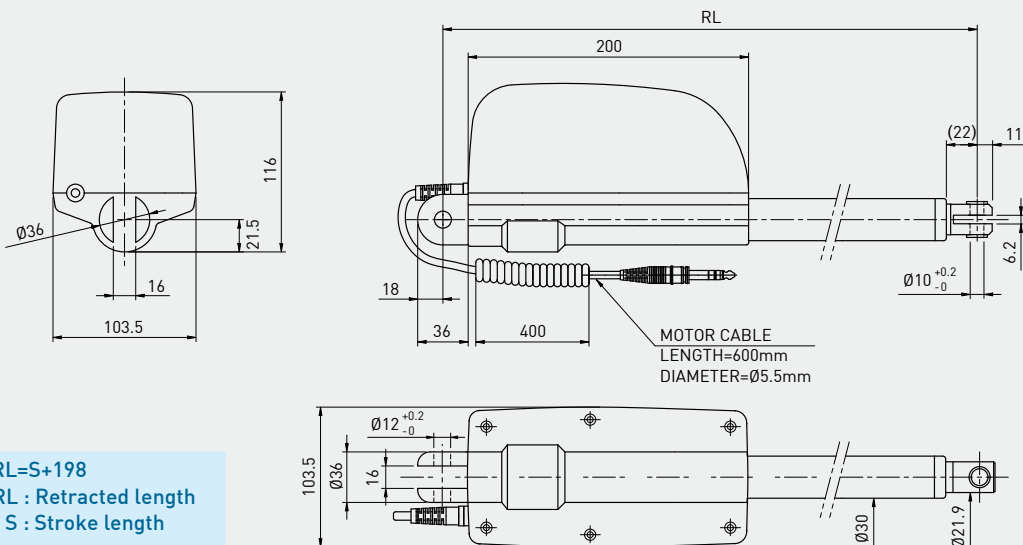
Screw type	ACME
Weight*	3.29 kg
Protection	IP 54
Compatible controller	LAK2/LAK2LR
Working temp	+5°C ~40°C

Position feedback specifications (Hall Sensor)		
Supply voltage	24VDC	5VDC
Output	High level 22VDC Low level 0.2v/10mA sink (NPN)	TTL

\* Stroke length 300 mm

\* Option: (1) IP66

- (2) Position feedback
- (3) Safety nut: RL=S+211
- (4) Spline(push only): RL=S+237
- (5) Mono jack-plug(Standard is stereo)
- (6) With down internal limit switch RL=S+202

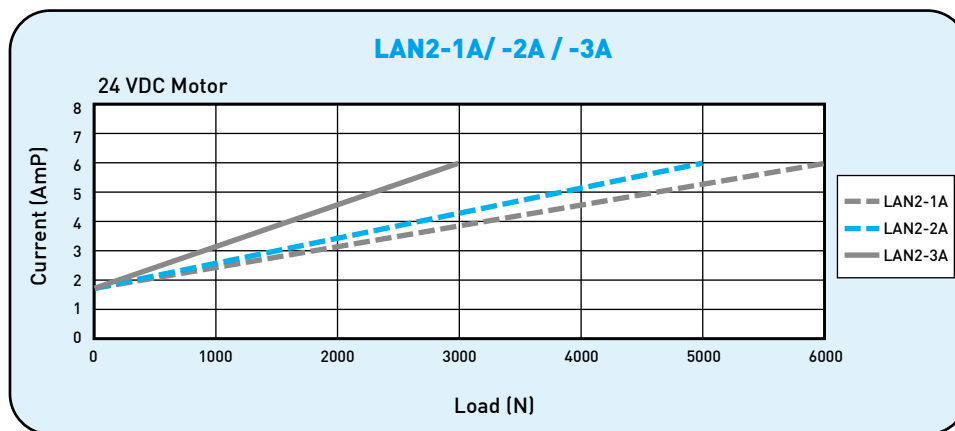
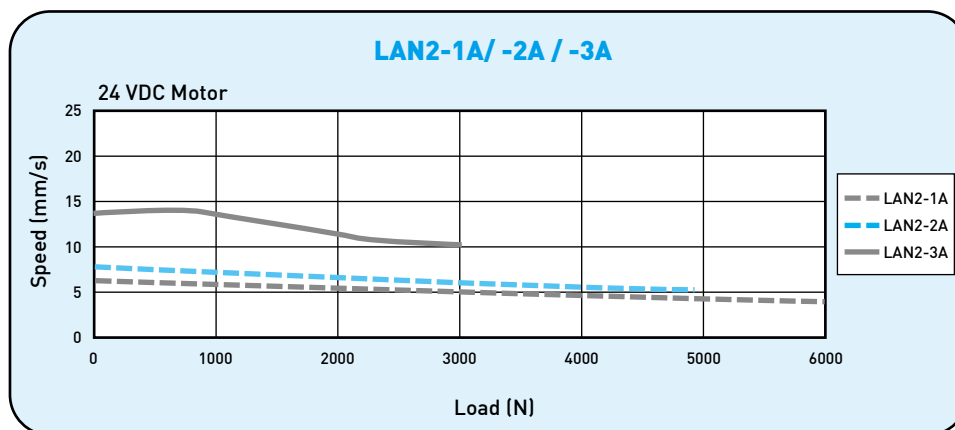


- RL=S+198  
RL : Retracted length  
S : Stroke length

## • LAN2 Specifications

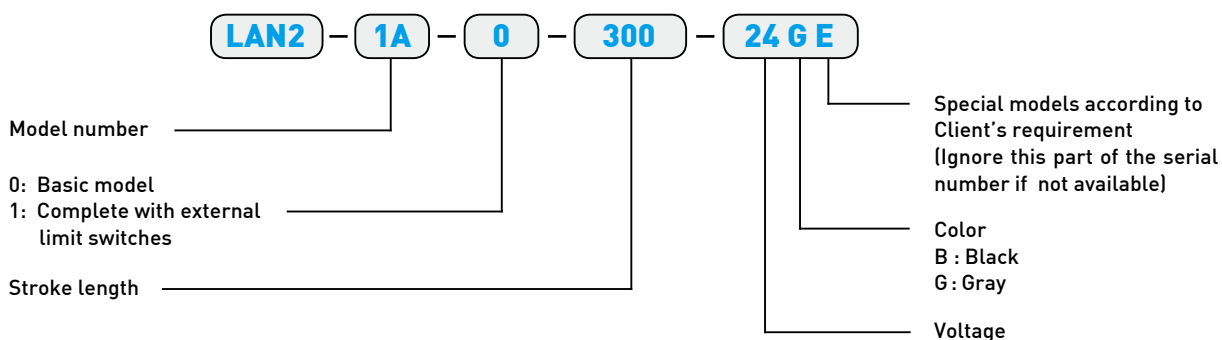
Model	Screw type	Thrust max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S						Duty cycle %	Max.current (A) 24VDC	Hall Sensor Resolution (mm/pulse)	
				Load=Max.	Load=0	100	150	200	250	300	350				400
LAN2-1A	ACME	6000	5000	4	6	100	150	200	250	300	350	400	10	6	0.3
LAN2-2A	ACME	5000	5000	5	7.5	100	150	200	250	300	350	400	10	6	0.4
*LAN2-3A	ACME	3000	3000	9	14	100	150	200	250	300	350	400	10	6	0.8

\* LAN2/-3A Holding Force (Push direction only).



\*\*Note: The test results are obtained by using 24VDC power supply.

## • Ordering Information



# 8.

## HIWIN LAN Series (3)

**LAN3**



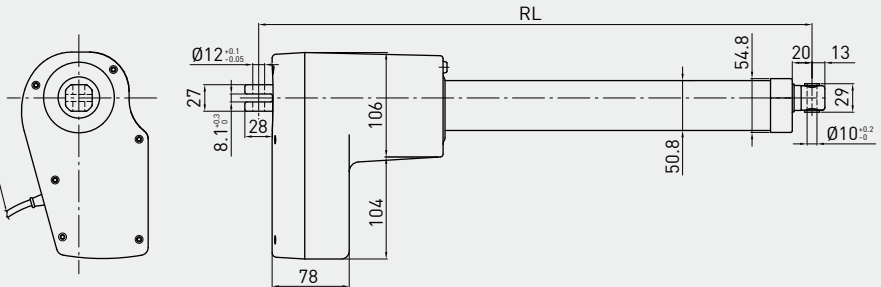
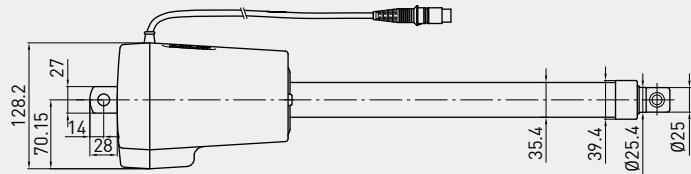
Screw type	ACME
Weight*	5.31 kg
Protection	IP 54
Compatible controller	LAK6B/LAK2J
Working temp	+5°C ~ 40°C

\* Stroke length 200 mm

\* Option: (1) IP66

- (2) potentiometer 10K ohm (RL=S+221, S < 200mm / RL= S+271, S:200~500mm)
- (3) Mechanical spline (RL=S+252, S < 200mm / RL= S+302, S:200~500mm)
- (4) Safety Nut (RL=S+222, S < 200mm / RL= S+272, S:200~500mm);  
Safety Nut+Mechanical spline(RL=S+259,S < 200mm / RL=S+309, S=200~500mm)
- (5) Mechanical quick release
- (6) Back fixture turned 90°
- (7) Fast motor 24Q
- (8) 36VDC motor

- RL=S+210  
Stroke < 200
- RL=S+260  
(Stroke:200~500mm)  
RL:Retracted length  
S:Stroke length



MOTOR CABLE  
MOTOR CABLE LENGTH=1000mm  
MOTOR CABLE DIAMETER=Ø5.5mm

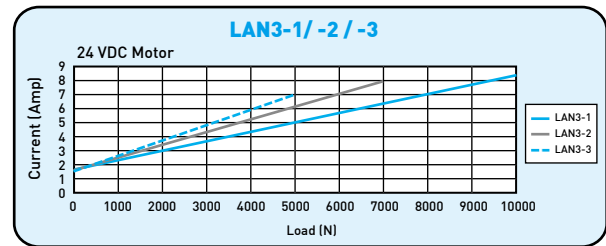
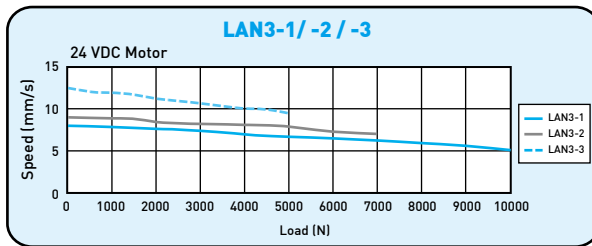


### • LAN3 Specifications

Model	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S										Duty cycle %	Max.current (A) 24VDC	Potentiometer Resolution (Ohm/mm)
				Load=Max.	Load=0	110	150	200	250	300	350	400	450	500				
LAN3-1	10000	6000	10000	5	8	110	150	200	250	300	350	400	-	-	10	8.3	37.5	
LAN3-2	7000	6000	7000	7	9	110	150	200	250	300	350	400	450	500	10	8	28	
LAN3-3	5000	5000	5000	9.5	12.5	110	150	200	250	300	350	400	450	500	10	7	22.5	

\* Stroke over 200mm(included), RL=S+260

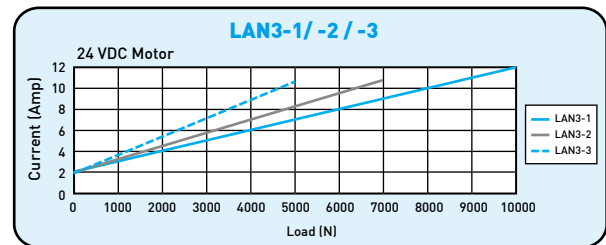
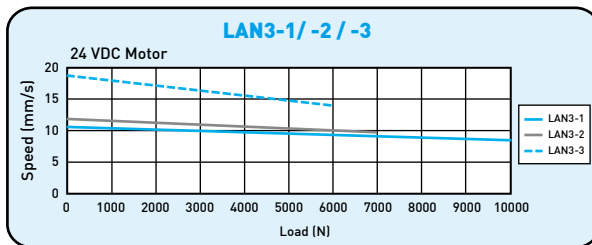
\* The max. stroke lengths with potentiometer : LAN3-1 Max.250mm, LAN3-2 Max.330mm, LAN3-3 Max.420mm



\*\*Note: The test results are obtained by using 24VDC power supply.

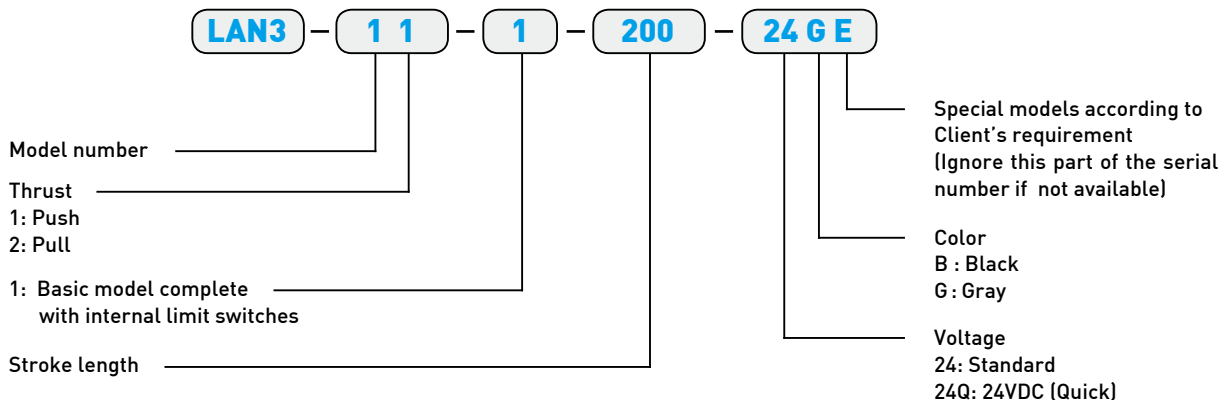
### Fast Motor 24Q

Model	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	Speed (mm/s)		Standard stroke (mm) : S										Duty cycle %	Max.current (A) 24VDC	Potentiometer Resolution (Ohm/mm)
				Load=Max.	Load=0	110	150	200	250	300	350	400	450	500				
LAN3-1	10000	6000	10000	8	11	110	150	200	250	300	350	400	-	-	10	12	37.5	
LAN3-2	7000	6000	7000	9	13	110	150	200	250	300	350	400	450	500	10	11	28	
LAN3-3	5000	5000	5000	13	18	110	150	200	250	300	350	400	450	500	10	11	22.5	



\*\*Note: The test results are obtained by using 24VDC power supply.

### • Ordering Information



# 8.

## HIWIN LAN Series (4)

### LAN4



Screw type	ACME
Weight*	2.33 kg
Protection	IP 54
Compatible controller	LAK2/LAK2LR
Working temp	+5°C ~-40°C

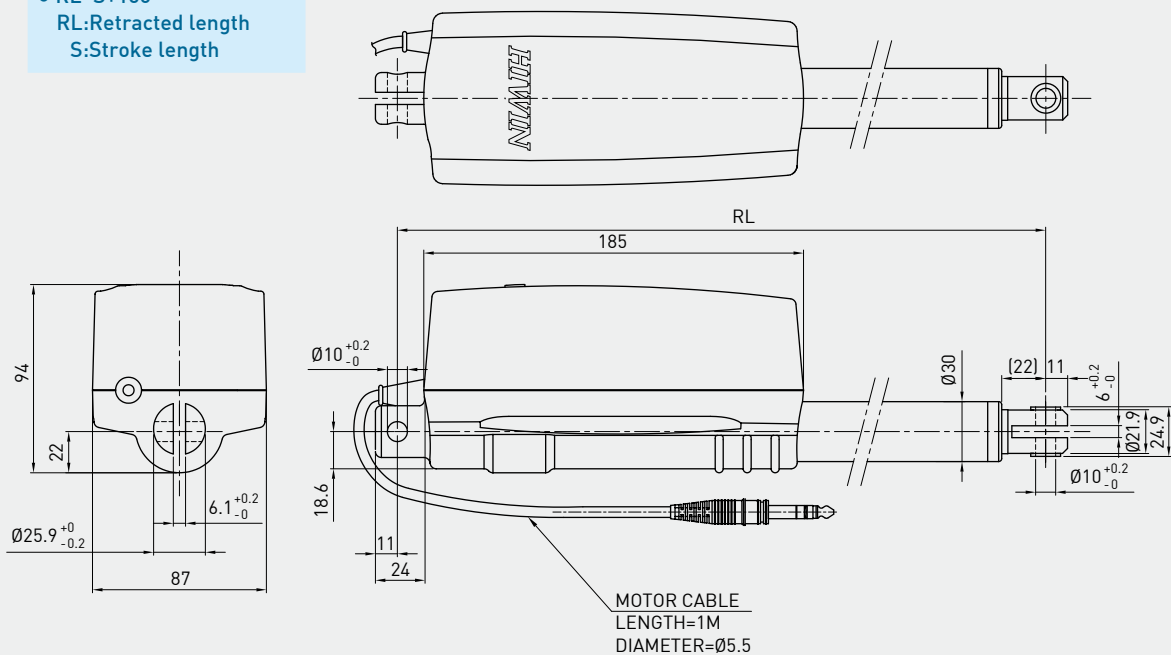
\* Stroke length 200 mm

\* Option: (1) IP66

(2) Safety Nut RL=S+174

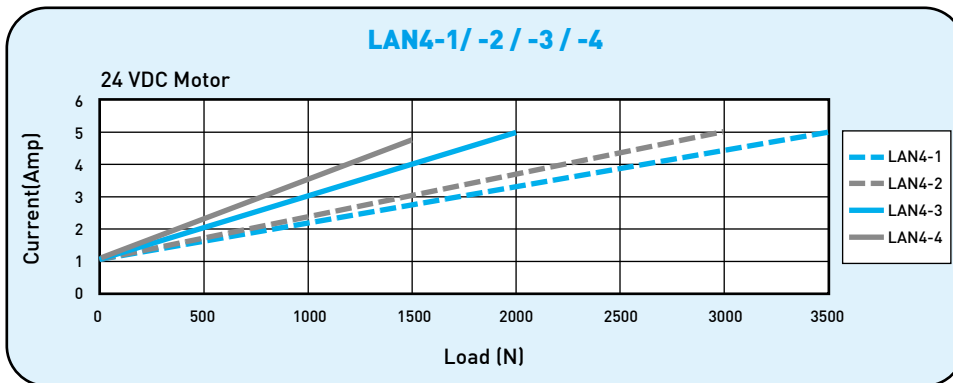
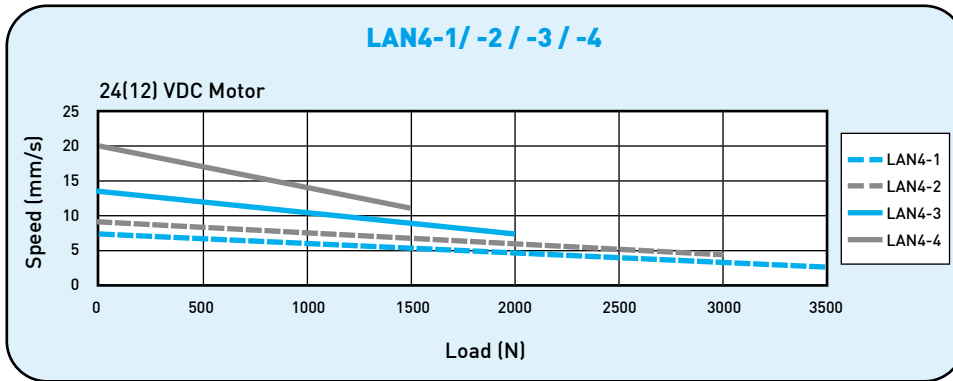
(3) Mono jack-plug(Standard is stereo)

• RL=S+160  
RL:Retracted length  
S:Stroke length

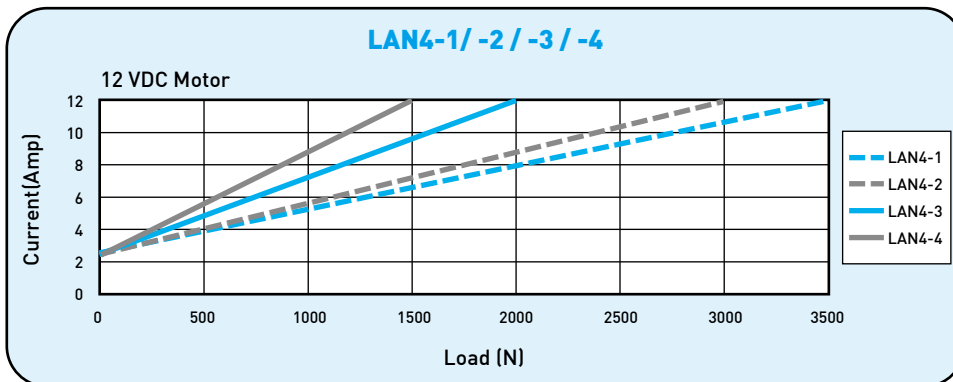


## • LAN4 Specifications

Model	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	force (mm/s)		Standard stroke (mm) : S							Duty cycle %	Max.current (A)	
				Load=Max.	Load=0	100	150	200	250	300	350	400		24VDC	12VDC
LAN4-1	3500	3500	3500	3.5	7	100	150	200	250	300	350	400	10	5	12
LAN4-2	3000	3000	3000	4.2	9	100	150	200	250	300	350	400	10	5	12
LAN4-3	2000	2000	2000	7	13	100	150	200	250	300	350	400	10	5	12
LAN4-4	1500	1500	1500	11	20	100	150	200	250	300	350	400	10	5	12

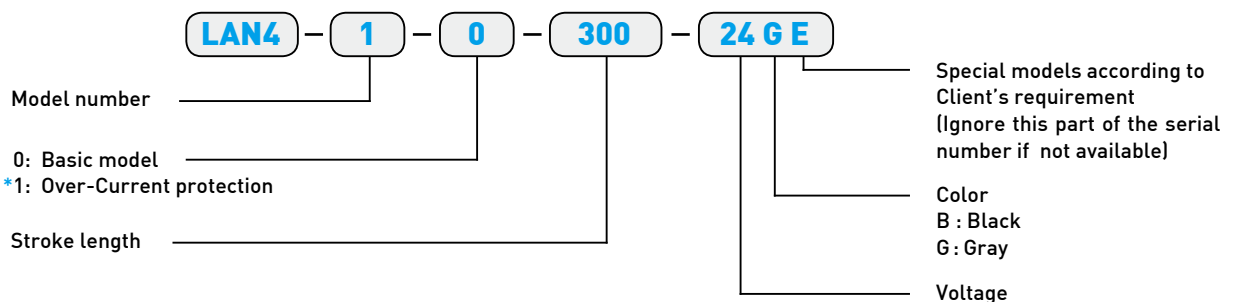


\*\*Note: The test results are obtained by using 24VDC power supply.



\*\*Note: The test results are obtained by using 12VDC power supply.

## • Ordering Information



\*Remark : Completed with internal over-current protection circuitry to ensure Actuator stops if obstacles or stroke limits are reached.

# 9.

## HIWIN LAC3 Series

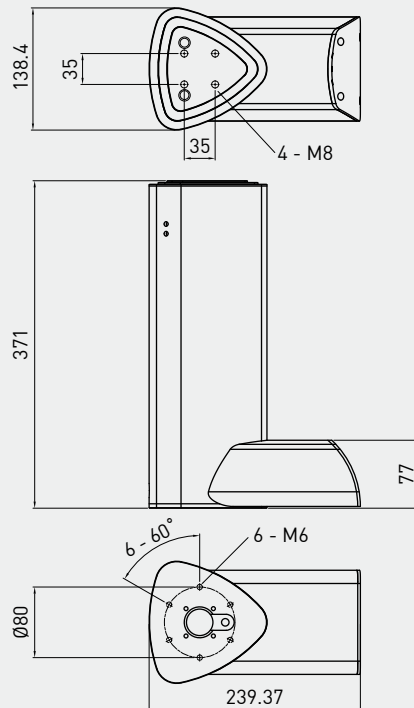
LAC3



Screw type	ACME
Weight*	8.1 kg
Protection	IP 54
Compatible controller	LAK2BN/LAK4N/LAK6B
Working temp	+5°C ~40°C

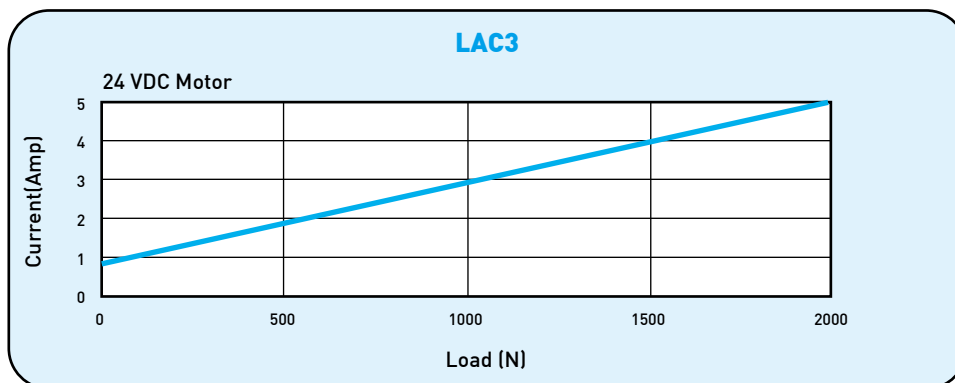
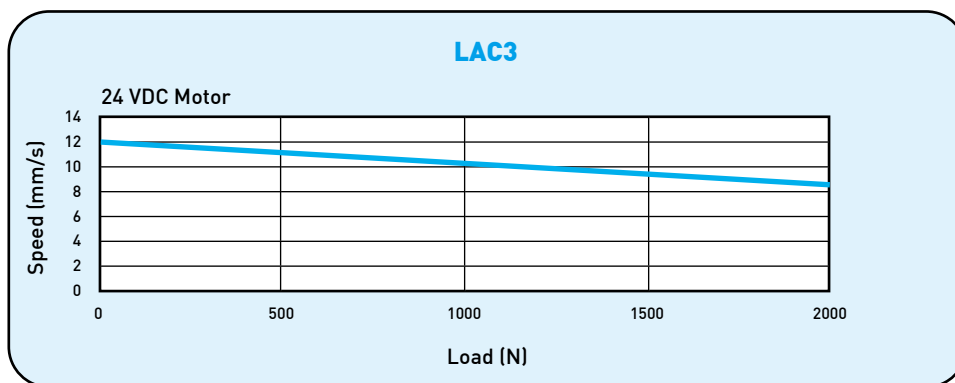
\* Stroke length 400 mm

\* Option: (1) IP66  
(2) Position Feedback: Potentiometer



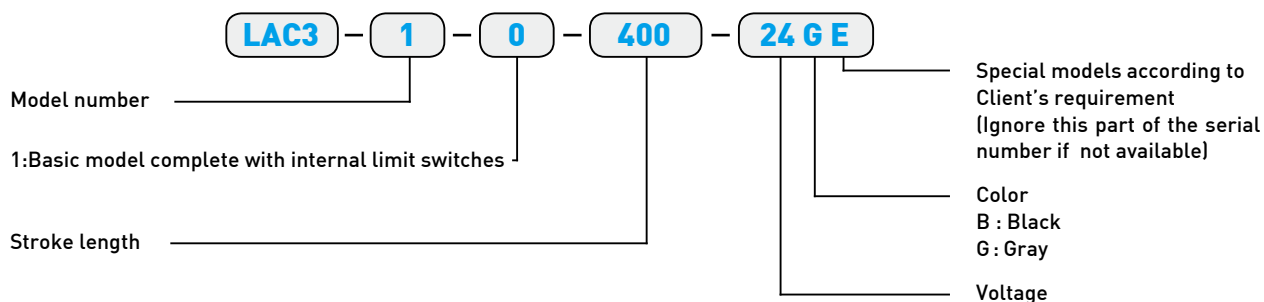
### LAC3 Specifications

Model	Thrust max. (N)	Pulling max. (N)	Holding max. (N)	force (mm/s) Load=Max. Load=0		Standard stroke (mm) : S	Duty cycle %	Max.current (A) 24VDC
LAC3-1	2000	500	2000	8.4	12	400	10	5



\*\*Note: The test results are obtained by using 24VDC power supply.

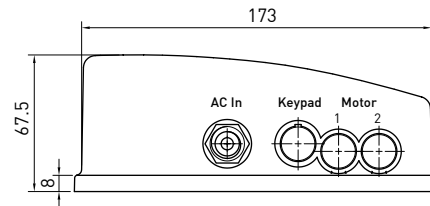
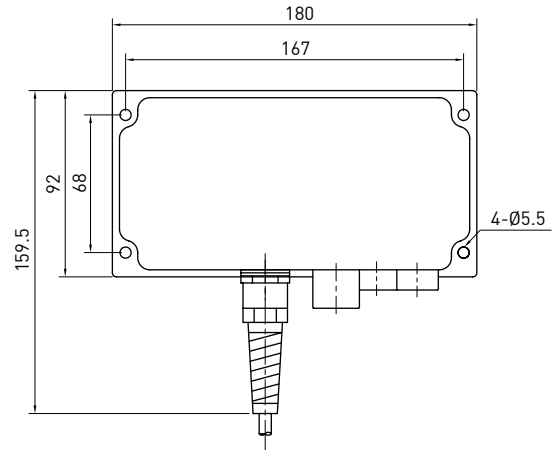
### Ordering Information



# 10.

## HIWIN 1-Axis Controller

**LAK2LR**



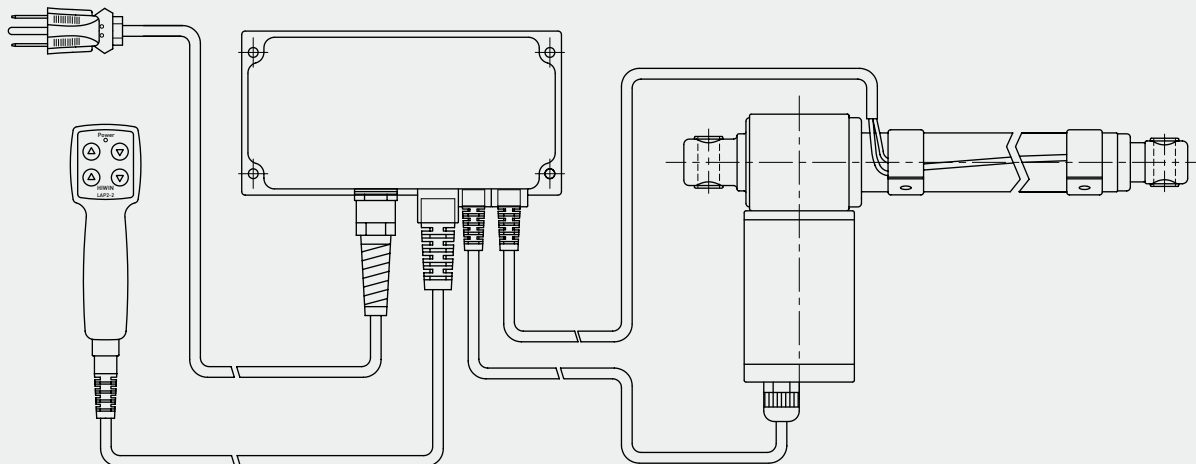
Input voltage	AC 100/110/220/230V
Output power	108VA(24VDC)max
Duty cycle	10%
Working temp	+5°C ~40°C
Protection*	IP 54

\* Option: IP66

### • Features of LAK2LR

- Control 1 Actuator with external limit switches.
- OLP (Over Load Protection)
- ESS (Enhanced Spark Suppression)
- Standard cable length: 4M
- Relay connecting point protection.

• For Series LAM, LAN2 completed with external limit switches



• Ordering Information

**LAK2LR - G - 110 - B E**

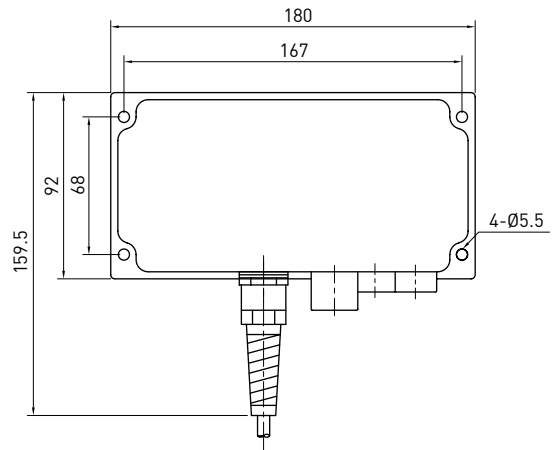
Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	B : Black G : Gray
Input Voltage	100 : AC100V; 110 : AC110V 220 : AC220V; 230 : AC230V
Actuator No. 1	G : LAM-1/-2/-1A ; LAN2

\* Check attached table for over current setting...see page 45.  
\* The keypad of the LAK2LR is not the same as LAK2L.

# 10.

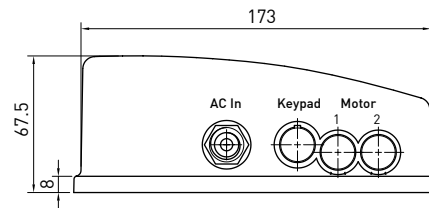
## HIWIN 2-Axis Controller

**LAK2**



Input voltage	AC 100/110/220/230V
Output power	108VA(24VDC)max
Duty cycle	10%
Working temp	+5°C ~40°C
Protection*	IP 54

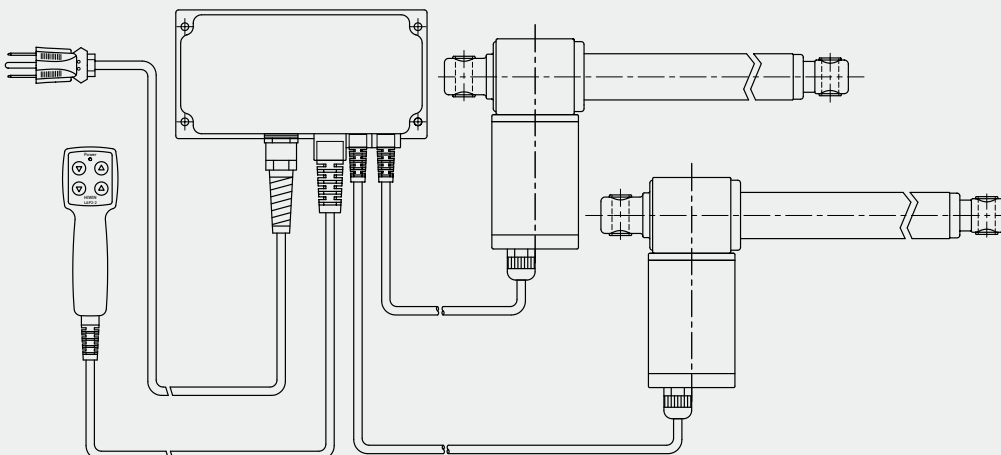
\* Option: (1) IP66  
(2) DC 12V / 24V In & Out



### • Features of LAK2

- Control 1 or 2 Linear Actuators
- Over load protection
- Standard cable length: 4M
- Electronic protection of the relays

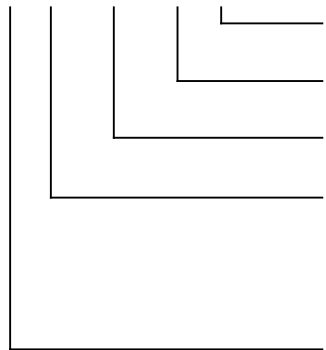
### • For Series LAS, LAS3, LAS4, LAM, LAN1, LAN2





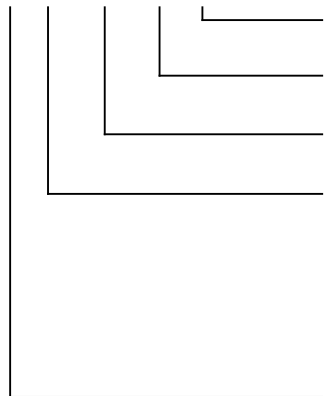
• **Ordering Information**

**LAK2 - B 0 - 110 - B E**



Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	B : Black G : Gray
Input Voltage	100 : AC100V; 110 : AC110V 220 : AC220V; 230 : AC230V
Actuator No. 2	0 : NO A : LAS4-1 B : LAS-1; LAS3-1 C : LAS-2; LAS3-2; LAS4-2 E : LAN4 G : LAM-1/-2/-1A; LAN2
Actuator No. 1	A : LAS4-1 B : LAS-1; LAS3-1 C : LAS-2; LAS3-2; LAS4-2 E : LAN4 G : LAM-1/-2/-1A; LAN2

**LAK2 - E 0 - 12 - B E**



Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	B : Black G : Gray
Input Voltage	12 : 12VDC 24 : 24VDC
Actuator No. 2	0 : NO A : LAS4-1 B : LAS-1; LAS3-1 C : LAS-2; LAS3-2; LAS4-2 E : LAS-1(12V); LAS3-1(12V/); LAS4-1(12V) F : LAS-2(12V); LAS3-2(12V) G : LAM-1/-2/-1A; LAN2 L : LAN1-1/-2/-3(12V); LAM-1/-2/-1A
Actuator No. 1	A : LAS4-1 B : LAS-1; LAS3-1 C : LAS-2; LAS3-2; LAS4-2 E : LAS-1(12V); LAS3-1(12V); LAS4-1(12V) F : LAS-2(12V); LAS3-2(12V) G : LAM-1/-2/-1A; LAN2 L : LAN1-1/-2/-3(12V); LAM-1/-2/-1A

\*Standard cable:1M in length with 3 flying lead termination

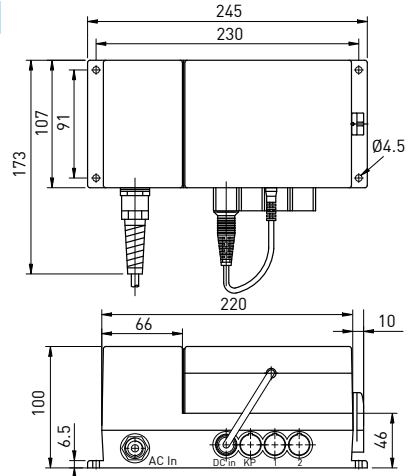
# 10.

## HIWIN 2-Axis Controller

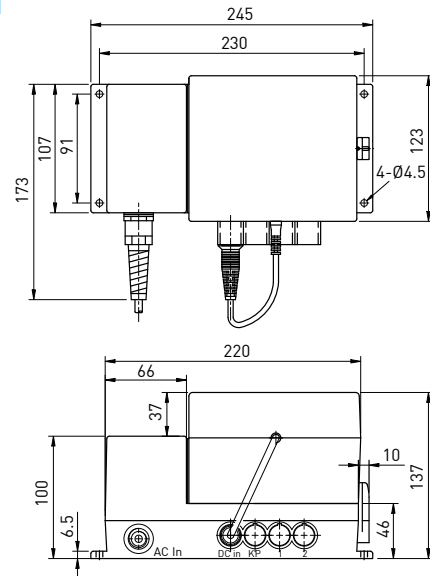
**LAK2B**



(1) For 1.3Ah Battery



(2) For 2.9Ah Battery



Input voltage	AC 100/110/220/230V
Output power	144VA(24VDC)max
Duty cycle	10%
Working temp	+5°C ~40°C
Protection*	IP 54

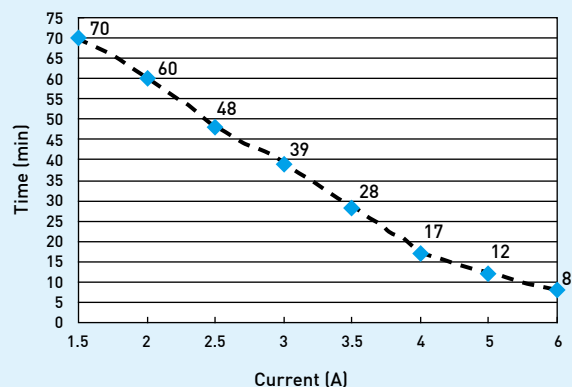
\* Option: (1) IP66  
(2) Custom program

### • Features of LAK2B

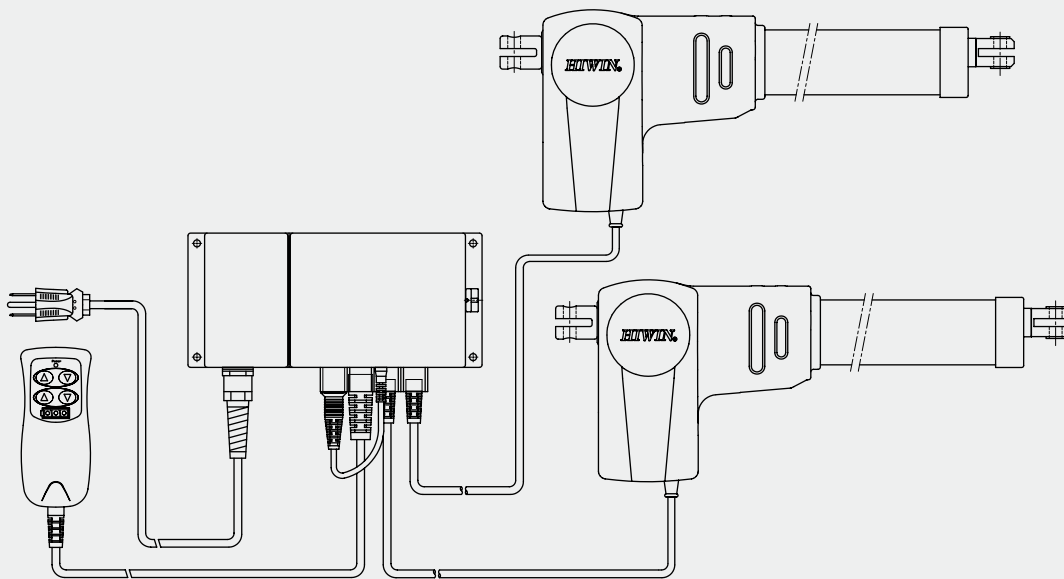
- Control 1 or 2 Linear Actuators
- Compact size
- Over load protection (1 setting for 2 axes)
- Soft - start/stop
- Standard cable length : 4 M
- Rechargeable Battery
- Low battery indicator (alarm)
- Battery capacity : 1.3 Ah (12VDCx2)  
(Option:2.9Ah, 12VDCx2)
- Electronic protection of the relays

\*Note: Please charge battery for at least 12 hours before initial use.

Current vs. Durable Period under Load (1.3Ah)

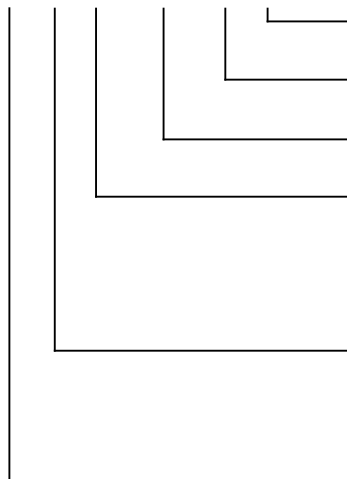


• For Series LAS, LAS3, LAS4, LAN1 and LAM3



• Ordering Information (LAK2B)

LAK2B - 1 - D 0 - 110 - B E



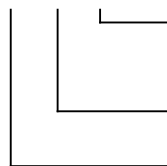
Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	B : Black G : Gray
Input Voltage	100 : AC100V; 110 : AC110V 220 : AC220V; 230 : AC230V
Actuator No. 2	0 : NO A : LAS4-1 B : LAS-1; LAS3-1 C : LAS-2; LAS3-2; LAS4-2 D : LAN1-1/-2; LAM3-3/-4 E : LAM3-2; LAN4; LAC3-1
Actuator No. 1	A : LAS4-1 B : LAS-1; LAS3-1 C : LAS-2; LAS3-2; LAS4-2 D : LAN1-1/-2; LAM3-3/-4 E : LAM3-2; LAN4; LAC3-1
Battery	0 : No 1 : 1.3Ah 2 : 2.9Ah

\* Check attached table for over current setting...see page 45.

• Ordering Information (Battery)



LAKB - 1 - G E



Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	B : Black G : Gray
Battery	1 : 1.3Ah 2 : 2.9Ah 3 : 4.5Ah (For LAK2J)

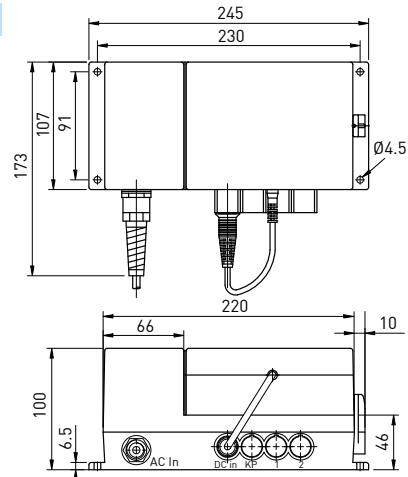
# 10.

## HIWIN 2-Axis Controller

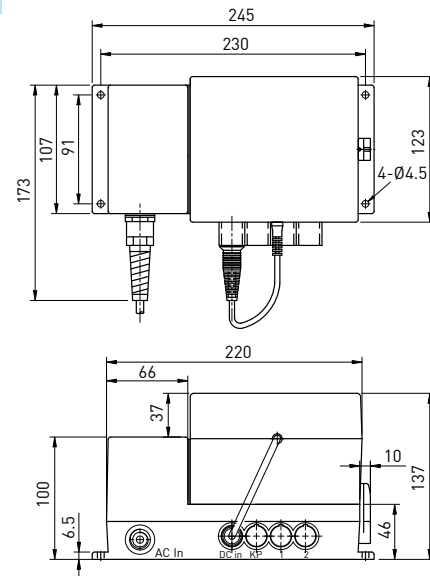
**LAK2BN**



(1) For 1.3Ah Battery



(2) For 2.9Ah Battery



Input voltage	AC 100/110/220/230V
Output power	144VA(24VDC)max
Duty cycle	10%
Working temp	+5°C ~40°C
Protection*	IP 54

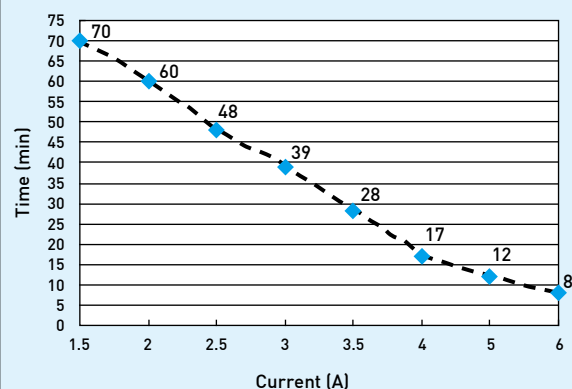
\* Option: (1) IP66  
(2) Custom program

### • Features of LAK2BN

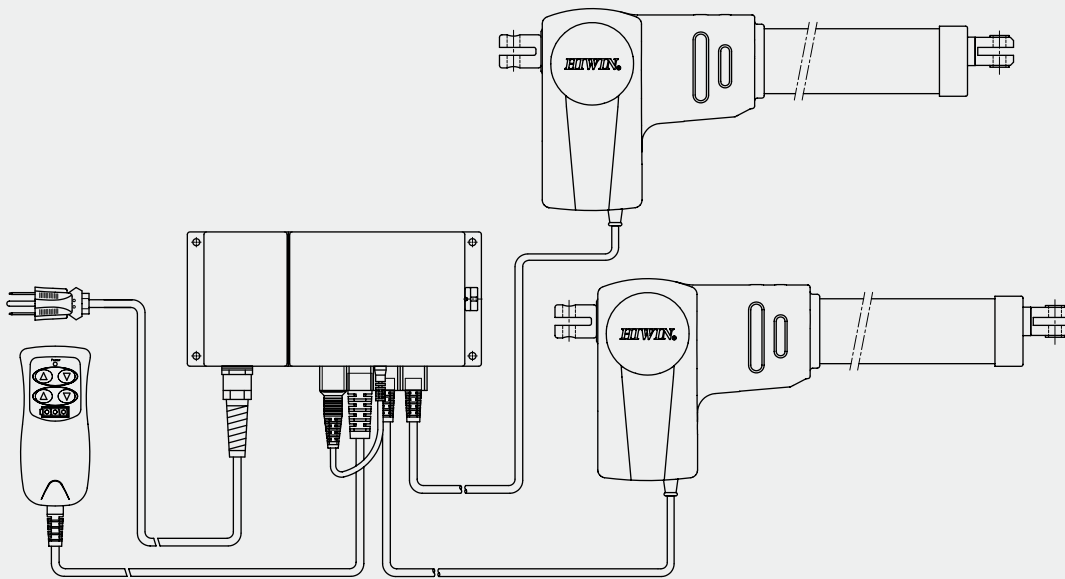
- Control 1 or 2 Linear Actuators
- Compact size
- Over load protection
- Soft - start/stop
- Standard cable length : 4 M
- Rechargeable Battery
- Low battery indicator (alarm)
- Battery capacity : 1.3 Ah (12VDCx2)  
(Option:2.9Ah, 12VDCx2)

\*Note: Please charge battery for at least 8 hours before initial use.

Current vs. Durable Period under Load (1.3Ah)



• For Series LAS4, LAN1 and LAM3



• Ordering Information (LAK2BN)

**LAK2BN - 1 - D 0 - 110 - B E**

Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	B : Black G : Gray
Input Voltage	100 : AC100V; 110 : AC110V 220 : AC220V; 230 : AC230V
Actuator No. 2	0 : NO A : LAS4-1 B : LAS-1; LAS3-1 C : LAS-2; LAS3-2; LAS4-2 D : LAN1-1/-2; LAM3-3/-4 E : LAM3-2; LAN4; LAC3-1
Actuator No. 1	A : LAS4-1 B : LAS-1; LAS3-1 C : LAS-2; LAS3-2; LAS4-2 D : LAN1-1/-2; LAM3-3/-4 E : LAM3-2; LAN4; LAC3-1
Battery	0 : No 1 : 1.3Ah 2 : 2.9Ah

\* Check attached table for over current setting...see page 45.

• Ordering Information (Battery)



**LAKB - 1 - G E**

Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	B : Black G : Gray
Battery	1 : 1.3Ah 2 : 2.9Ah

# 10.

## HIWIN 2-Axis Controller

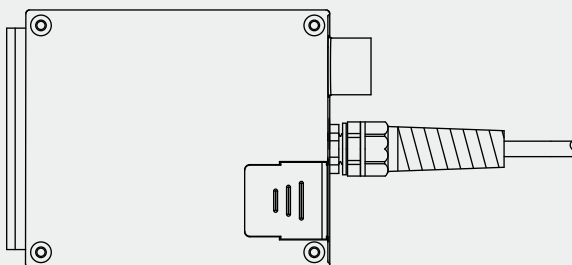
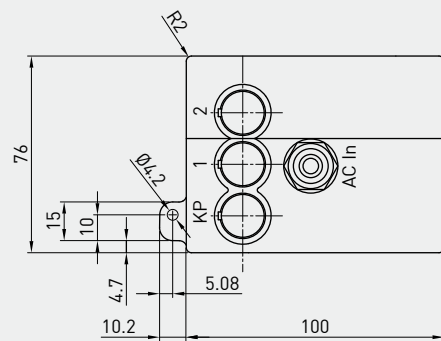
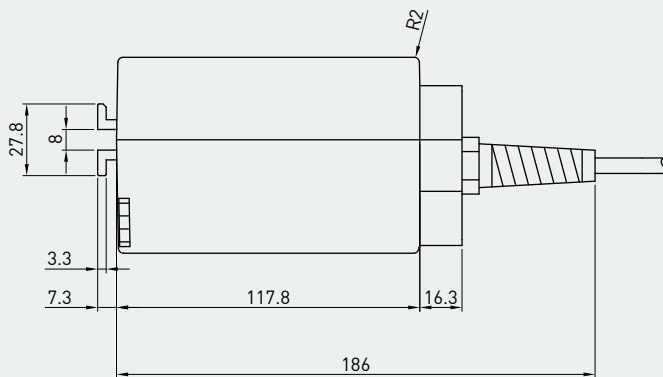
**LAK2D**

**CE**



Input voltage	AC 100/110/220/ 230V(50/60Hz)
Output power	108VA(24VDC)max
Duty cycle	10%
Working temp	+5°C ~40°C
Protection*	IP 54

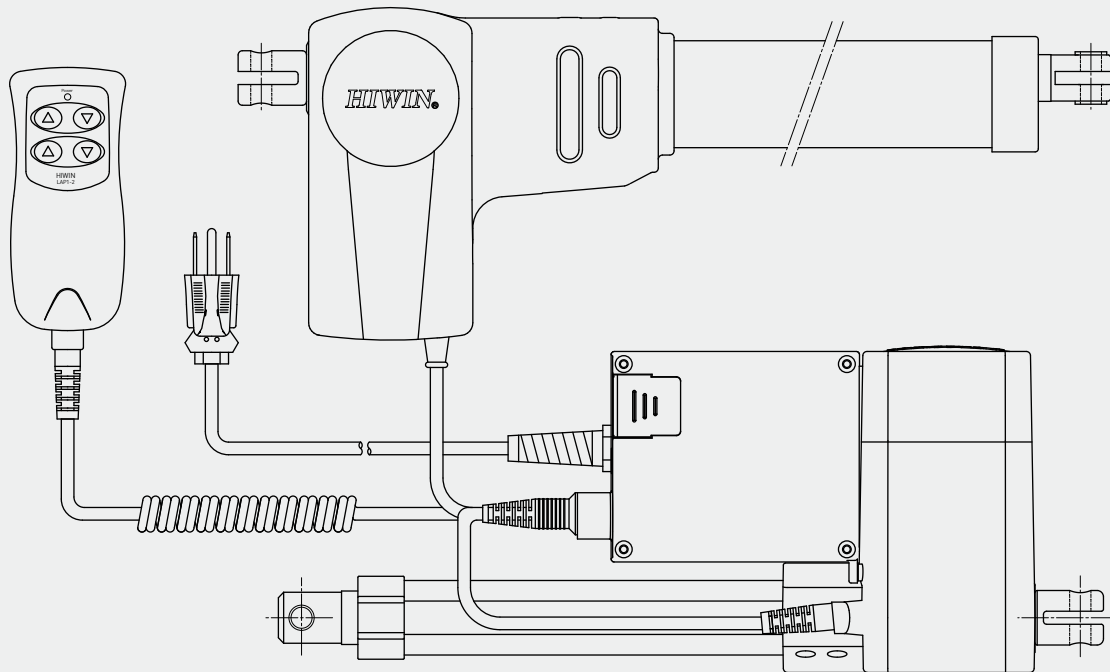
\* Option: IP66



• **Features of LAK2D**

- Control 1 or 2 Linear Actuators
- Standard cable length : 4 M
- Over Load protection
- During an emergency power loss, please insert 2- 9V alkaline batteries to lower the actuators. (Protection class is IP54 when LAK2D is optioned with batteries)
- Can be mounted directly on LAM3

• **For Series LAI, LAM, LAM3 and LAN1:**



• **Ordering Information**

**LAK2D - 1 - D 0 - 110 - G E**

Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	W : White B : Black G : Gray
Input Voltage	100 : AC100V; 110 : AC110V 220 : AC220V; 230 : AC230V
Actuator No. 2	0 : NO B : LAS-1; LAS3-1 C : LAS-2; LAS3-2; LAS4-2 D : LAN1-1/-2; LAM3-3/-4 E : LAM3-2; LAN4; LAC3-1 F : LAN1-1/-2/-3(24Q); LAM3-1
Actuator No. 1	B : LAS-1; LAS3-1 C : LAS-2; LAS3-2; LAS4-2 D : LAN1-1/-2; LAM3-3/-4 E : LAM3-2; LAN4; LAC3-1 F : LAN1-1/-2/-3(24Q); LAM3-1
Battery	0 : No 1 : 9-volt alkaline battery

\* Check attached table for over current setting...see page 45.

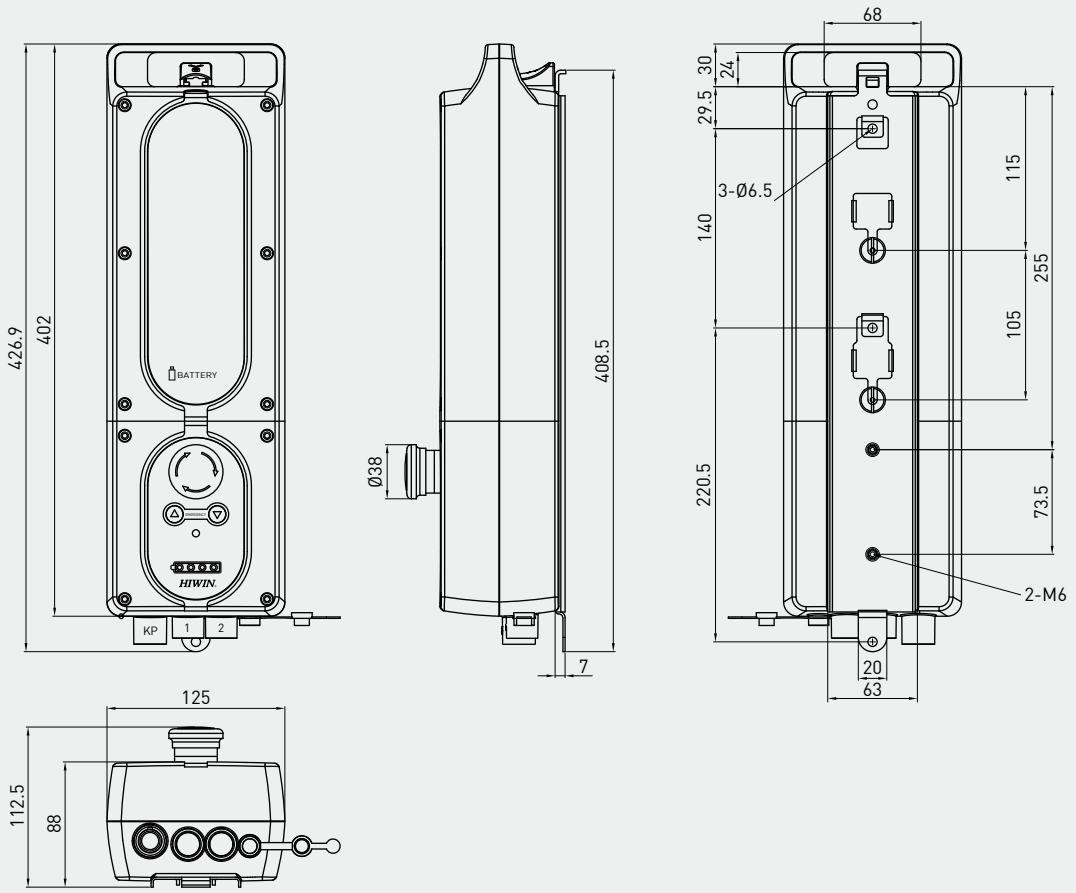
# 10. **HIWIN 2-Axis Controller**

**LAK2J**



Output power	DC 24V
Duty cycle	10%
Working temp	+5°C ~40°C
Protection*	IP 54

\* Option: (1) IP65  
(2) Customized software



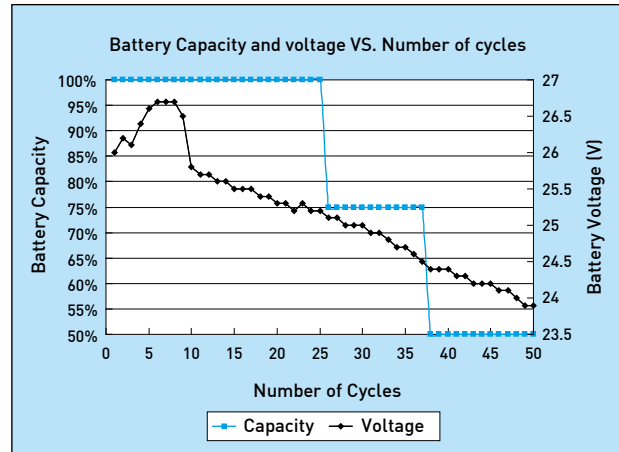


### • Features of LAK2J

- Portable design (operated by battery)
- Control 1 to 2 Linear Actuators
- Emergency stop button
- Emergency operation through front panel
- Over load protection
- Soft - start / stop
- Battery rechargeable via LAKCH charger
- Automatic alarm when the battery is low
- Automatic Energy Saving Mode
- Battery capacity 4.5 Ah(12VDC\*2)
- LED for power indication

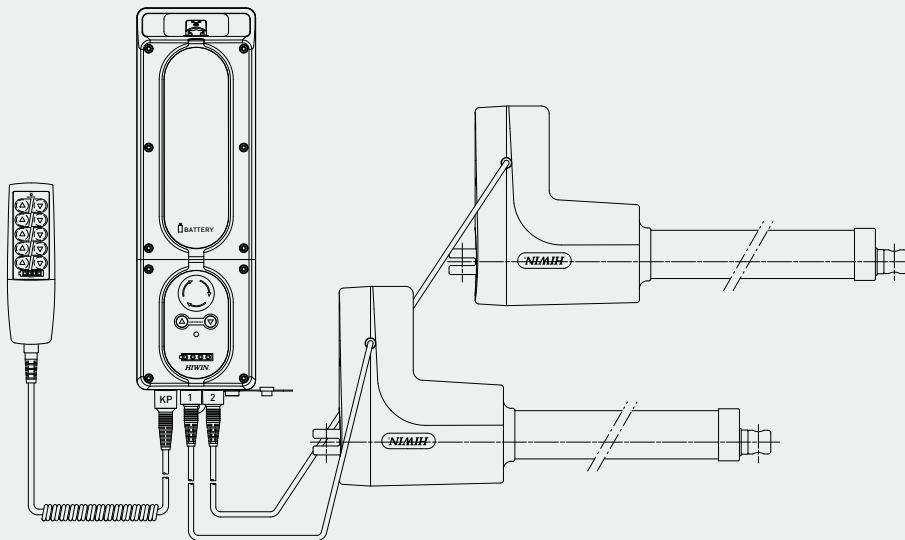
\*Note : Please fully charge the battery for 12hr the first time using LAK2J

### • Battery Characteristics



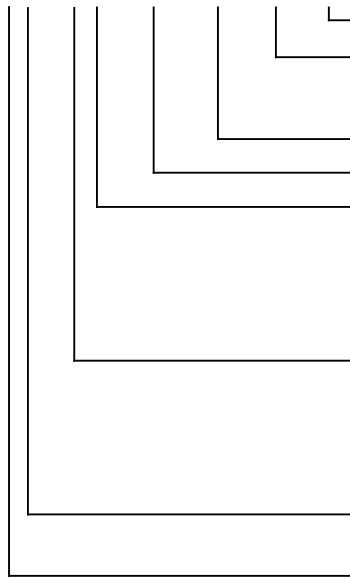
\*Test results are obtained under 5A load current

### • For series LAN3 and LAN1



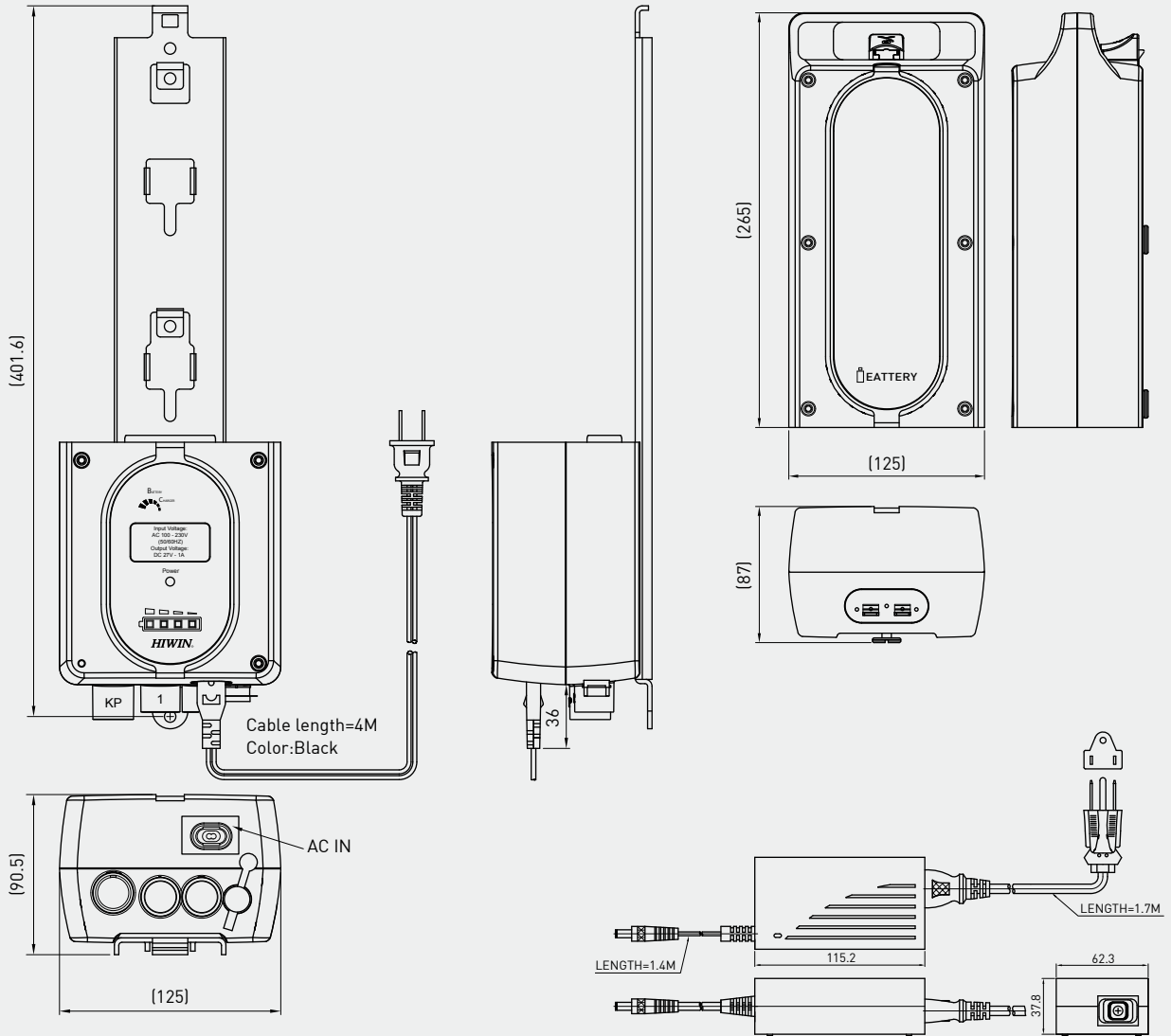
### • Ordering Information

**LAK2J - 11 - HH - 01 - 24 - W - E**



Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	W : White G : Gray B : Black
Output power	DC : 24V
Software function	01 : Standard
Actuator No.2	C : LAI-1 D : LAM3-3/-4; LAN1-1/-2; LAI-1A E : LAM3-2; LAN4; LAC3-1 F : LAM3-1; LAN1-1/-2/-3/-4(24Q) G : LAN2; LAM-1/-2/-1A H : LAN3
Actuator No.1	C : LAI-1 D : LAM3-3/-4; LAN1-1/-2; LAI-1A E : LAM3-2; LAN4; LAC3-1 F : LAM3-1; LAN1-1/-2/-3/-4(24Q) G : LAN2; LAM-1/-2/-1A H : LAN3
Power	1 : DC in charger 2 : AC in charger (100~230VAC, 50~60HZ)
Battery type	1 : 4.5Ah

• **Charger**



• **Ordering Information**

**LAKCH - A - 24 - B**

Color	B : Black
Output power	DC : 24V
Model	

**LAKCH - B - 24 - W E**

Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	W : White G : Gray
Output power	DC : 24V
Wall charger	

# 10.

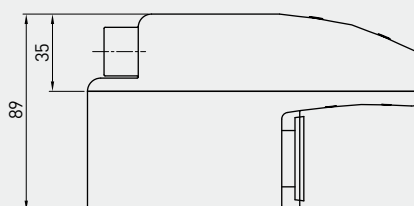
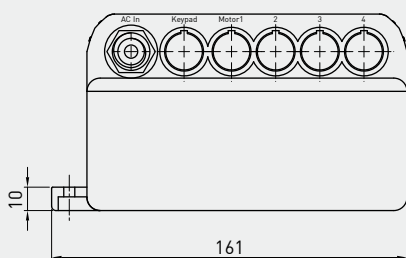
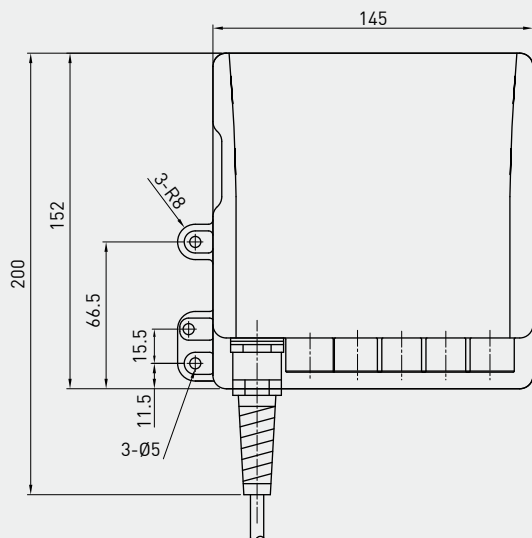
## HIWIN 3-Axis Controller

LAK4



Input voltage	AC 100/110/220/230V(50/60Hz)
Output power	72.5VA(24VDC)max
Duty cycle	10%
Working temp	+5°C ~40°C
Protection*	IP 54

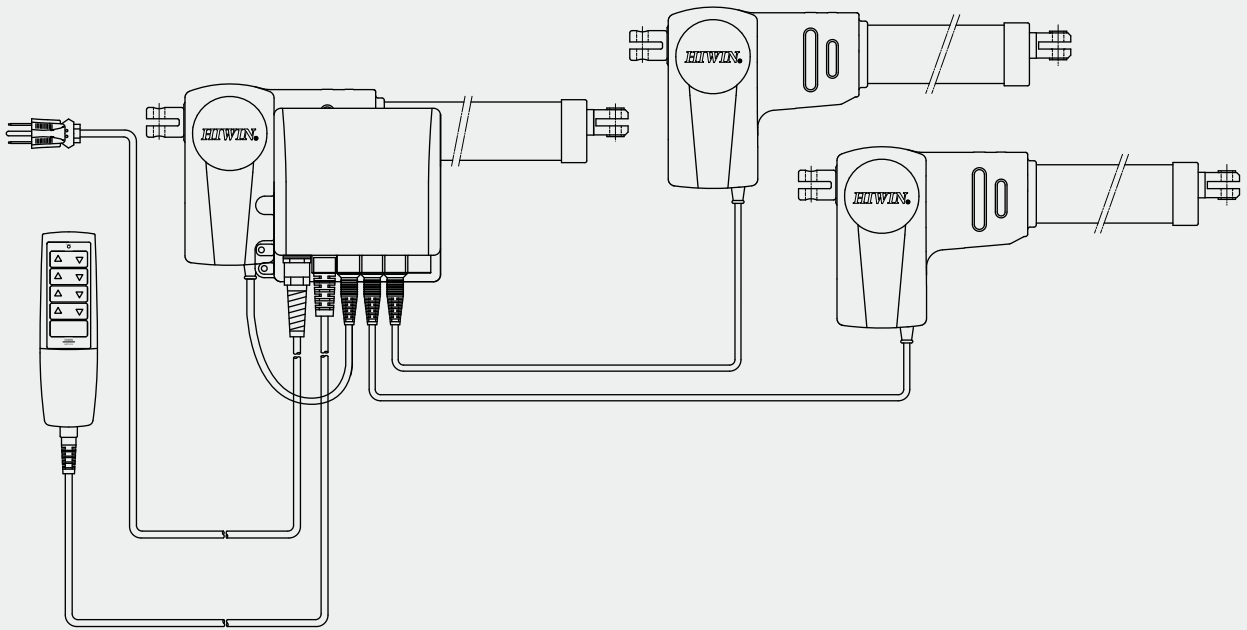
\* Option: IP66



• **Features of LAK4**

- Control 1 to 3 Actuators
- Can be mounted directly on LAN1
- Standard cable length: 4M

• **For Series LAM3 and LAN1:**



• **Ordering Information**

**LAK4 - D 000 - 110 - B E**

Special models according to Client's requirement	None E=ignore this part of the serial number if not available
Color	B : Black G : Gray
Input Voltage	100 : AC100V; 110 : AC110V 220 : AC220V; 230 : AC230V
Actuator No. 2 ~ No. 3	0 : NO D : LAN1-1/-2; LAM3-3/-4 E : LAM3-2; LAN4; LAC3-1 F : LAN1-1/-2/-3(24Q); LAM3-1
Actuator No. 1	D : LAN1-1/-2; LAM3-3/-4 E : LAM3-2; LAN4; LAC3-1 F : LAN1-1/-2/-3(24Q); LAM3-1

Note: Please select LAK4N for 4 axis application.

# 10.

## HIWIN 4-Axis Controller

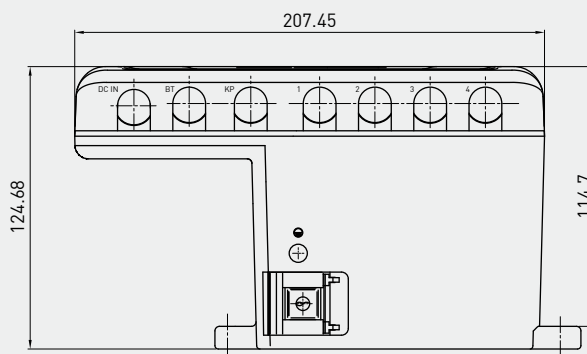
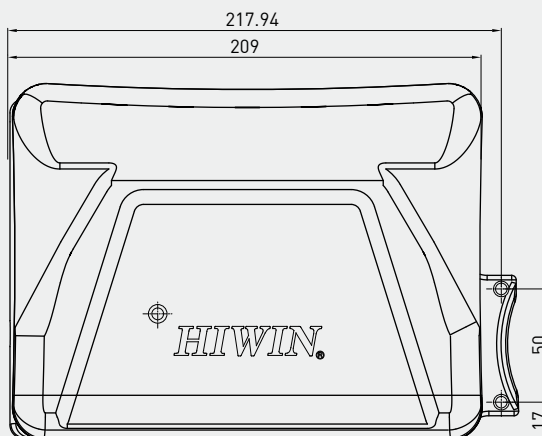
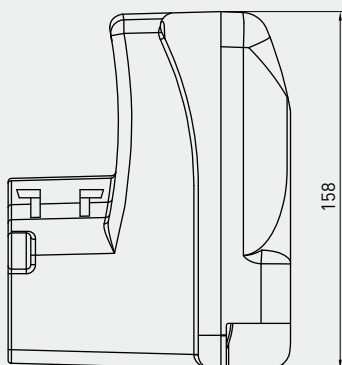
LAK4N

CE



Input voltage	AC 100/110/220/230V
Output power	216VA(DC 24V)Max
Duty cycle	10%
Working temp	+5°C ~40°C
Protection*	IP 54

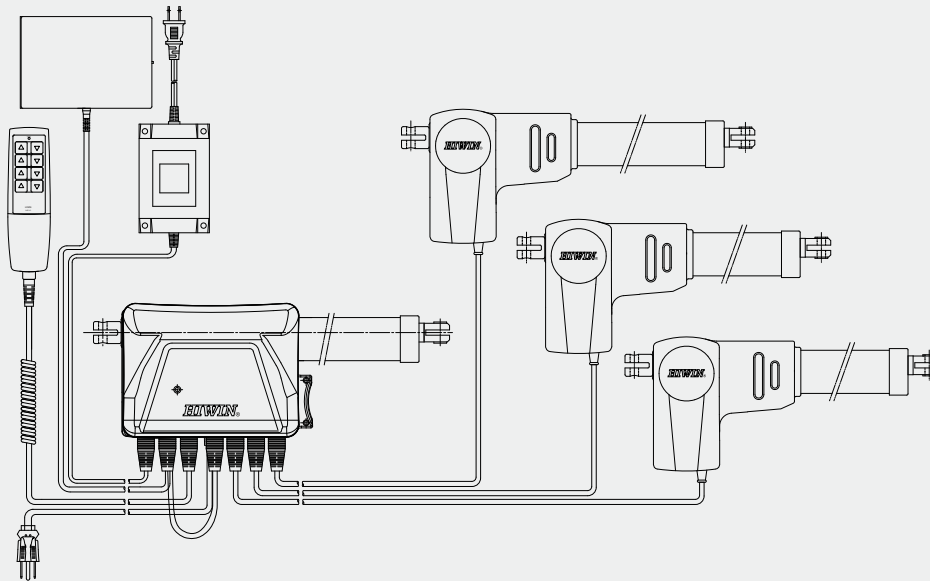
\* Option: IP66



## • Features of LAK4N

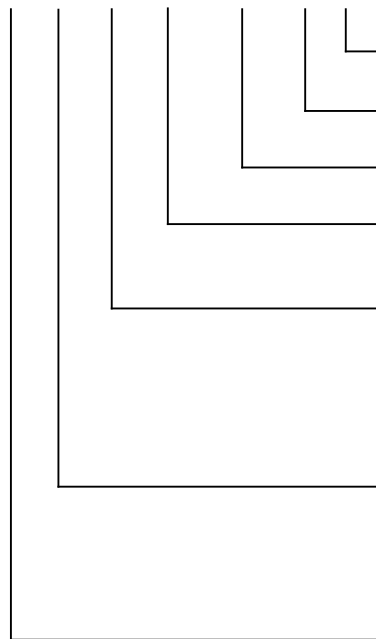
- Control 1 to 4 Linear Actuators
- Standard cable length 4M
- Detachable cable retainer for accidental unplugging protection
- LED for power indication
- External DC input
- Reconfigurable simultaneous movement
- Microprocessor (Software version) can receive the signal of hall sensor, optical sensor or potentiometer
- Over Load protection
- Removable AC power cable
- Soft - start / stop
- External battery input
- Can be mounted directly on LAN1

## • For Series LAN1, LAM, LAM3, LAI, LAN2, LAN3 and LAN4:



## • Ordering Information

**LAK4N - 1 - C000 - 00 - 110 - G E**



Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	B : Black G : Gray
Input Voltage	100 : AC100V; 110 : AC110V 220 : AC220V; 230 : AC230V
Type	00 : Analog 01 : Standard Software 02 : Custom software
Actuator No.4	0 : No C : LAI-1 D : LAN1-1/-2; LAM3-3/-4; LAI-1A E : LAM3-2; LAN4; LAC3-1 F : LAN1-1/-2/-3/-4(24Q); LAM3-1 G : LAM-1/-2/1A; LAN2 H : LAN3
Actuator No.1 ~ No.3	C : LAI-1 D : LAN1-1/-2; LAM3-3/-4; LAI-1A E : LAM3-2; LAN4; LAC3-1 F : LAN1-1/-2/-3/-4(24Q); LAM3-1 G : LAM-1/-2/1A; LAN2 H : LAN3
External power	0 : No 1 : 1.3Ah battery 2 : 2.9Ah battery 3 : 324VA Power adaptor 4 : 2.9Ah battery with 324VA power adaptor

\* Check attached table for over current setting...see page 45.

# 10.

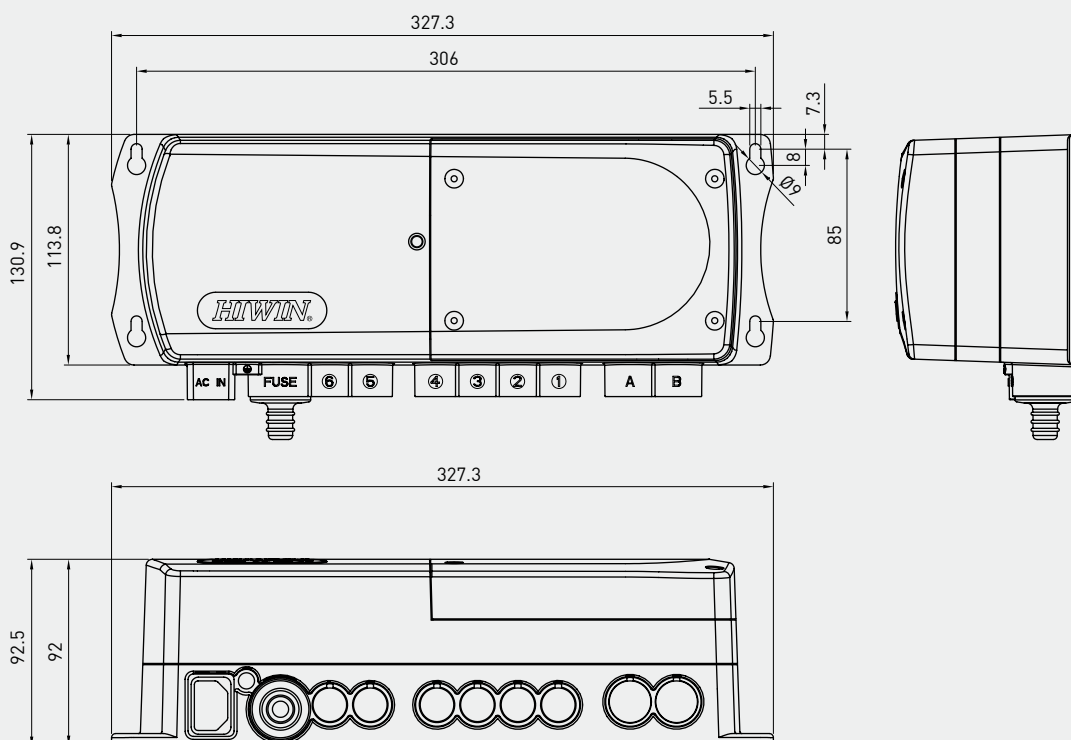
## HIWIN 6-Axis Controller

### LAK6B



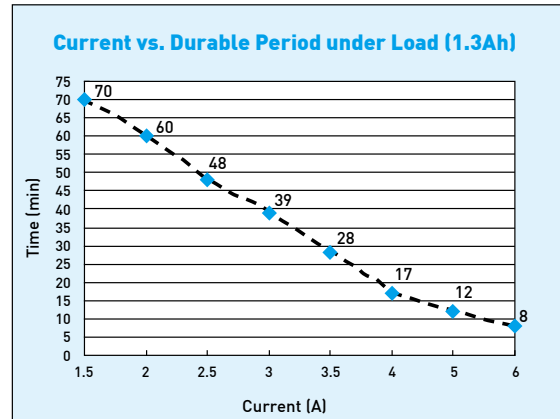
Input voltage	AC 100/110/220/230V
Output power	216VA(24VDC)max
Duty cycle	10%
Working temp	+5°C ~40°C
Protection*	IP 54

\* Option: (1) IP66  
(2) Custom Program



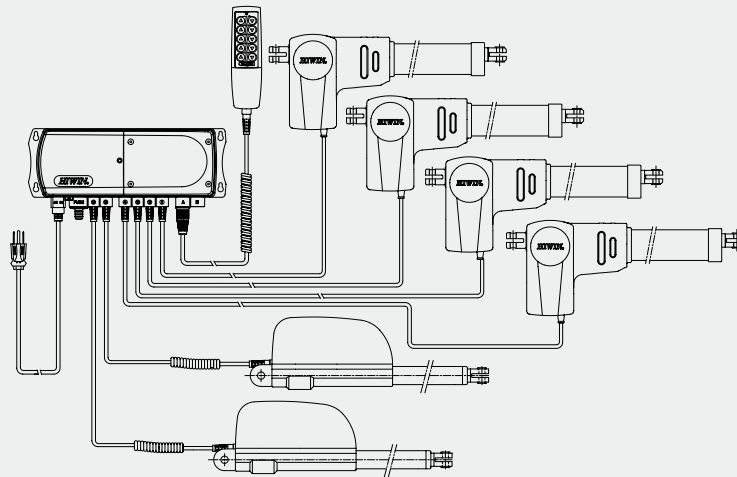
## • Features of LAK6B

- Control 1 to 6 Linear Actuators
- Over load protection
- Soft-start
- Standard cable length: 4 M
- Rechargeable battery
- Low battery indicator (alarm)
- Automatic energy saving
- Battery capacity 1.3 Ah (12VDCx2)
- Main fuse replaceable by external plug
- Spare fuse inside the fuse plug
- External ground connection
- LED power indication



\*Note: Please charge battery for at least 8 hours before initial use.

## • For Series LAS4, LAM3, LAN1 and LAN3:



## • Ordering Information

**LAK6B - 1 - D 0000 - 00 - 110 - G E**

Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	B : Black G : Gray
Input Voltage	100 : AC100V; 110 : AC110V 220 : AC220V; 230 : AC230V
Actuator No. 2~No. 6	00 : Standard 01 : Custom software
Actuator No. 1	0 : NO A : LAS4-1 B : LAS-1; LAS3-1 C : LAS-2; LAS3-2; LAS4-2; LAI-1 D : LAN1-1/-2; LAM3-3/-4; LAI-1A E : LAM3-2; LAN4; LAC3-1 F : LAN1-1/-2/-3/-4(24Q); LAM3-1 G : LAM-1/-2/-1A; LAN2 H : LAN3
Battery	0 : No 1 : 1.3Ah

\* Check attached table for over current setting...see page 45.



• **Over Current Setting Table**

Code No.	Current setting	Actuator Model	Controller Model
A	2.5A	LAS4-1	LAK2; LAK2B; LAK6B; LAK2BN
B	3.0A	LAS-1; LAS3-1	LAK2; LAK2LR; LAK4N
C	4.0A	LAS-2; LAS3-2; LAS4-2; LAI-1(24V)	LAK2; LAK2LR; LAK2D; LAK4N; LAK2BN
D	5.0A	LAM3-3/-4; LAN1-1/-2; LAI-1A(24V)	LAK2D; LAK4; LAK2B; LAK6B; LAK4N; LAK2BN
E(24V)	6.0A	LAM3-2; LAN4; LAC3-1	LAK2D; LAK2B; LAK2BN
E(12V)	6.0A	LAS-1(12V); LAS3-1(12V); LAS4-1(12V)	LAK2(DC)
F(24V)	7.0A	LAN1-1/-2/-3/-4(24Q); LAM3-1	LAK2D; LAK2B; LAK6B; LAK4; LAK4N; LAK2BN
F(12V)	7.0A	LAS-2(12V), LAS3-2(12V)	LAK2(DC)
G(24V)	8.0A	LAM-1/-2/-1A; LAN2	LAK2; LAK2LR; LAK4N
G(12V)	8.0A	LAI-1(12V)	LAK2(DC)
H(24V)	9.0A	LAN3	LAK6B; LAK4N
H(12V)	9.0A	LAI-1A(12V)	LAK2(DC)
I	10A	For reservation	
J	12A	For reservation	
K	14A	For reservation	
L	15A	LAN1-1/-2/-3(12V); LAM-1/-2/-1A(12V), -2A(12V)	LAK2(DC)
Z	**A	Special current value (special requirement)	

• **LA Cable connector V.S. controller model**

			Controller Model							
			LAK2LR	LAK2B	LAK2D	LAK2	LAK2J	LAK4	LAK4N	LAK6B
		Normal connector	audio	4pin	4pin	audio	audio	4pin	4pin	4pin
Actuator Model	LAM	bare wire	to audio	to 4pin	to 4pin	to audio	to audio	to 4pin	to 4pin	to 4pin
	LAM3	4pin	to audio	normal	normal	to audio	to audio	normal	normal	normal
	LAI	bare wire	to audio	to 4pin	to 4pin	to audio	to audio	to 4pin	to 4pin	to 4pin
	LAS	bare wire	to audio	to 4pin	to 4pin	to audio	to audio	to 4pin	to 4pin	to 4pin
	LAS3	bare wire	to audio	to 4pin	to 4pin	to audio	to audio	to 4pin	to 4pin	to 4pin
	LAS4	bare wire	to audio	to 4pin	to 4pin	to audio	to audio	to 4pin	to 4pin	to 4pin
	LAN1	4pin	to audio	normal	normal	to audio	to audio	normal	normal	normal
	LAN2	audio	normal	to 4pin	to 4pin	normal	normal	to 4pin	to 4pin	to 4pin
	LAN3	4pin	to audio	normal	normal	to audio	to audio	normal	normal	normal
	LAN4	audio	normal	to 4pin	to 4pin	normal	normal	to 4pin	to 4pin	to 4pin
LAC	4pin	to audio	normal	normal	to audio	to audio	normal	normal	normal	

# 11.

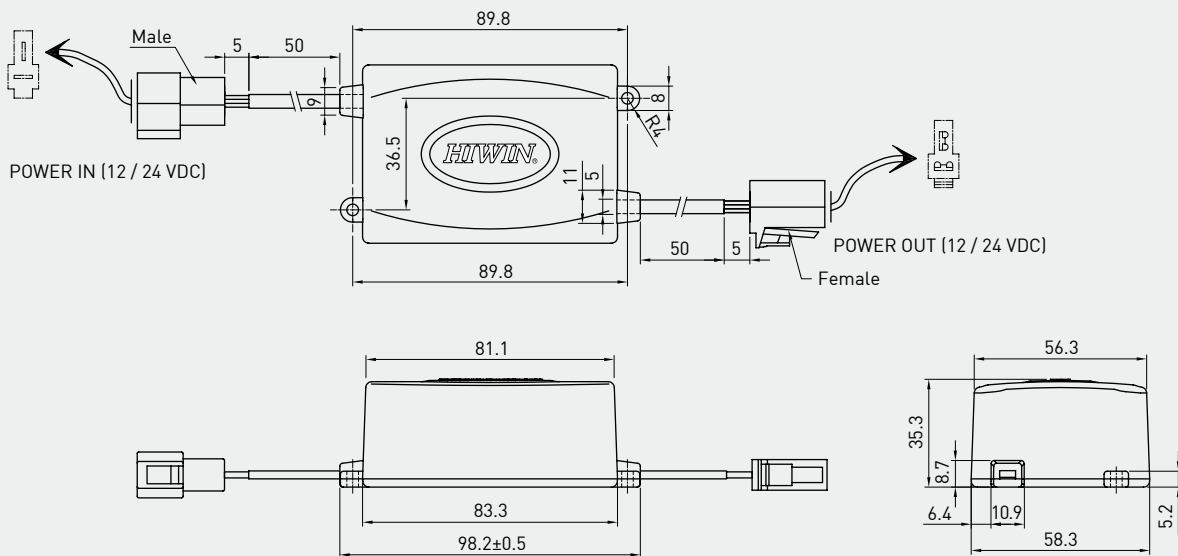
## HIWIN Over Current Protection Box

### LAKC-1



Input voltage	12 / 24 VDC
Output voltage	12 / 24 VDC
Duty cycle	10%
Working temp	+5°C ~-40°C
Protection*	IP 54

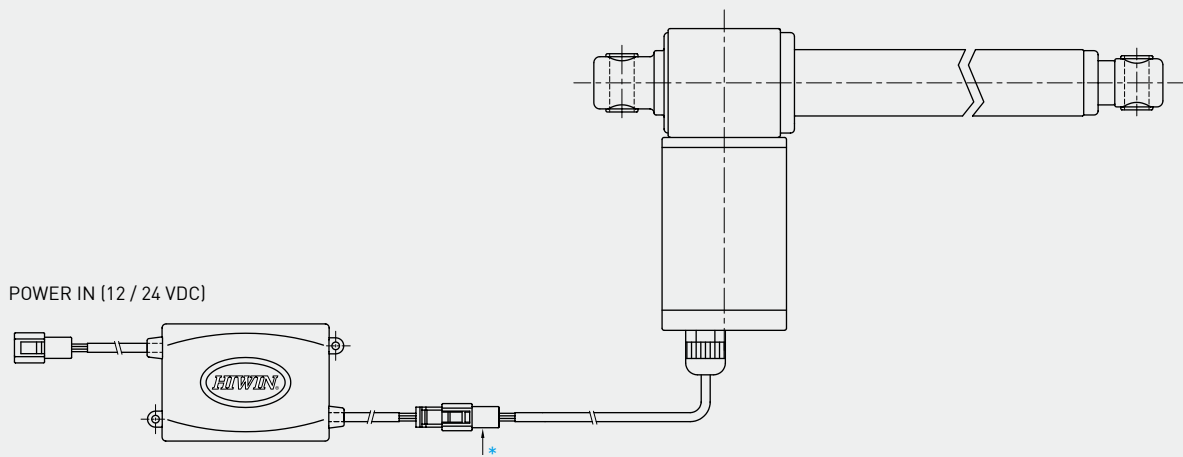
\* Option: IP66



## • Features of LAKC-1

- Compact size
- Low cost
- Easy to use
- Multiple over- current settings available
- Fast response time

## • For Series



\* When purchasing an actuator to be connected with LAKC, please mention to Hiwin sales personnel.

## • Ordering Information

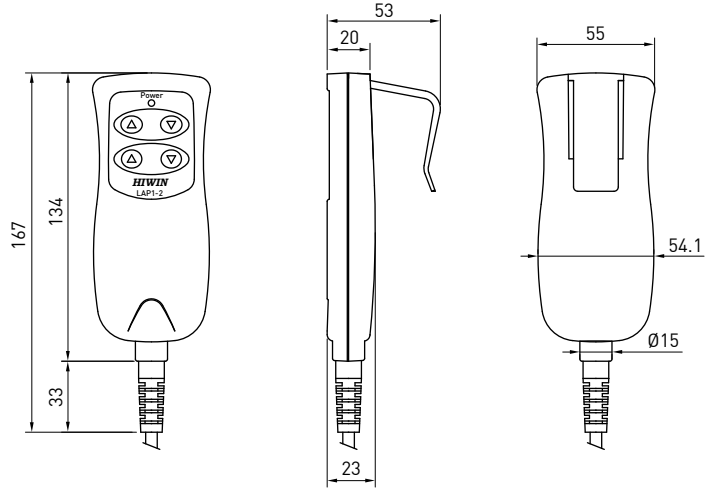
**LAKC-1-12-6 G E**

Special models according to Client's requirement	None	E=Ignore this part of the serial number if not available
Color	B : Black	G : Gray
Over Current Setting	12V : 2 : 2A 3 : 3A 4 : 4A 5 : 5A 6 : 6A 8 : 8A 10 : 10A 12 : 12A 18 : 18A	24V : 2 : 2A 2.5 : 2.5A 3 : 3A 4 : 4A 5 : 5A 6 : 6A 7 : 7A 8 : 8A 9 : 9A 10 : 10A
Input(Output)Voltage	12 : 12VDC	24 : 24VDC
Model number		

# 12.

## HIWIN Keypad Series

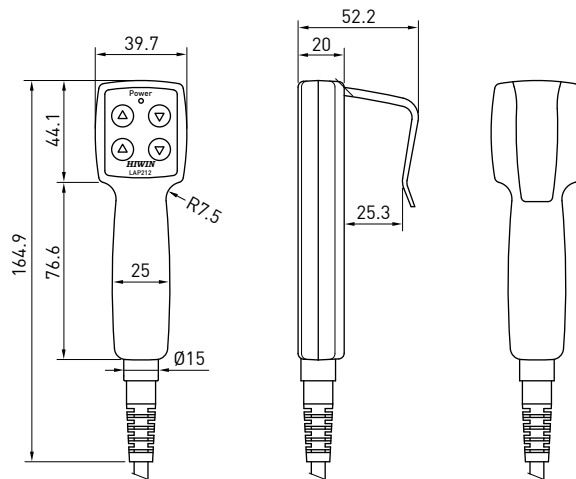
### LAP1



#### • Features of LAP1

- Control maximum of 2 Actuators
- Compatible with LAK2, LAK4, LAK2LR, LAK2D
- Ergonomic design
- Standard cable length: coil 600mm; total 1100mm
- Protection: IP66

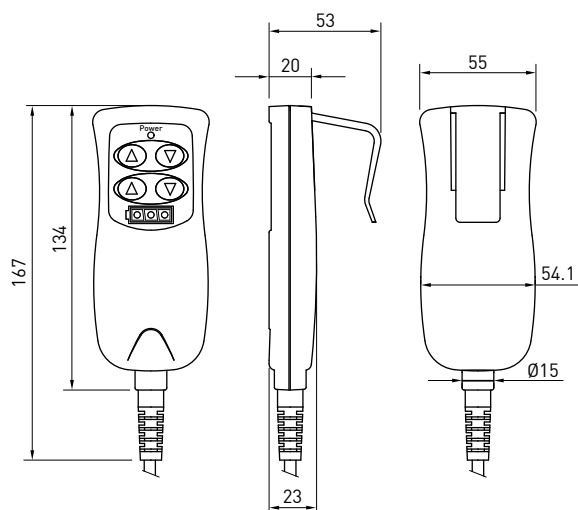
### LAP2



#### • Features of LAP2

- Control maximum of 2 Actuators
- Compatible with LAK2, LAK4, LAK2D
- Ergonomic design and small size
- Standard cable length: coil 600mm; total 1100mm
- Protection: IP66

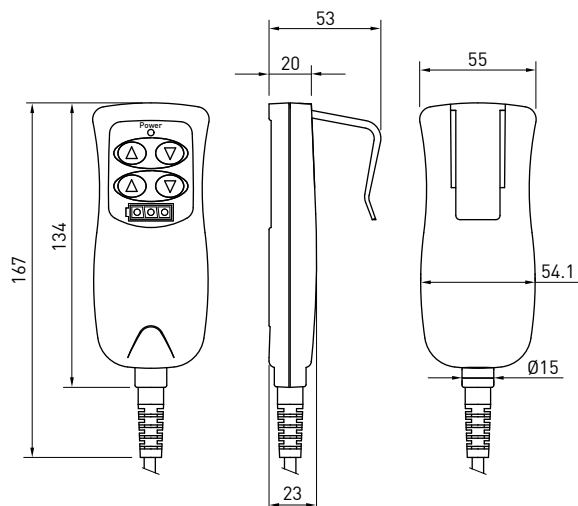
## LAP3



### • Features of LAP3

- Control maximum of 2 Actuators
- Compatible with LAK2B, LAK2J
- Ergonomic design
- Standard cable length: coil 600mm; total 1100mm
- LED for battery capacity
- Protection: IP66

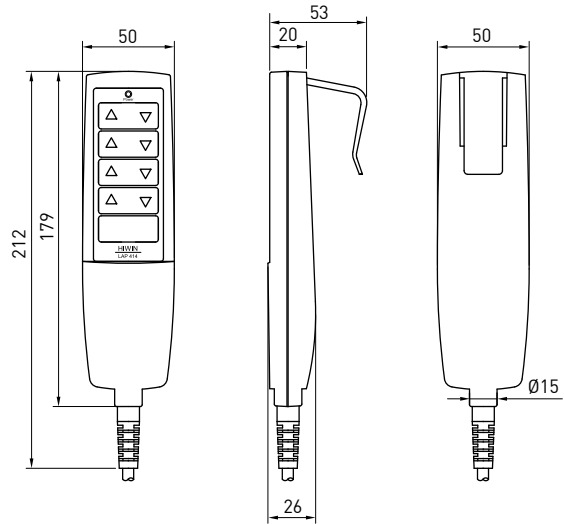
## LAP3N



### • Features of LAP3N

- Control maximum of 2 Actuators
- Compatible with LAK2BN
- Ergonomic design
- Standard cable length: coil 600mm; total 2250mm
- LED for battery capacity
- Protection: IP66

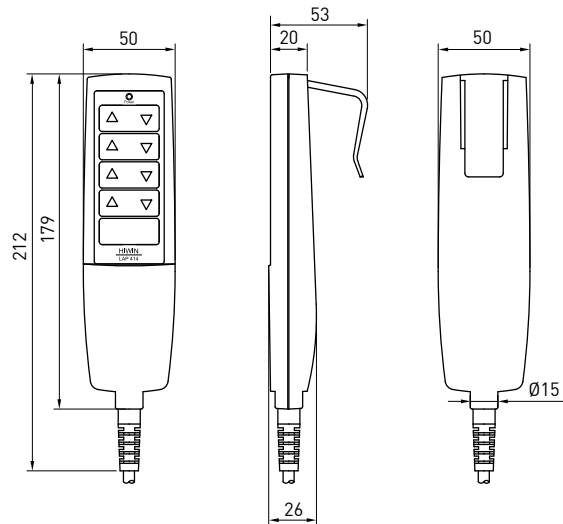
## LAP4



### • Features of LAP4

- Control maximum of 4 Actuators
- Compatible with LAK4
- Ergonomic design
- Standard cable length: coil 600mm; total 2250mm
- Protection: IP66

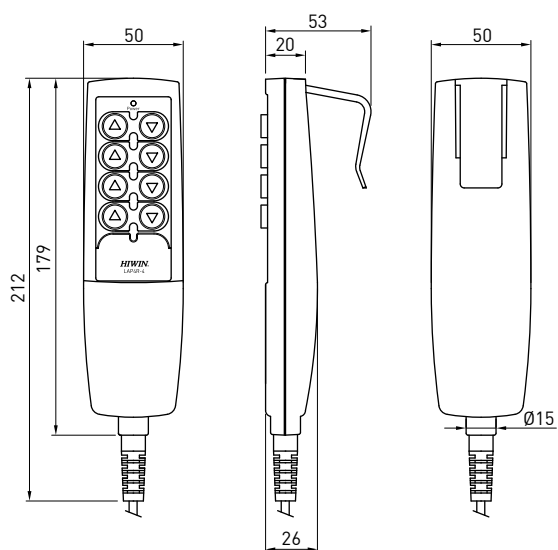
## LAP4N



### • Features of LAP4N

- Control maximum of 4 Actuators
- Compatible with LAK4N
- Ergonomic design
- Standard cable length: coil 600mm; total 2250mm
- Protection: IP66

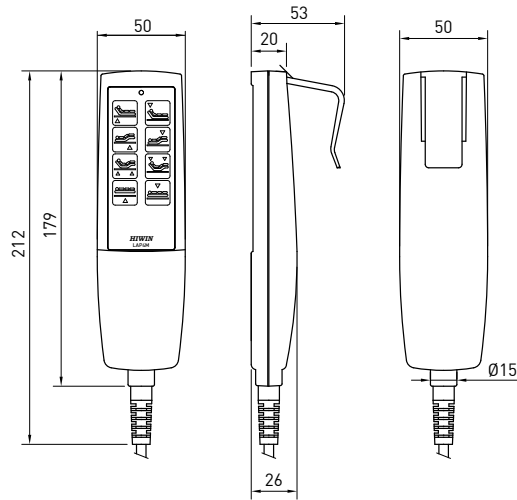
## LAP4R



### • Features of LAP4R

- Control maximum of 4 Actuators
- Compatible with LAK4, LAK4N, LAK2J, LAK6B
- Ergonomic design
- Standard cable length: coil 600mm; total 2250mm
- Protection: IP66

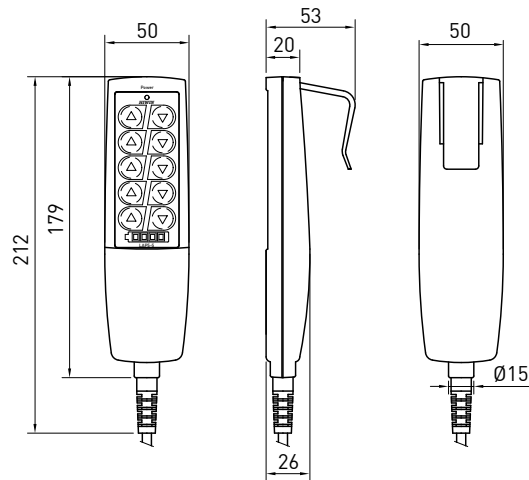
**LAP4M**



• **Features of LAP4M**

- Control maximum of 4 Actuators
- Compatible with LAK4, LAK4N
- Ergonomic design
- Standard cable length: coil 600mm; total 2250mm
- Protection: IP66

**LAP5**

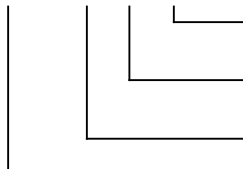


• **Features of LAP5**

- Control maximum of 5 Actuators
- Compatible with LAK6B, LAK2J
- Ergonomic design
- Standard cable length: coil 600mm; total 1100mm
- Protection: IP66

• **Ordering Information**

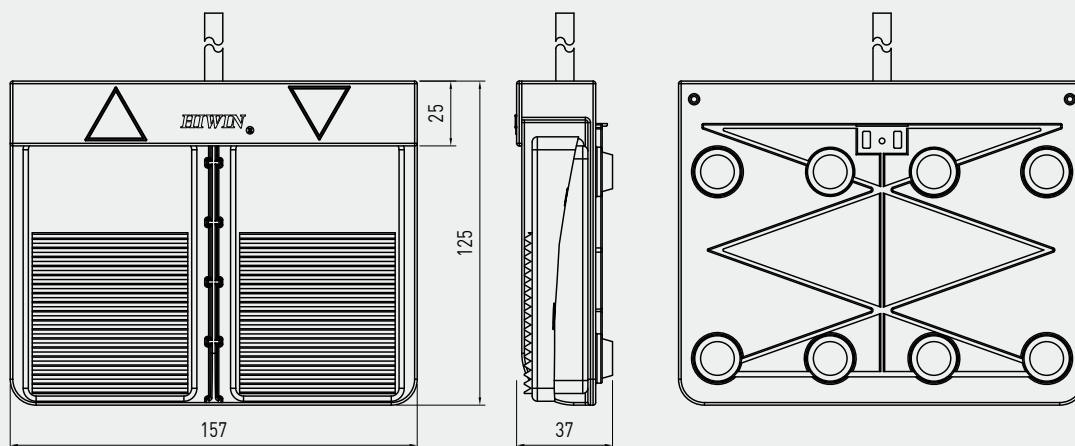
**LAP1 - 2 - B E**



Special models according to Client's requirement	None	E=Ignore this part of the serial number if not available	
Color	B : Black	G : Gray	
Number of axis controlled			
Model number	LAP1	LAP4	LAP4N
	LAP2	LAP4M	LAP4R
	LAP3	LAP3N	LAP5



**LAFS**



• **Features of LAFS1**

- Control 1 Actuator
- Compatible with all controllers
- Easily portable with attached magnet
- Standard cable length : coil 600mm; total 1100mm

• **Ordering Information**

**LAFS1 - 1 G E**



Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	G : Gray
Number of axis controlled	
Model number	LAFS1

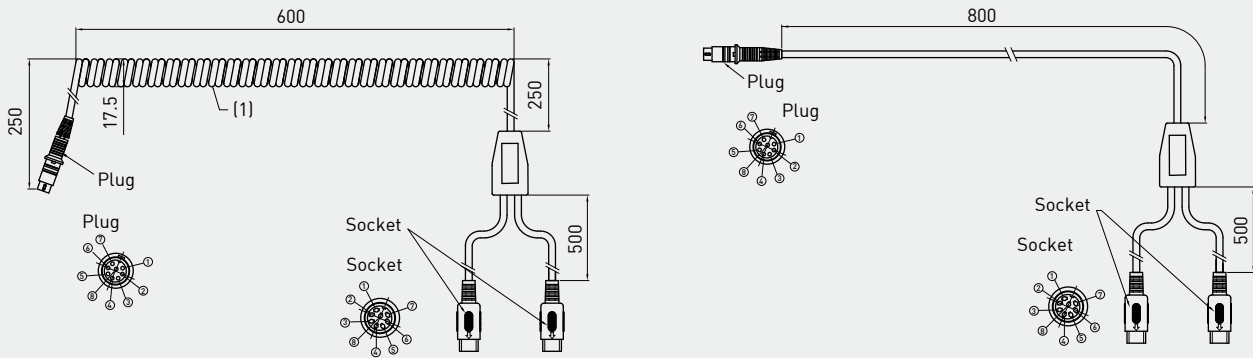
# 15.

## Options for Each Actuator Type

### Y-CABLE

#### • Features of Y-Cable

- Compatible with 2 keypads input independently.



#### • Ordering Information

##### LAPY - 1 - G - E

Special models according to Client's requirement	None E=Ignore this part of the serial number if not available
Color	B : Black G : Gray
Cable	1. Coil cable 2. Straight cable
Model of Y extension cable	

# 16.

## Options for Each Actuator Type

Series	Function	IP54	IP65	IP66	Back fixture turn 90°	Gear box material S45C	Rod end with flat connector	Safety nut	Spline (push only)	Quick release	Internal limit switches	External limit switches	Hall Sensor		Potentiometer	Optical Sensor		
													NPN	TTL		NPN	PNP	TTL
LAM	LAM-1	●	▲		▲	▲						▲						
	LAM-2	●	▲		▲	▲						▲						
	LAM-1A	●	▲		▲	▲						▲						
	LAM-2A	●	▲		▲	▲						▲						
LAM3	LAM3-1	●		▲	▲			▲	▲		●							
	LAM3-2	●		▲	▲			▲	▲		●							
	LAM3-3	●		▲	▲			▲	▲		●							
	LAM3-4	●		▲	▲			▲	▲		●							
LAS	LAS1-1	●	▲		▲		▲				●							
	LAS1-2	●	▲		▲		▲				●							
LAS3	LAS3-1	●	▲								●				■	■	■	■
	LAS3-2	●	▲								●				■	■	■	■
LAS4	LAS4-1	●	▲								●							
	LAS4-2	●	▲								●							
LAN1	LAN1-1	●		▲	▲			▲	▲		●		▲	▲				
	LAN1-2	●		▲	▲			▲	▲		●		▲	▲				
	LAN1-3	●		▲	▲			▲	▲		●		▲	▲				
	LAN1-4	●		▲	▲			▲	▲	▲	●		▲	▲				
LAN2	LAN2-1A	●		▲				▲	◆			◆	▲					
	LAN2-2A	●		▲				▲	◆			◆	▲					
	LAN2-3A	●		▲				▲	◆			◆	▲					
LAN3	LAN3-1	●		▲	▲			▲	▲	▲	●				▲			
	LAN3-2	●		▲	▲			▲	▲	▲	●				▲			
	LAN3-3	●		▲	▲			▲	▲	▲	●				▲			
LAN4	LAN4-1	●		▲														
	LAN4-2	●		▲														
	LAN4-3	●		▲														
	LAN4-4	●		▲														

● Standard.

▲ Option is available.

◆ ■ Only 1 option is available.

# 17.

## HIWIN Customer Requirements(LA)

Customer:		Contact person:
		Tel:
		Fax:
Voltage VDC		Notes:
No-Load current		
Max. current		
Max. thrust force		
Max. pulling force		
Max. holding force		
Stroke		
Install length		
Speed (mm/s)		
Load (N)		
Duty cycle 10%		
Operation temp		
IP Class		
Outdoor use	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Direction	<input type="checkbox"/> H <input type="checkbox"/> V	
Axial load	<input type="checkbox"/> YES <input type="checkbox"/> NO	
With L/S	<input type="checkbox"/> YES <input type="checkbox"/> NO	
With control	<input type="checkbox"/> YES <input type="checkbox"/> NO	
Over current	<input type="checkbox"/> YES <input type="checkbox"/> NO	
With customer's L/S		
Position capability		
Special design		
Expected price		
Quantity		
Recommended specification:		
Engineer:		



**HIWIN MIKROSYSTEM CORP.**  
No. 1, 6th Road  
Taichung Industrial Park  
Taichung 40755, TAIWAN  
Tel : +886-4-23550110  
Fax: +886-4-23550123  
www.hiwinmikro.com.tw  
business@mail.hiwinmikro.com.tw

#### HIWIN USA

•CHICAGO  
1400 Madeline Lane  
Elgin, IL 60124, U.S.A.  
Tel : +1-847-8272270  
Fax: +1-847-8272291  
www.hiwin.com  
info@hiwin.com

•SILICON VALLEY  
Tel : +1-510-4380871  
Fax: +1-510-4380873

#### HIWIN FRANCE

Route de Bretoncelles  
F-61110 Dorceau  
Tel : +33-2-33852266  
Fax: +33-2-33253235  
www.hiwin.fr

#### HIWIN GmbH

Brücklesbünd 2, D-77654  
Offenburg, GERMANY  
Tel : +49-781-93278-0  
Fax: +49-781-93278-90  
www.hiwin.de  
www.hiwin.eu  
info@hiwin.de

#### HIWIN SCHWEIZ

Schachenstrasse 80  
CH-8645 Jona, SWITZERLAND  
Tel : +41-55-2250025  
Fax: +41-55-2250020  
www.hiwin.ch  
info@hiwin.ch

#### HIWIN S.R.O.

Kastanova 34  
CZ 62000 Brno,  
CZECH REPUBLIC  
Tel : +420-548-528238  
Fax: +420-548-220233  
www.hiwin.cz  
info@hiwin.cz

#### HIWIN JAPAN

•KOBE  
3F. Sannomiya-Chuo Bldg.  
4-2-20 Goko-Dori. Chuo-Ku  
KOBE 651-0087, JAPAN  
Tel: +81-78-2625413  
Fax: +81-78-2625686  
www.hiwin.co.jp  
info@hiwin.co.jp