

## Feature

- Aluminum alloy housing
- SUS304 inner-tube
- Compact mechanical system
- Protect class IP66
- Built-in limit switches
- Imported POT/HALL sensors (options)
- CE certificated
- Widely work in the harsh environment

## Model ALM602



## Basic Spec.

Housing color	<input type="checkbox"/> Silver	<input type="checkbox"/> Black	<input type="checkbox"/> Customize colors			
Screw type	<input type="checkbox"/> T screw					
Control	<input type="checkbox"/> control box <input type="checkbox"/> control system + manual					
Application	<input type="checkbox"/> Industrial					
Work environment	<input type="checkbox"/> 0~40°C	<input type="checkbox"/> -20~65°C	<input type="checkbox"/> -40~65°C			
Noise level	<input type="checkbox"/> ≤65dB					
Stroke	<input type="checkbox"/> 50-600mm	<input type="checkbox"/> Customize stroke				
Load	<input type="checkbox"/> ≤1200N	<input type="checkbox"/> ≤2000N	<input type="checkbox"/> ≤2500N			
Duty cycle	<input type="checkbox"/> 10%	<input type="checkbox"/> 20%				
Motor type	<input type="checkbox"/> Brushed DC motor					
IP rating	<input type="checkbox"/> IP65	<input type="checkbox"/> IP66				
Signal output	<input type="checkbox"/> No	<input type="checkbox"/> Switch signal	<input type="checkbox"/> Hall sensors	<input type="checkbox"/> POT	<input type="checkbox"/> Magnetic switch	
Input voltage	<input type="checkbox"/> 12V	<input type="checkbox"/> 24V	<input type="checkbox"/> 36V	<input type="checkbox"/> 48V		
Cable length	<input type="checkbox"/> 1m	<input type="checkbox"/> 2m	<input type="checkbox"/> Customize length			

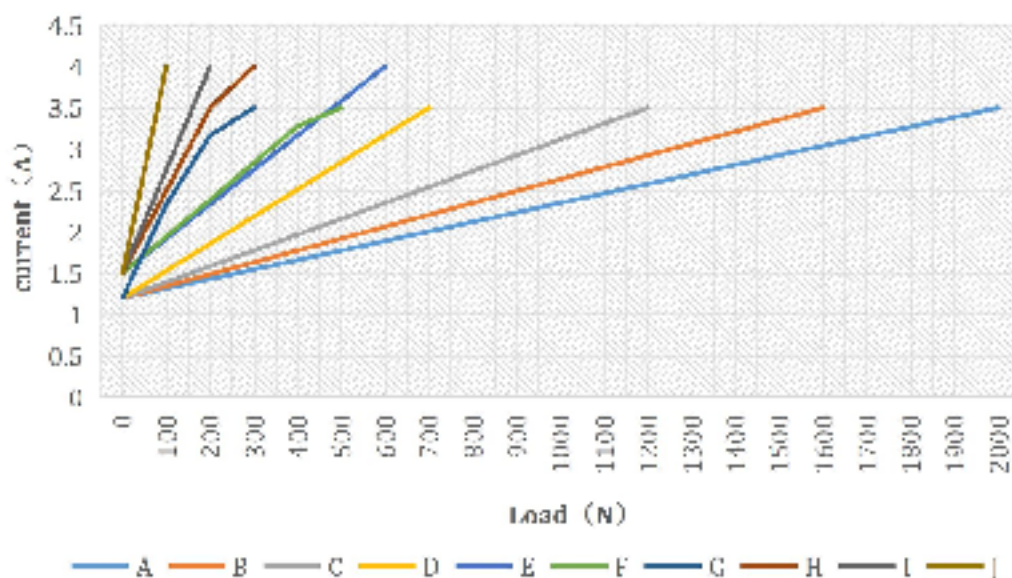
# Technical info

Code	Gear ratio	Screw pitch	Max.load	No-load (mm/s)	Full-load (mm/s)	Test environment (standard temperature)							
						12V	24V	36V	48V	12V	24V	36V	48V
						No-load current (A)				Full-load current (A)			
A	40:1	3	2000	5	35	1.2	0.6	0.4	0.3	3.5	2	1.5	1
B	30:1	3	1600	65	5	1.2	0.6	0.4	0.3	3.5	2	1.5	1
C	20:1	3	1200	10	7	1.2	0.6	0.4	0.3	3.5	2	1.5	1
D	10:1	3	700	18	13	1.2	0.6	0.4	0.3	3.5	2	1.5	1
E	20:1	5	600	14	11	1.5	0.8	0.5	0.3	4	2.5	1.5	1
F	20:1	7.5	450	24	18	1.5	0.8	0.5	0.3	4	2.5	1.5	1
G	5:1	3	300	38	30	1.2	0.7	0.4	0.3	3.5	2	1.5	1
H	10:1	7.5	250	45	35	1.5	0.8	0.5	0.3	4	2.5	1.5	1
I	5:1	5	200	55	45	1.5	0.8	0.5	0.3	4	2.5	1.5	1
J	5:1	7.5	100	80	60	1.5	0.8	0.5	0.3	4	2.5	1.5	1

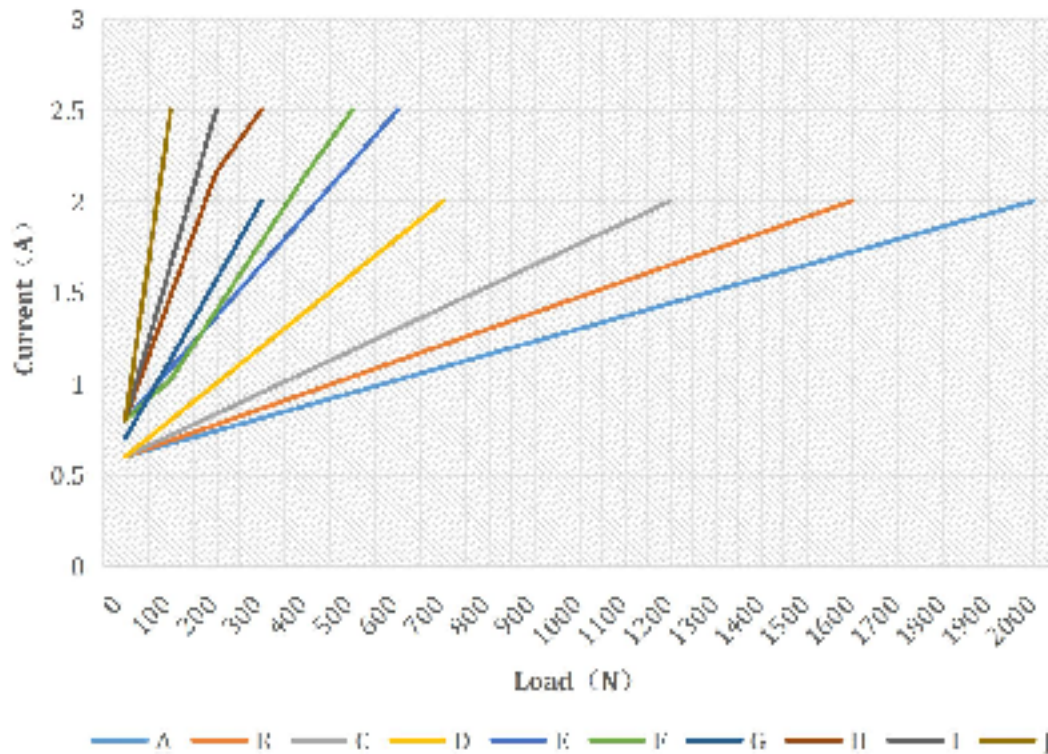
## Load & Current

(The letter corresponds to the transmission code in the selection parameter table)

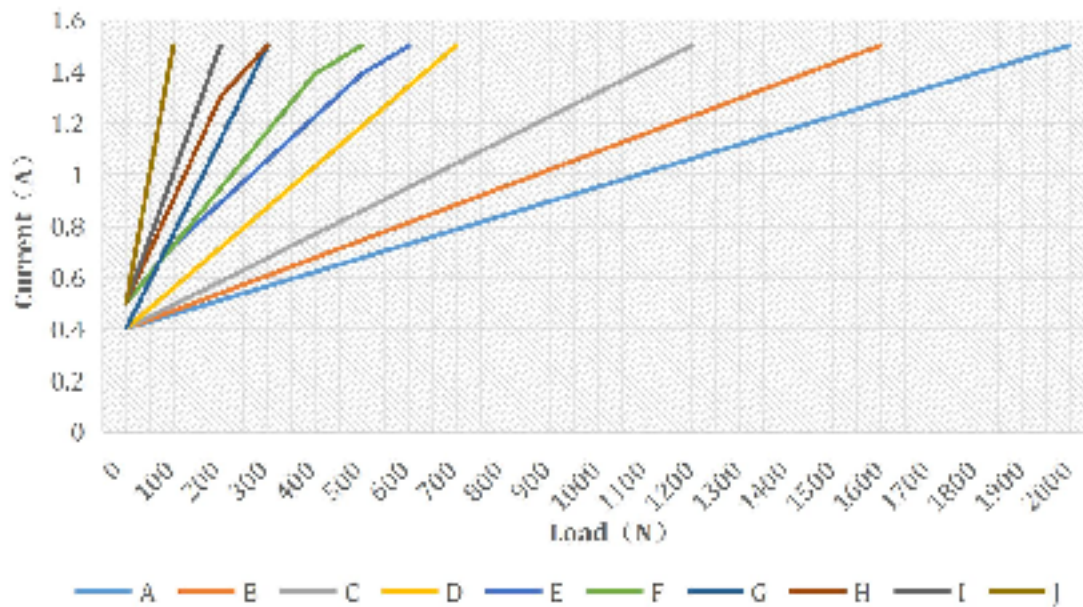
12V Load & Current



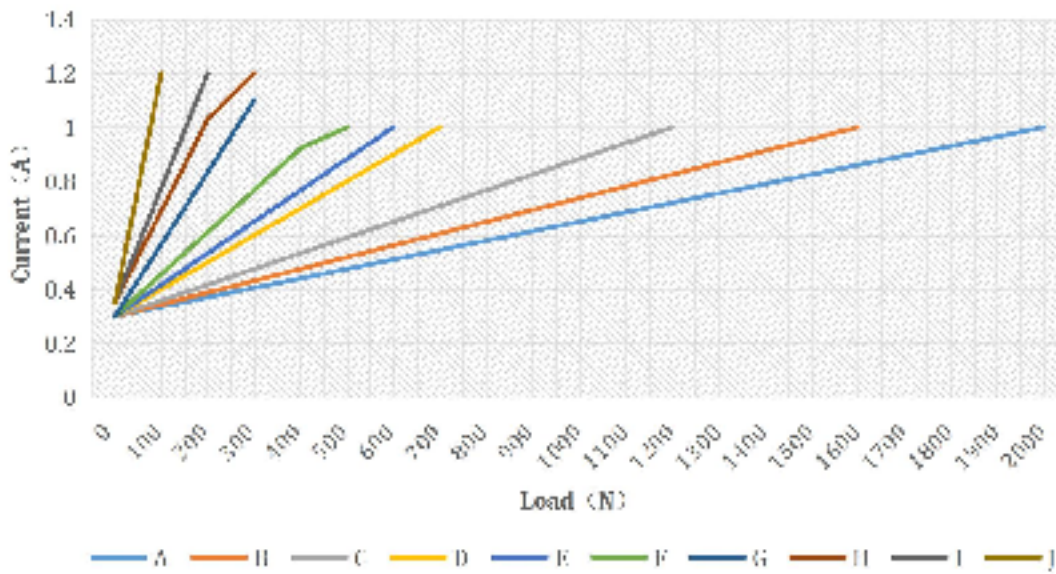
24V Load & Current



36V Load & Current



10V Load & Current



# Mounting length

## Stroke & Mounting length

Linear actuator without POT

Linear actuator with POT

S(mm)	Retracted L (mm)	Extended A (mm)	Simulate
50	158	208	$30 \leq \text{Stroke} \leq 300,$ $L = S + 108$ $A = L + S (A = S^2 + 108)$
100	208	308	
150	258	408	
200	308	508	
250	358	608	
300	408	708	
350	500	850	$300 < \text{Stroke} \leq 500,$ $L = S + 150$ $A = L + S (A = S^2 + 150)$
400	550	950	
450	600	1050	
500	650	1150	
550	730	1280	$500 < \text{Stroke} \leq 600,$ $L = S + 180$ $A = L + S (A = S^2 + 180)$
600	780	1380	

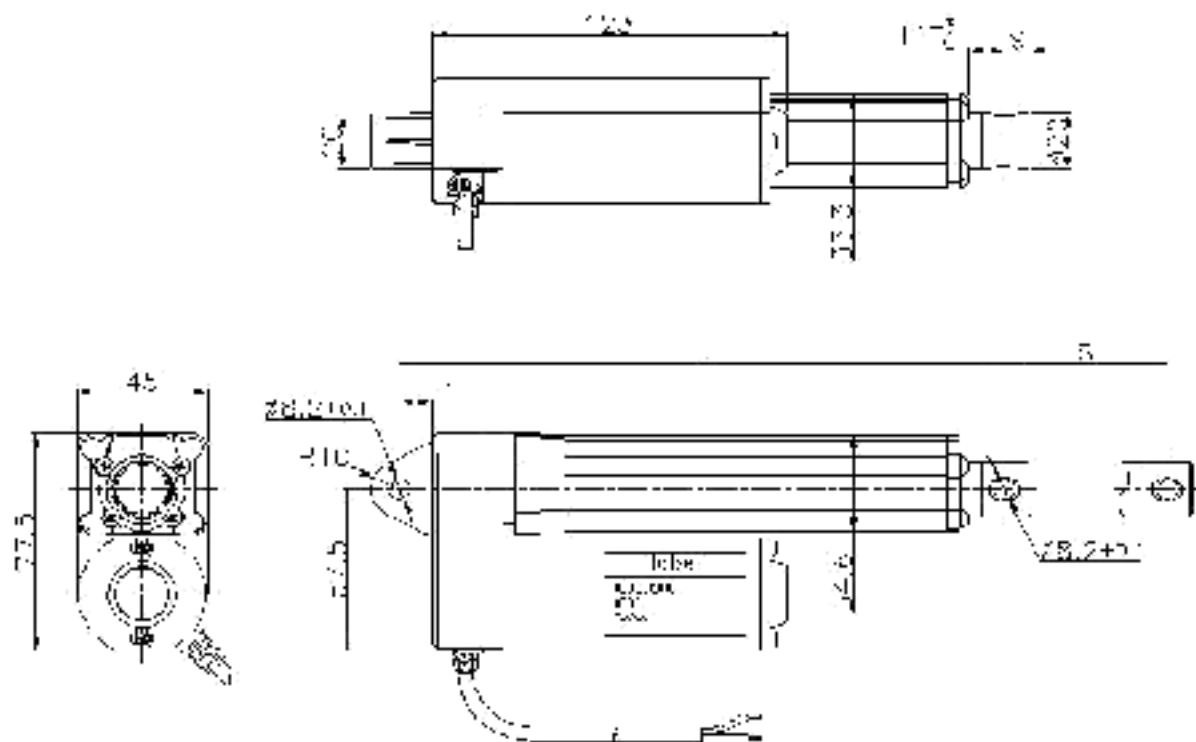
S(mm)	Retracted L (mm)	Extended A (mm)	Simulate
50	190	240	$30 \leq \text{Stroke} \leq 400,$ $L = S + 140$ $A = L + S (A = S^2 + 140)$
100	240	340	
150	290	440	
200	340	540	
250	390	640	
300	440	740	
350	490	840	
400	540	940	

## Dimension

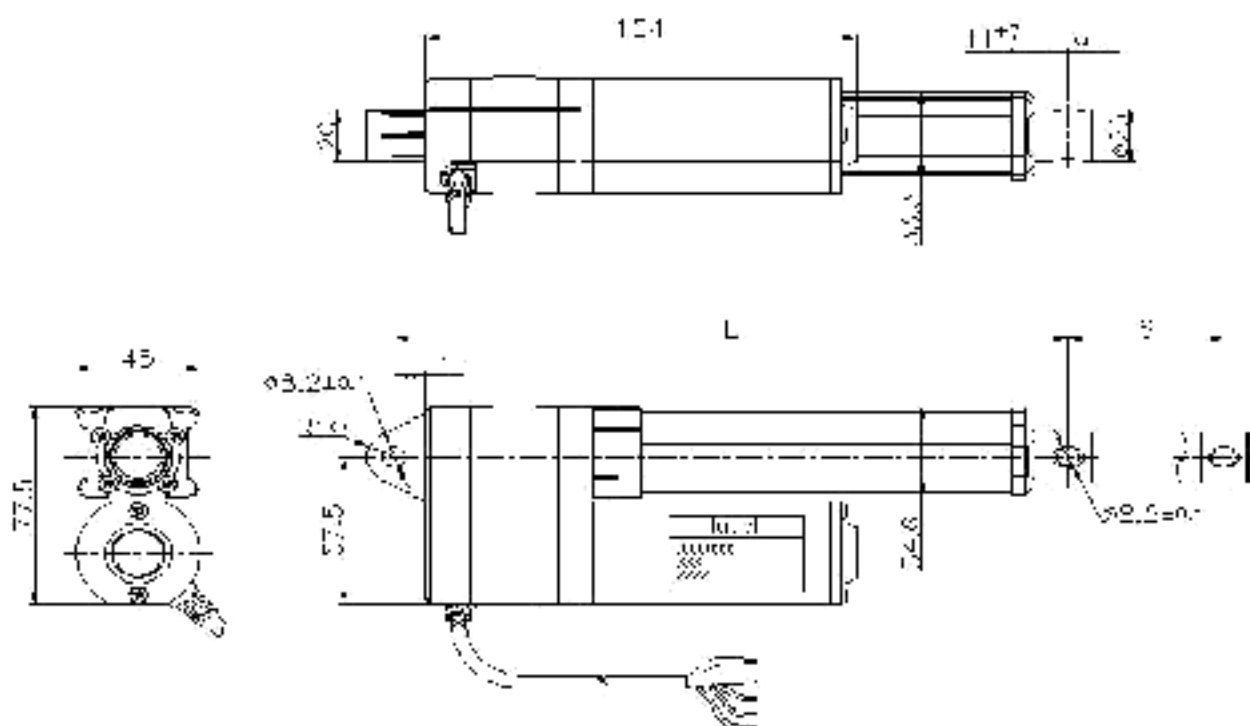
S: Stroke, the travel length of actuator

L: Length, the fully retracted length of actuator from front hole centre to rear hole centre

### (Standard type/without POT)

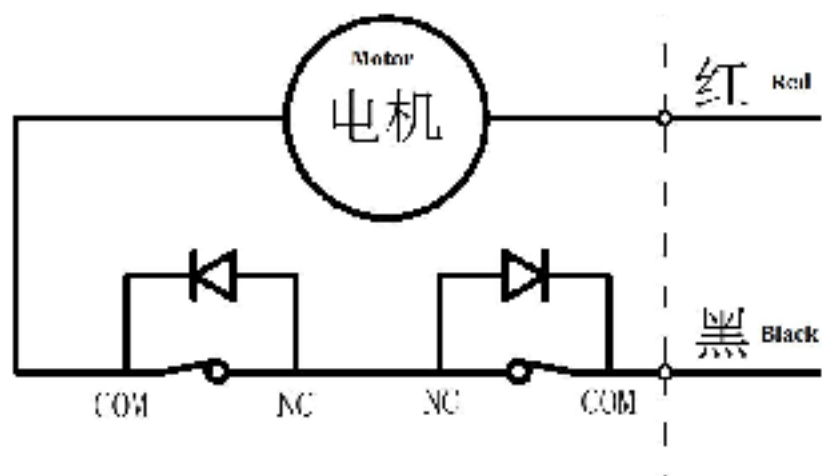


### (With POT)



# Signal output

## Standard limit switch diagram



## Limit switch signal output

Closed <input type="checkbox"/>	Open <input type="checkbox"/>
<p>The diagram shows a limit switch with terminals labeled 'COM', 'NC', and 'COM'. The switch is shown in a closed state. The signal output is represented by a closed switch symbol.</p>	<p>The diagram shows two limit switches: 'Down limit switch' and 'Upper limit switch'. The 'Down limit switch' has terminals labeled 'NC', 'C', and 'NO'. The 'Upper limit switch' has terminals labeled 'C', 'NO', and 'NC'. The signal output is represented by an open switch symbol.</p>
C <input type="checkbox"/>	NC <input type="checkbox"/>
<p>The diagram shows two limit switches: 'Upper limit switch' and 'Down limit switch'. The 'Upper limit switch' has terminals labeled 'NO', 'C', and 'NO'. The 'Down limit switch' has terminals labeled 'NO', 'C', and 'NC'. The signal output is represented by a closed switch symbol.</p>	<p>The diagram shows two limit switches: 'Upper limit switch' and 'Down limit switch'. The 'Upper limit switch' has terminals labeled 'C', 'NO', and 'NO'. The 'Down limit switch' has terminals labeled 'NO', 'C', and 'C'. The signal output is represented by an open switch symbol.</p>



## Hall sensor signal

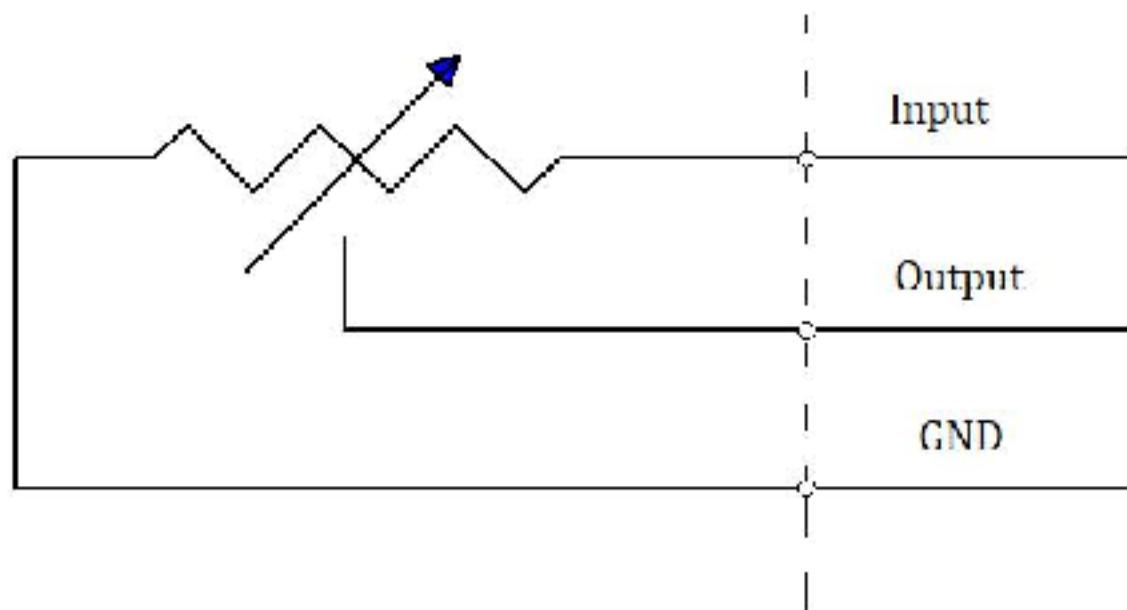
Hall sensors built-in motor				
Code	Signal feedback	Magnetic pole	Resolution (1 pair of pole) Pulse/mm	Resolution (4 pairs of poles) Pulse/mm
A	Hall sensors	1 pair of pole or 4 pairs of poles	13.17 pulse/mm	52.67 pulse/mm
B			10.16 pulse/mm	40.63 pulse/mm
C			7.10 pulse/mm	28.4 pulse/mm
D			3.70 pulse/mm	14.8 pulse/mm
E			4.26 pulse/mm	17.04 pulse/mm
F			2.84 pulse/mm	11.36 pulse/mm
G			1.78 pulse/mm	7.12 pulse/mm
H			1.48 pulse/mm	5.92 pulse/mm
I			1.07 pulse/mm	4.272 pulse/mm
J			0.71 pulse/mm	2.848 pulse/mm
Phase difference				
Phase difference 90°		<p>Extend 伸長      Retract 縮短</p>		

Notice: Hall sensor power supply 3.3V-24V, recommend to use 5V or 12V

## POT

POT information			
Resistance	Turn(s)	Tolerance	Remark
10K	10	$\pm 5\%$	Actual resistance value may vary within the 0-10K $\Omega$ range based on stroke length
POT (10K $\Omega$ )			
Code	Initial resistance	10K $\Omega$ POT Max. stroke	Remark
A、B、C、D、G	0.2-0.4K $\Omega$	180mm/540mm	/
E、I	0.2-0.4K $\Omega$	300mm/600mm	/
F、H、J	0.2-0.4K $\Omega$	540mm/600mm	/

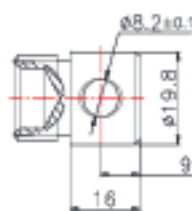
### Potentiometer wiring diagram



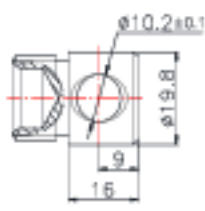


# Attachment options

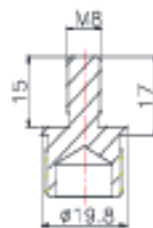
## Front



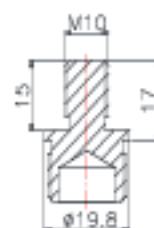
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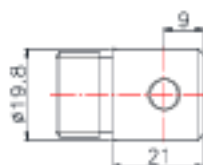
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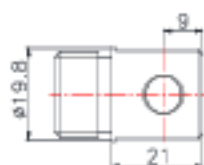
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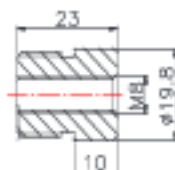
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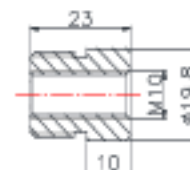
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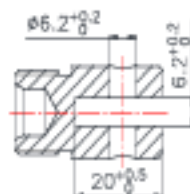
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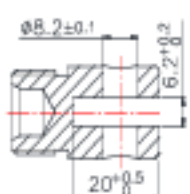
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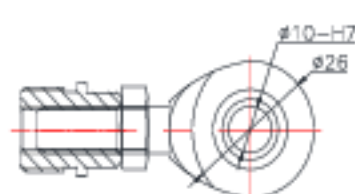
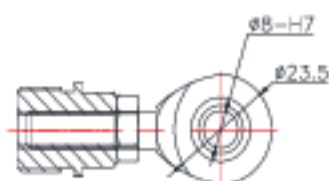
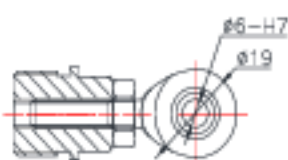
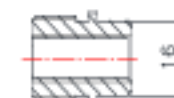
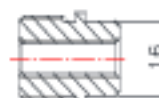
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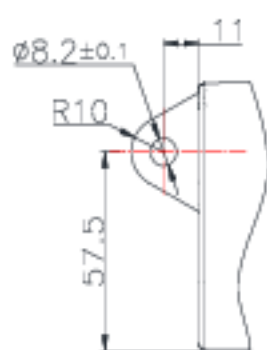
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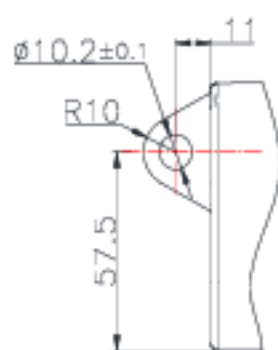
10



## Rear



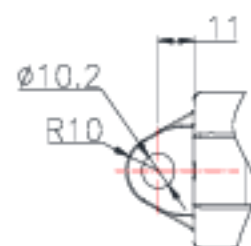
01  
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## Main products

Model	Load (N)	Stroke (mm)	Speed (mm/s)	IP rating	Application
ALM501B	8000	50-600mm	5-17mm/s	IP65	Medical, furniture, industrial
ALM601	1200	50-600mm	3.5-80mm/s	IP65	Industrial
ALM602	2000	50-600mm	3.5-55mm/s	IP65	Industrial
ALM603	2500	50-600mm	5-15mm/s	IP65	Medical, furniture, industrial
ALM606	8000	50-600mm	5-50mm/s	IP65	Industrial
ALM606A	7000	50-900mm	5-50mm/s	IP65	Industrial
ALM607	5000	50-600mm	5-50mm/s	IP65	Industrial
ALM608	12000	50-1000mm	6.5-38mm/s	IP66	Industrial