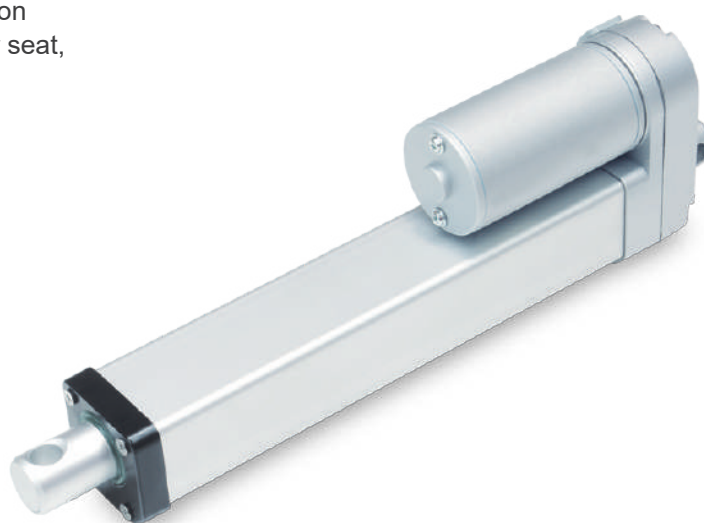


Actuator

LD36

LD36 is a compact actuator with IP66 protection level, suitable for various applications with limited installation space, such as window opener, adjustable car driver seat, and other outdoor applications.



Features and Options

Main applications: Industrial, furniture

Standard features:

- Input voltage: 12V DC / 24V DC
- Max. load: 1000N (Push / Pull)
- Speed at no load: 43.9mm/sec (Typical value)
- Speed at full load: 4.6mm/sec (Typical value @1000N loaded)
- Stroke: 50 / 100 / 150 / 200 / 250 / 300mm
- Noise level: ≤ 60 dB
- IP level: IP66 / IP69K
- Preset limit switches
- Duty cycle: 25%, max. 1 min. continuous operation in 4 min.
- Operating ambient temperature: -25°C ~ +65°C
- Certified: CE Marking, Electromagnetic Compatibility Directive 2014/30/EU

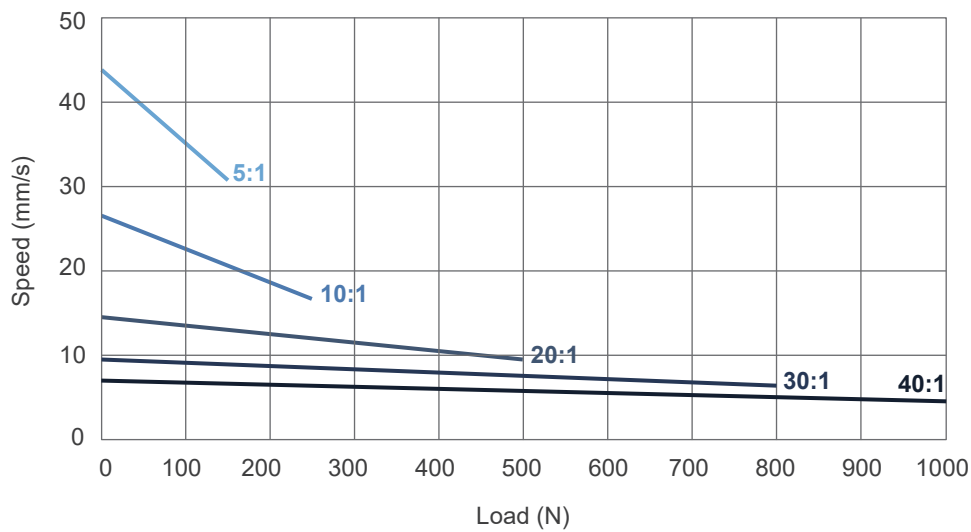
Options:

- Positioning signal feedback with Hall effect sensor x 1
- Positioning signal feedback with Hall effect sensor x 2
- Analog positioning feedback with Potentiometer (POT)

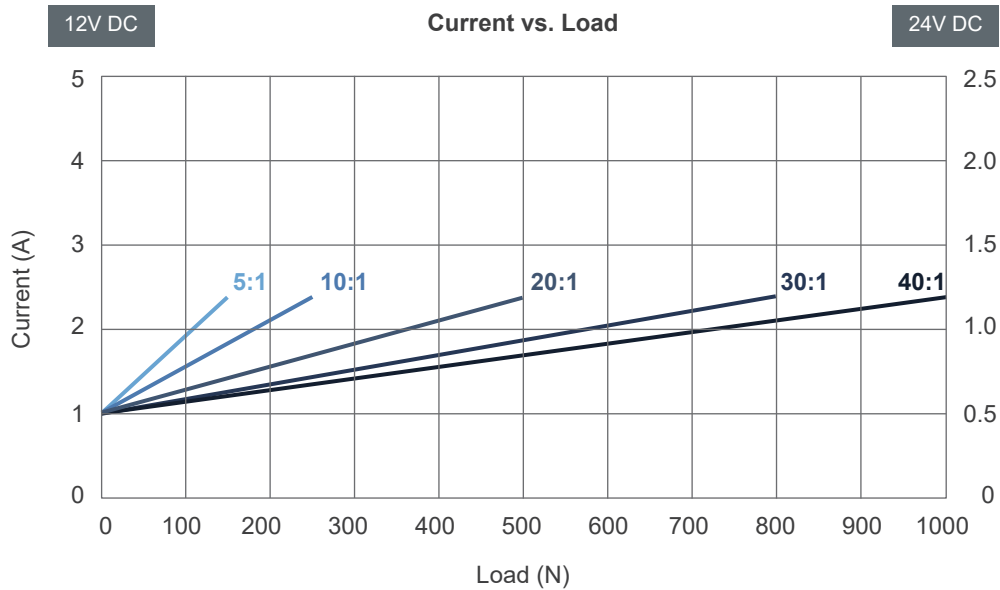
Performance Data

Model No.	Gear ratio	Push/Pull Max. (N)	Self-locking ability (N)	* Typical speed (mm/s)		* Typical current (A)			
				No load	Full load	No load		Full load	
						12V	24V	12V	24V
LD36-XX-05-XXX	5:1	150	250	43.9	30.8	1.0	0.5	2.4	1.2
LD36-XX-10-XXX	10:1	250	340	27.6	16.8	1.0	0.5	2.4	1.2
LD36-XX-20-XXX	20:1	500	680	14.6	9.5	1.0	0.5	2.4	1.2
LD36-XX-30-XXX	30:1	800	1020	9.5	6.3	1.0	0.5	2.4	1.2
LD36-XX-40-XXX	40:1	1000	1530	7.0	4.6	1.0	0.5	2.4	1.2

Speed vs. Load



Current vs. Load



Remarks:

- * The typical speed or typical current means the average value neither upper limit nor lower limit. The performance curves are made with typical values.

Dimensions

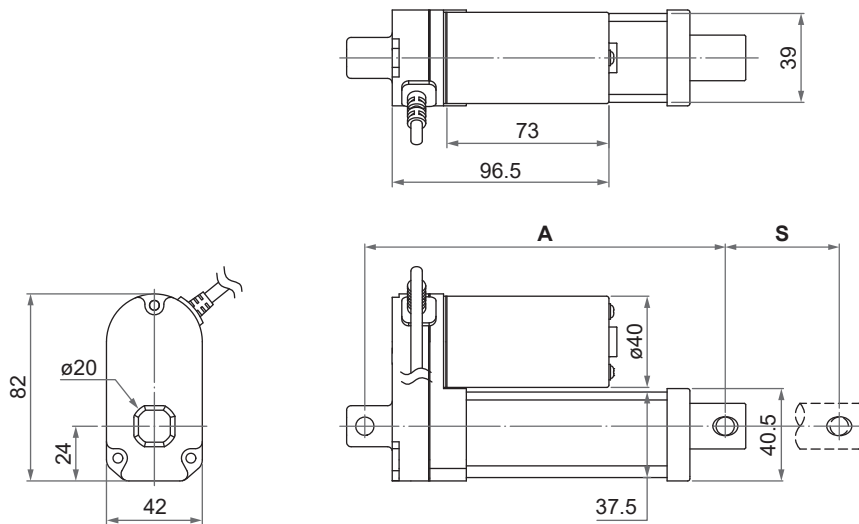
• Retracted length (A)

Option	Front connector code	Stroke (S)					
		50	100	150	200	250	300
Basic or with Hall sensor	1	158	209	260	311	362	413
	3	199	250	301	352	403	454
	6	168.5	219.5	270.5	321.5	372.5	423.5
With POT	1	195	246	297	348	399	450
	3	236	287	338	389	440	491
	6	205.5	256.5	307.5	358.5	409.5	460.5

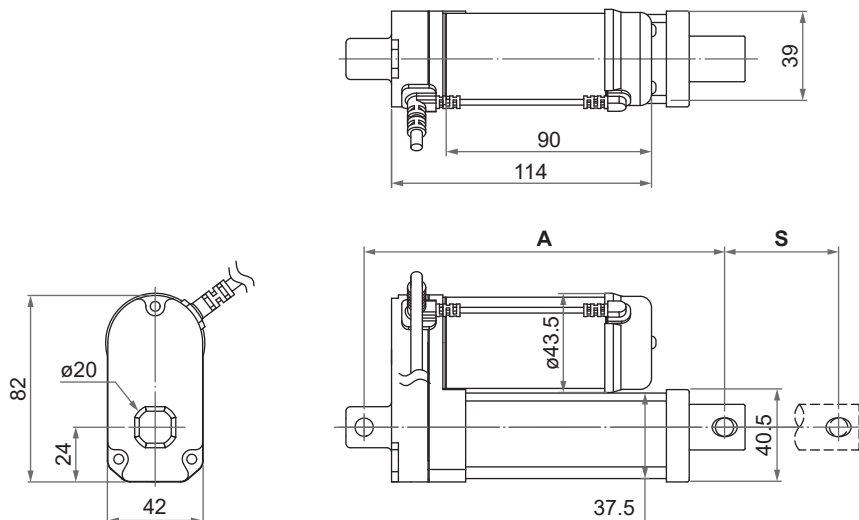
(tolerance: ±3mm)

• Drawing

- Basic, without positioning feedback.

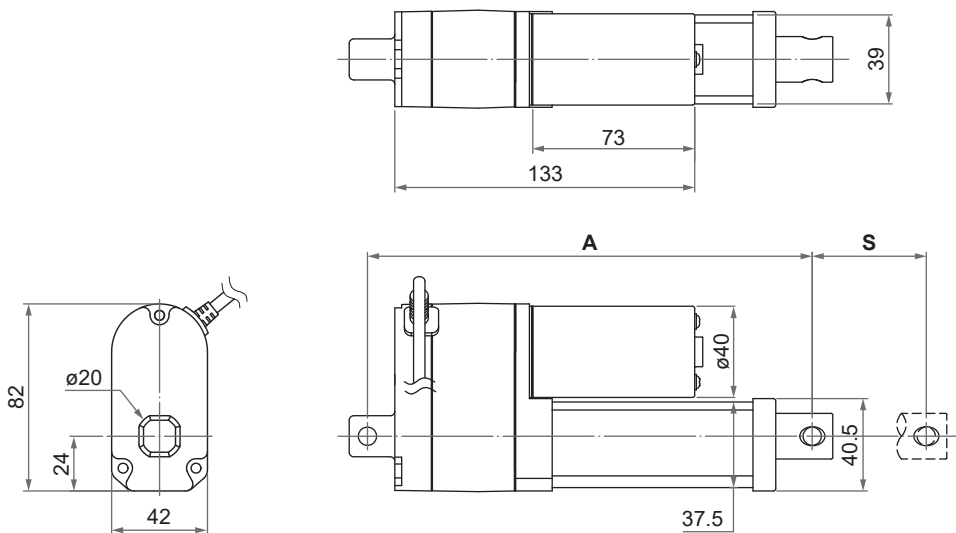


- With Hall effect sensor positioning feedback



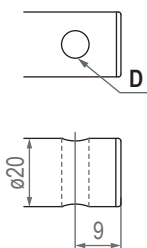
Unit: mm

- With potentiometer (POT) absolute positioning feedback

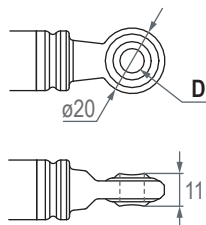


• Front connector

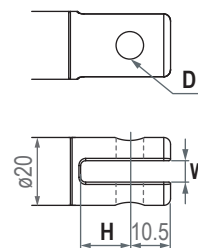
1: Drilled hole



3: Spherical rod eye



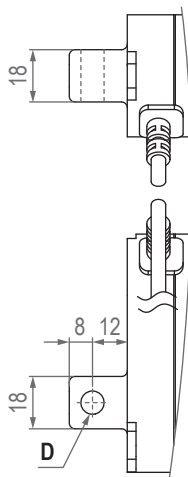
6: Plastic slot



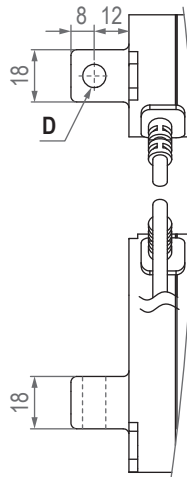
Front connector code	Diameter of pivot without bushing (D)	Slot width (W)	Slot depth (H)
1	ø6.4, ø8, ø10	N/A	N/A
3	ø8	N/A	N/A
6	ø8, ø10	6	15

• Rear connector

0: Zinc alloy clevis, 0°



9: Zinc alloy clevis, 90°



Rear connector code	Diameter of pivot without bushing (D)	Slot width (W)	Slot depth (H)
0, 9	ø6.4, ø8, ø10	N/A	N/A

Unit: mm

Compatibility

Product	Model	LD36 spec
Controller	CI72	Standard
Accessory	MB22 mounting bracket (Fig. 1)	Standard, mounting hole $\varnothing 6.4\text{mm}$, $\varnothing 8\text{mm}$ or $\varnothing 10\text{mm}$



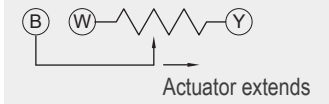
Fig. 1

Cable with Flying Leads

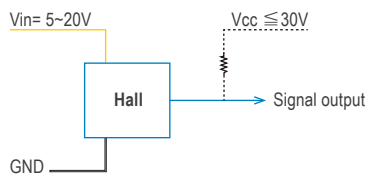

- Basic, without positioning feedback.

	Wire color	Definition	Descriptions
Power wires	Red	DC power	Connect red wire to "Vdc +" & black wire to "Vdc -" of DC power to extend the actuator. Switch the polarity of DC input to retract it.
	Black		

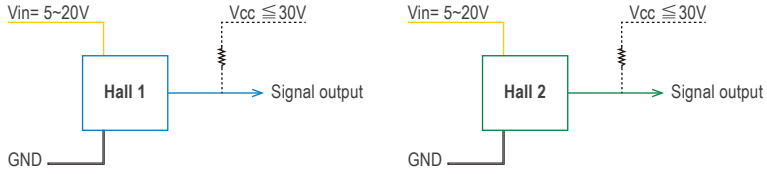
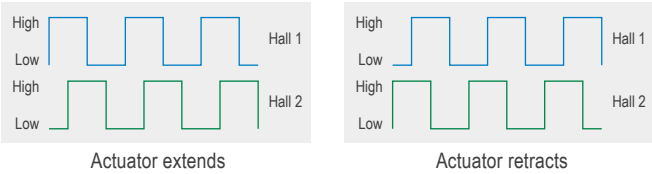

- With potentiometer (POT) absolute positioning feedback

	Wire color	Definition	Descriptions														
Power wires	Red	DC power	Connect red wire to "Vdc +" & black wire to "Vdc -" of DC power to extend the actuator. Switch the polarity of DC input to retract it.														
	Black																
Signal wires	Yellow	Vin	Input voltage 70V max.														
	Blue	POT output	<p>1. Potentiometer specification:</p> <ul style="list-style-type: none"> - 10K ohm, 10 turns. - Tolerance $\pm 5\%$ <p>2. Output voltage: The voltage (resistance) between blue and white increases linearly from about 0 when the actuator extends, and decreases when it retracts.</p>  <p>3. There are different resolutions according to the stroke length (as table below)</p> <table border="1"> <thead> <tr> <th>Stroke</th> <th>Resistance (tolerance: $\pm 0.3\text{K}\Omega$)</th> </tr> </thead> <tbody> <tr> <td>50mm</td> <td>0.3 ~ 4.8K</td> </tr> <tr> <td>100mm</td> <td>0.3 ~ 5.0K</td> </tr> <tr> <td>150mm</td> <td>0.3 ~ 4.5K</td> </tr> <tr> <td>200mm</td> <td>0.3 ~ 4.9K</td> </tr> <tr> <td>250mm</td> <td>0.3 ~ 4.8K</td> </tr> <tr> <td>300mm</td> <td>0.3 ~ 4.8K</td> </tr> </tbody> </table> <p>- LD36 only utilizes half the number of turns (about 5 turns) of this POT part.</p>	Stroke	Resistance (tolerance: $\pm 0.3\text{K}\Omega$)	50mm	0.3 ~ 4.8K	100mm	0.3 ~ 5.0K	150mm	0.3 ~ 4.5K	200mm	0.3 ~ 4.9K	250mm	0.3 ~ 4.8K	300mm	0.3 ~ 4.8K
	Stroke	Resistance (tolerance: $\pm 0.3\text{K}\Omega$)															
50mm	0.3 ~ 4.8K																
100mm	0.3 ~ 5.0K																
150mm	0.3 ~ 4.5K																
200mm	0.3 ~ 4.9K																
250mm	0.3 ~ 4.8K																
300mm	0.3 ~ 4.8K																
	White	GND															

- With single Hall effect sensor positioning feedback

	Wire color	Definition	Descriptions												
Power wires	Red	DC power	Connect red wire to "Vdc +" & black wire to "Vdc -" of DC power to extend the actuator. Switch the polarity of DC input to retract it.												
	Black														
Signal wires	Yellow	Vin	Voltage input range: 5 ~ 20V												
	Blue	Hall output	<p>The signal wires output should connect the pull-up resistor to the operating voltage (Vcc) of the system. (10KΩ resistor is recommended)</p> <p>Wiring:</p>  <p>High= Determined by Vcc and the pull-up resistor. Low= GND</p> <p>Hall signal data:</p>  <p>Hall effect sensor resolution:</p> <table border="1"> <thead> <tr> <th>Gear ratio</th> <th>Resolution (pulses/mm)</th> </tr> </thead> <tbody> <tr> <td>5:1</td> <td>2.27</td> </tr> <tr> <td>10:1</td> <td>3.62</td> </tr> <tr> <td>20:1</td> <td>6.86</td> </tr> <tr> <td>30:1</td> <td>10.57</td> </tr> <tr> <td>40:1</td> <td>14.27</td> </tr> </tbody> </table>	Gear ratio	Resolution (pulses/mm)	5:1	2.27	10:1	3.62	20:1	6.86	30:1	10.57	40:1	14.27
	Gear ratio	Resolution (pulses/mm)													
5:1	2.27														
10:1	3.62														
20:1	6.86														
30:1	10.57														
40:1	14.27														
White	GND														

• With dual Hall effect sensors positioning feedback

	Wire color	Definition	Descriptions																		
Power wires	Red	DC power	Connect red wire to "Vdc +" & black wire to "Vdc -" of DC power to extend the actuator. Switch the polarity of DC input to retract it.																		
	Black																				
Signal wires	Yellow	Vin	Voltage input range: 5 ~ 20V																		
	Blue	Hall 1 output	<p>The signal wires output should connect the pull-up resistor to the operating voltage (Vcc) of the system. (10KΩ resistor is recommended)</p> <p>Wiring:</p>  <p>High= Determined by Vcc and the pull-up resistor. Low= GND</p> <p>Hall signal data:</p> <p>- A type</p>  <p>- B type</p>  <p>Hall effect sensor resolution:</p> <table border="1"> <thead> <tr> <th>Gear ratio</th> <th>Resolution (pulses/mm)</th> <th>Hall signal data type</th> </tr> </thead> <tbody> <tr> <td>5:1</td> <td>2.27</td> <td>B type</td> </tr> <tr> <td>10:1</td> <td>3.62</td> <td>A type</td> </tr> <tr> <td>20:1</td> <td>6.86</td> <td>A type</td> </tr> <tr> <td>30:1</td> <td>10.57</td> <td>A type</td> </tr> <tr> <td>40:1</td> <td>14.27</td> <td>B type</td> </tr> </tbody> </table>	Gear ratio	Resolution (pulses/mm)	Hall signal data type	5:1	2.27	B type	10:1	3.62	A type	20:1	6.86	A type	30:1	10.57	A type	40:1	14.27	B type
	Gear ratio	Resolution (pulses/mm)	Hall signal data type																		
	5:1	2.27	B type																		
10:1	3.62	A type																			
20:1	6.86	A type																			
30:1	10.57	A type																			
40:1	14.27	B type																			
Green	Hall 2 output																				
	White	GND																			

Certifications

LD36 actuator is compliant with the following regulations, in terms of the essential conformity requirements of EMC Directive of 2014/30/EU.

Emission	Immunity
EN 55014-1:2006+A1:2009+A2:2011	EN 55014-2:1997+A1:2001+A2+:2008 Category I

Ordering Key

LD36- 24 - 05 - 150 - 1 0 D 0 0

Input voltage	12: 12V DC 24: 24V DC
Gear ratio	05: 5:1 10: 10:1 20: 20:1 30: 30:1 40: 40:1
Stroke	050: 50mm 100: 100mm 150: 150mm 200: 200mm 250: 250mm 300: 300mm
Front connector <i>(Refer to Page 4)</i>	1: Drilled hole 3: Spherical rod eye 6: Plastic slot
Rear connector <i>(Refer to Page 4)</i>	0: Zinc alloy clevis, 0° 9: Zinc alloy clevis, 90°
Positioning feedback	0: Basic, without positioning feedback. S: Hall effect sensor x 1 D: Hall effect sensor x 2 P: Potentiometer (POT)
Reserved	0
Cable length	0: 900mm straight 1: 1500mm straight 2: 2000mm straight

Terms of Use

The user is responsible for application suitability of Moteck products. As ongoing improvement process continues, products listed on the Moteck website are subject to change without prior notice. Moteck reserves the right to terminate the sales or remove any product displayed on the website, or listed in its catalogues.