# Actuator
# LD10

LD10 features inline design which makes it an ideal product to fulfill the needs of application with limited installation space.

# Content

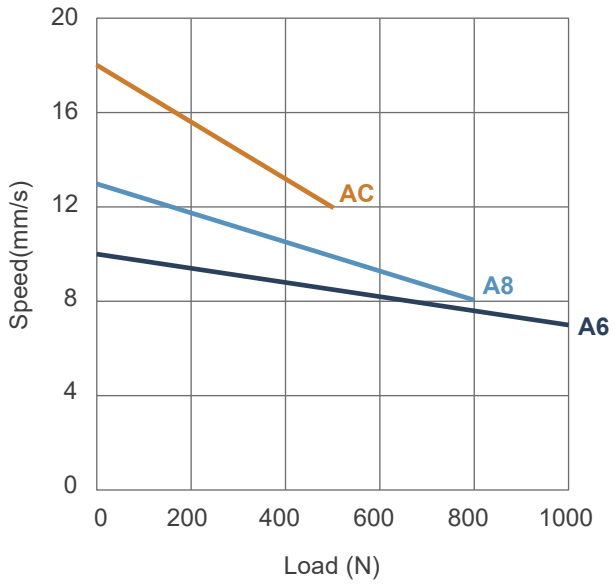
## Features and Options

- Main application: Industrial automation
- Input voltage: 12V DC / 24V DC
- Max. load: 1000N (Push/Pull)
- Max. speed at no load: 18mm/sec (Typical value)
- Speed at full load: 7mm/sec (Typical value @1000N loaded)
- Stroke: 50～300mm
- Noise level: ≦65dB
- IP level: IPX4 (Static; non-action)
- Preset limit switches
- Duty cycle:10%, max. 2 min. continuous operation in 20 min.
- Operating ambient temperature: -20°C～+65°C
- Storage ambient temperature: -25°C～+65°C
- Certified: CE Marking, EMC Directive 2014/30/EU

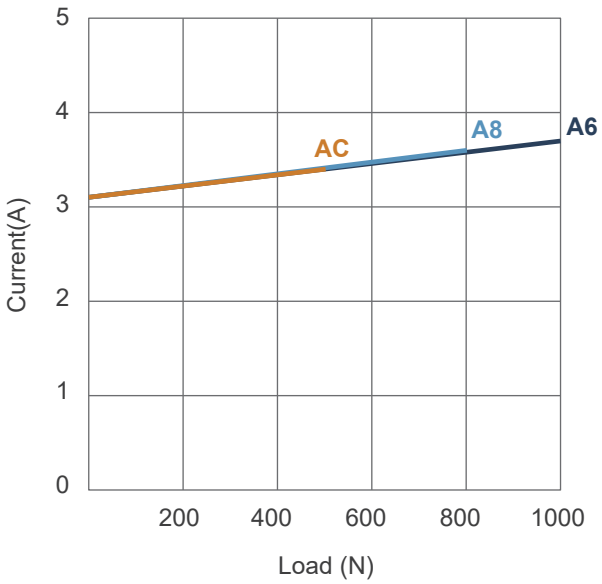
## Performance Data

| Model No. | Gear ratio | Push/Pull Max. (N) | * Typical Speed (mm/s) | | * Typical Current (A) | | | |
|---|---|---|---|---|---|---|---|---|
| | | | No load | Full load | No load | | Full load | |
| | | | | | 12V | 24V | 12V | 24V |
| LD10-XX-**A6**-16-XXX.XXX-CXX-X | 16:1 | 1000 | 10 | 7 | 4.2 | 3.1 | 5.3 | 3.7 |
| LD10-XX-**A8**-16-XXX.XXX-CXX-X | 16:1 | 800 | 13 | 8 | 4.2 | 3.1 | 5.2 | 3.6 |
| LD10-XX-**AC**-16-XXX.XXX-CXX-X | 16:1 | 500 | 18 | 12 | 4.2 | 3.1 | 4.9 | 3.4 |

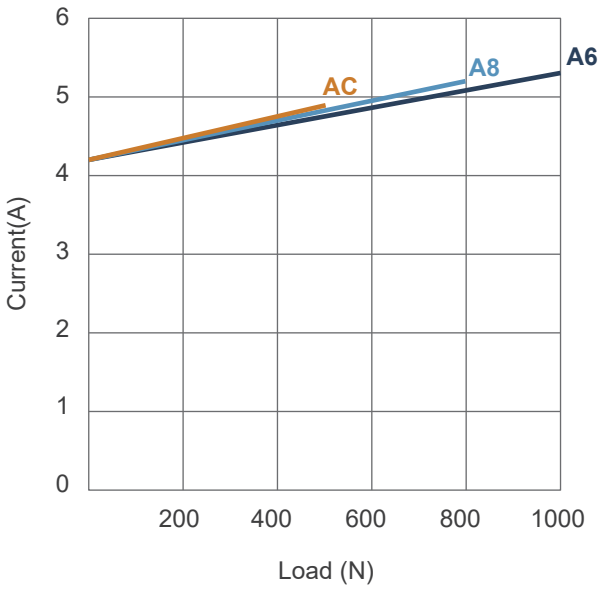
**Speed VS. Load**




**Current VS. Load** 24V DC




**Current VS. Load** 12V DC




**Remarks:**

* The typical speed or typical current means the average value neither upper limit nor lower limit, which measured under room temperature and stable power. The performance curves are made with typical values.

● Inrush current

- When the actuator starts to operate, an inrush current of about 0.2 seconds will be generated. The starting inrush current of LD10 can reach about 3 times of the typical current under the actuator maximum load.
- If a circuit board power supply is used, the specifications must be sufficient to handle the inrush current. If batteries are used as the power source, inrush current will not be a problem.
- MOTECK controllers are designed to take into account the inrush current when the actuator starts. If the user provides his or her own controller, this feature must be considered in the specifications and protection mechanisms. Besides, the connectors, switches and relays selected by users must also be able to withstand the starting currents.

# Dimensions

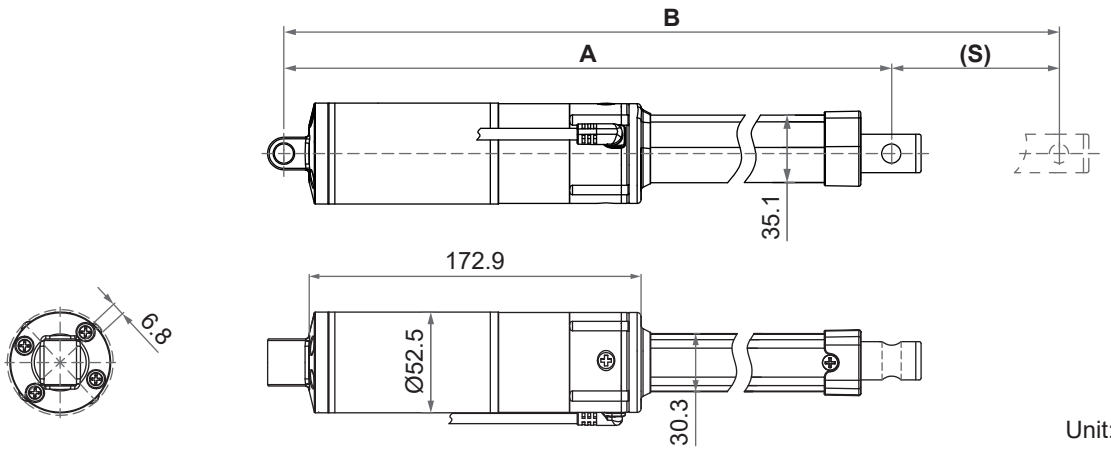
### 1. Installation dimension

- Available stroke (S) range = 50～300mm (±3mm)
- Retracted length (A) ≧ S + 256 + E + F (Unit: mm)

| Stroke | E |
|---|---|
| ≦200mm | +0 mm |
| 201≦S≦250mm | +10 mm |
| 251≦S≦300mm | +20 mm |
| **Front connector code** | **F** |
| 3, 4 | +0 mm |
| 1, A | +9 mm |
| 9 | +26 mm |

- Extended length (B) = Retracted length (A) + Stroke (S)

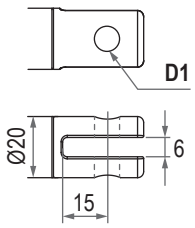
### 2. Drawing



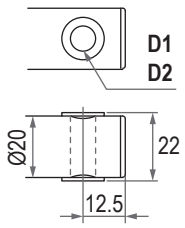

Unit: mm

### 3. Front connector

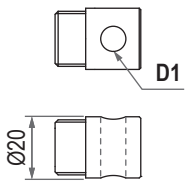
**1**: Plastic slot



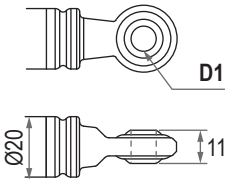

**3**: Drilled hole



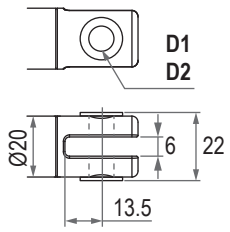

**4**: Plastic solid




**9**: Spherical rod eye



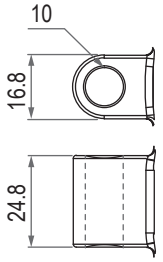

**A**: Metal slot




| Front connector code | Diameter of pivot without bushing (D1) | Diameter of pivot with bushing (D2) |
|---|---|---|
| 1 | Ø8 , Ø10 | N/A |
| 3 | Ø6.4, Ø8, Ø10 | Ø8 |
| 4 | Ø8 , Ø10 | N/A |
| 9 | Ø8 | N/A |
| A | Ø8, Ø10 | Ø8 |

### 4. Rear connector

**6**: Plastic




Unit: mm

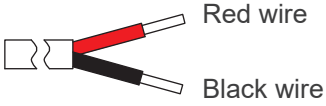
## Compatibility

| Product | Model | LD10 spec |
|---|---|---|
| **Controller** | CI72 | Standard |
| **Accessory** | MB22 mounting bracket (Fig. 1) | Standard, mounting hole ø8mm or ø10mm. |

Fig. 1

## Cable with Flying Leads

- Power wires




**Note:**
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.

## Certifications

LD10 actuator is compliant with the following regulations, in terms of the essential conformity requirements of EMC Directive of 2014/30/EU.

| Emission | Immunity |
|---|---|
| EN 61000-6-3:2007+A1:2011 | EN 61000-6-1:2007<br>IEC 61000-4-2:2008<br>IEC 61000-4-3:2006+A1:2007+A2:2010<br>IEC 61000-4-8:2009 |

## Ordering Key

**LD10- 24 - A6 - 16 - 356 . 456 - C 3 6 - 1**

| | |
|---|---|
| **Input voltage** | **12**: 12V DC<br>**24**: 24V DC |
| **Motor and Spindle type** (Refer to Page 4) | **A6**: 2500rpm / 6mm pitch<br>**A8**: 2500rpm / 8mm pitch<br>**AC**: 2500rpm / 12mm pitch |
| **Gear ratio** | **16**: 16:1 |
| **Retracted length** (Refer to Page 6) | **XXX** |
| **Extended length** (Refer to Page 6) | **XXX** |
| **Front connector** (Refer to Page 6) | **1**: Plastic slot<br>**3**: Drilled hole<br>**4**: Plastic solid<br>**9**: Spherical rod eye<br>**A**: Metal slot |
| **Rear connector** (Refer to Page 6) | **6**: Plastic |
| **Cable length** | **0**: 350mm straight<br>**1**: 1000mm straight<br>**2**: 450mm with 300mm coiled |