

# Actuator ID10BT

ID10BT has a maximum push/pull force of 1000N, but it has high speed and low noise performance. Durable and waterproof, it is suitable for industrial applications with lighter loads but emphasizing speed performance.



## Features and Options

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**Main application:** Industry

**Standard features:**

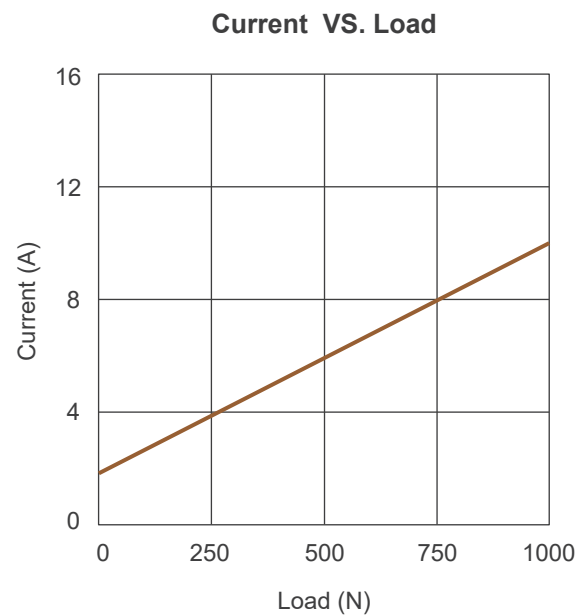
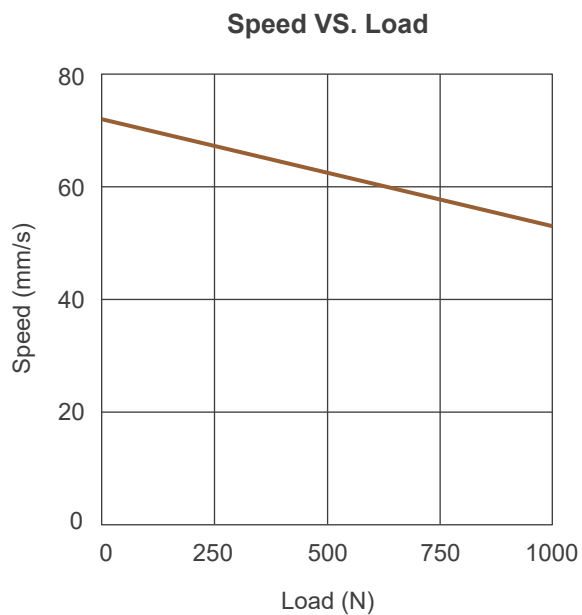
- Input voltage: 24V DC
- Max. rated load: 1000N (Push/Pull)
- Max. static load: 1500N
- Max. speed at no load: 72mm/sec (Typical value)
- Spindle type: ACME screw
- Gear ratio 4:1
- Stroke: 102 / 153 / 203 / 254 / 305 / 457mm
- Life cycle: 25,000 cycles, total stroke 18,000,000mm
- Noise level:  $\leq 55$ dB
- IP level: IP65 (Static; non-action)
- Built-in CAM type limit switches (LT)
- Extension tube material: Electroplated steel
- Color: Black
- Duty cycle: 25%, max. 2 min. continuous operation in 8 min.
- Operating ambient temperature: -25°C ~ +65°C
- Certified: CE Marking, EMC Directive 2014/30/EU

**Options:**

- Analog and absolute positioning feedback with Potentiometer (POT)
- IP level: IP66/IP69K (Static; non-action)

## Performance Data

| Model No.                | Push / Pull<br>Max. (N) | * Typical Speed (mm/s) |           | * Typical Current (A) @ 24V DC |           |
|--------------------------|-------------------------|------------------------|-----------|--------------------------------|-----------|
|                          |                         | No Load                | Full Load | No Load                        | Full Load |
| ID10BT-24F5A-XXX-0X0XLX0 | 1000                    | 72                     | 53        | 1.8                            | 10        |



### 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

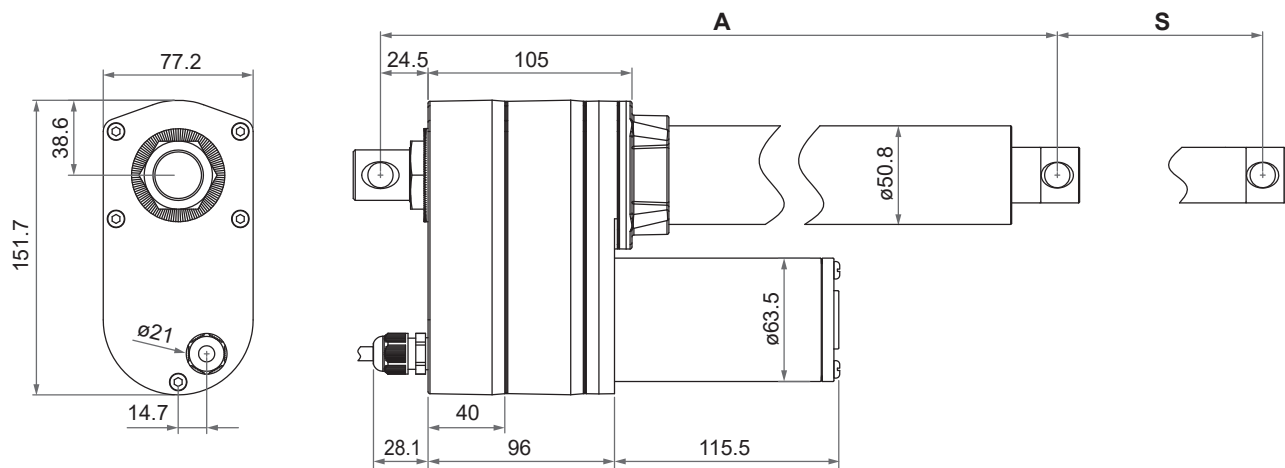
## Retracted length (A)

| Stroke (S)           | 102 (4") | 153 (6") | 203 (8") | 254 (10") | 305 (12") | 457 (18") |
|----------------------|----------|----------|----------|-----------|-----------|-----------|
| Retracted length (A) | 359      | 410      | 460      | 511       | 613       | 765       |

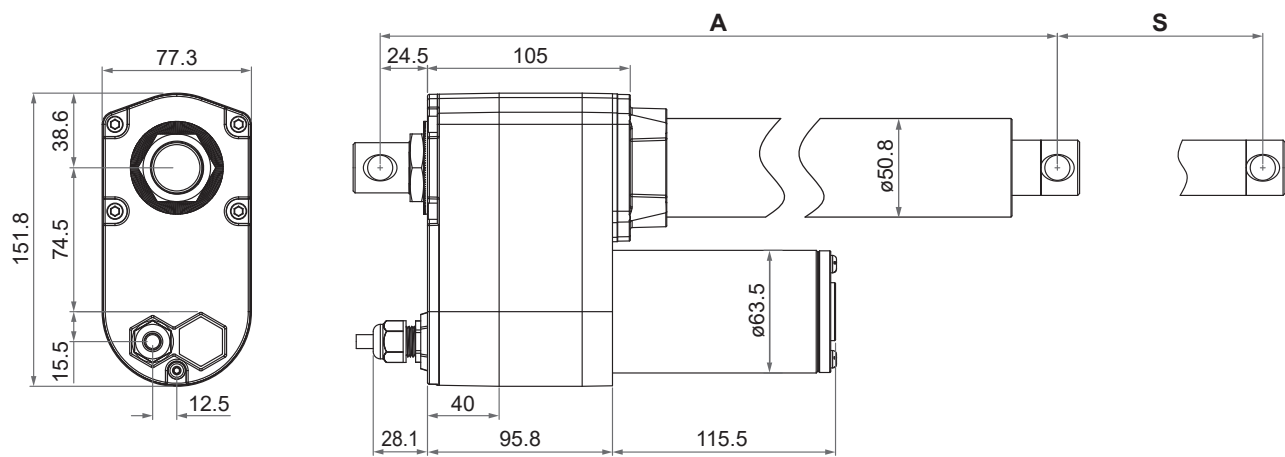
(Tolerance: ±5mm)

## Drawing

- IP65 (Standard)

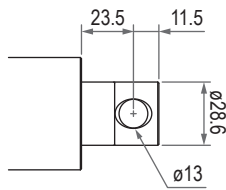


- IP66/IP69K (Option)

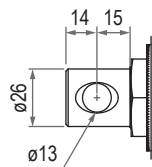


Unit: mm

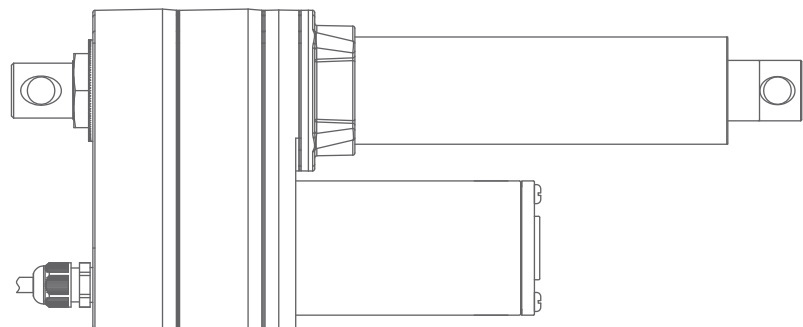
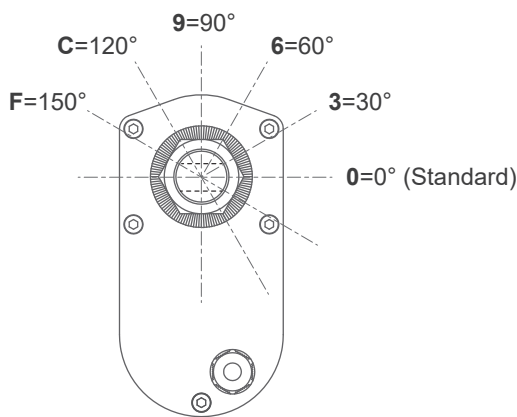
Front connector



Rear connector



Pivot orientation of rear connector



**Note:** As an example in 0° pivot of rear connector.

Unit: mm

Compatibility

| Product    | Model                          | ID10BT spec                   |
|------------|--------------------------------|-------------------------------|
| Controller | CI72                           | Standard                      |
| Accessory  | MB30 mounting bracket (Fig. 1) | Standard, mounting hole ø13mm |



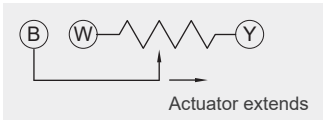
Fig. 1

## Wiring

### • 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                     | <div>1. Potentiometer specification:<ul style="list-style-type: none"><li>- 10K ohm, 10 turns.</li><li>- Tolerance ±5%</li></ul></div> <div>2. Output voltage: The voltage (resistance) between blue and white increases linearly from about 0 when the actuator extends, and decreases when it retracts.</div> <div></div> <div>3. There are different resolutions according to the stroke length (as table below)</div> <table><thead><tr><th>Stroke (mm)</th><th>Resistance (tolerance: ±0.3KΩ)</th></tr></thead><tbody><tr><td>102 (4")</td><td>0.3 ~ 8.1K</td></tr><tr><td>153 (6")</td><td>0.3 ~ 8.7K</td></tr><tr><td>203 (8")</td><td>0.3 ~ 9.2K</td></tr><tr><td>254 (10")</td><td>0.3 ~ 7.4K</td></tr><tr><td>305 (12")</td><td>0.3 ~ 8.8K</td></tr><tr><td>457 (18")</td><td>0.3 ~ 9.4K</td></tr></tbody></table> | Stroke (mm) | Resistance (tolerance: ±0.3KΩ) | 102 (4") | 0.3 ~ 8.1K | 153 (6") | 0.3 ~ 8.7K | 203 (8") | 0.3 ~ 9.2K | 254 (10") | 0.3 ~ 7.4K | 305 (12") | 0.3 ~ 8.8K | 457 (18") | 0.3 ~ 9.4K |
|              | Stroke (mm) | Resistance (tolerance: ±0.3KΩ) |   |             |                                |          |            |          |            |          |            |           |            |           |            |           |            |
| 102 (4")     | 0.3 ~ 8.1K  |                                |   |             |                                |          |            |          |            |          |            |           |            |           |            |           |            |
| 153 (6")     | 0.3 ~ 8.7K  |                                |   |             |                                |          |            |          |            |          |            |           |            |           |            |           |            |
| 203 (8")     | 0.3 ~ 9.2K  |                                |   |             |                                |          |            |          |            |          |            |           |            |           |            |           |            |
| 254 (10")    | 0.3 ~ 7.4K  |                                |   |             |                                |          |            |          |            |          |            |           |            |           |            |           |            |
| 305 (12")    | 0.3 ~ 8.8K  |                                |   |             |                                |          |            |          |            |          |            |           |            |           |            |           |            |
| 457 (18")    | 0.3 ~ 9.4K  |                                |   |             |                                |          |            |          |            |          |            |           |            |           |            |           |            |
|              | White       | GND                            |   |             |                                |          |            |          |            |          |            |           |            |           |            |           |            |

## Certifications

ID10BT actuator is compliant with the following regulations, in terms of the essential conformity requirements of EMC Directive of 2014/30/EU.

| Emission                | Immunity        |
|-------------------------|-----------------|
| EN55014-1:2017+A11:2020 | EN 55014-2:2015 |

## Ordering Key

|  |   |
|--|---|
| ID10BT - 24 F5A - 102 - 0 0 0 P L 5 0                    |   |
| Input voltage  | 24: 24V DC  |
| Motor and spindle type                                   | F5A: 3700rpm, 5.08mm pitch, ACME screw  |
| Stroke   | 102: 102mm (4")<br>153: 153mm (6")<br>203: 203mm (8")<br>254: 254mm (10")<br>305: 305mm (12")<br>457: 457mm (18") |
| Reserved   | 0   |
| Pivot orientation of rear connector<br>(Refer to Page 4) | 0: 0° (Standard)<br>3: 30°<br>6: 60°<br>9: 90°<br>C: 120°<br>F: 150°  |
| Reserved   | 0   |
| Positioning feedback                                     | 0: None<br>P: Potentiometer (POT)   |
| Limit switch   | L: Limit switches (Default)   |
| IP level   | 5: IP65 (Standard)<br>9: IP66/IP69K   |
| Cable length   | 0: 250mm straight<br>1: 500mm straight<br>3: 1000mm straight<br>5: 1500mm straight                                |

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