

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

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: ≤ 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: $-25^{\circ}\text{C} \sim +65^{\circ}\text{C}$
- Certified: CE Marking, EMC Directive 2014/30/EU

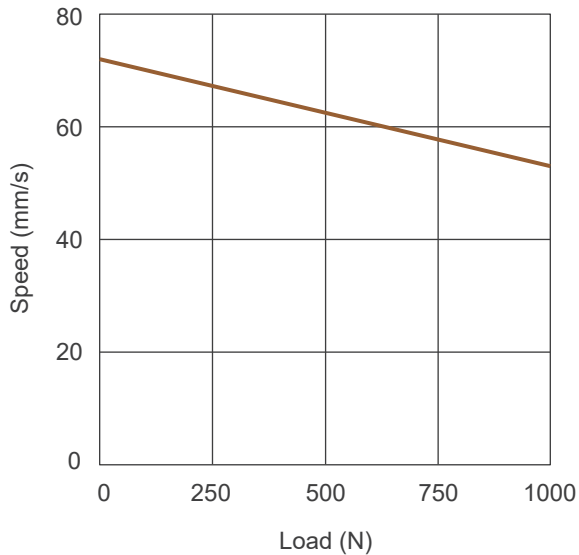
Options:

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

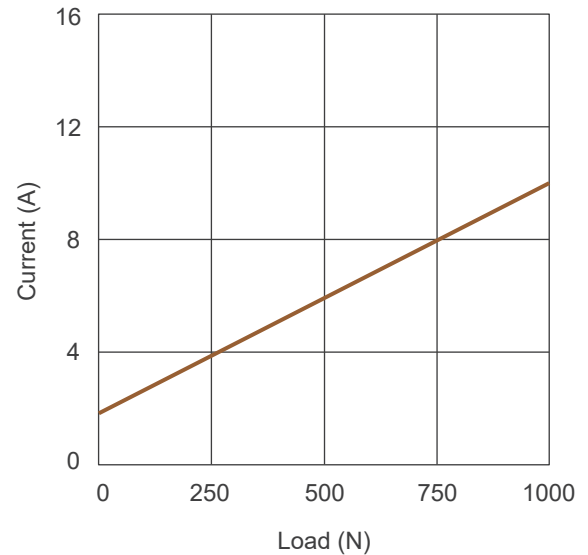
Performance Data

Model No.	Push / Pull 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

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

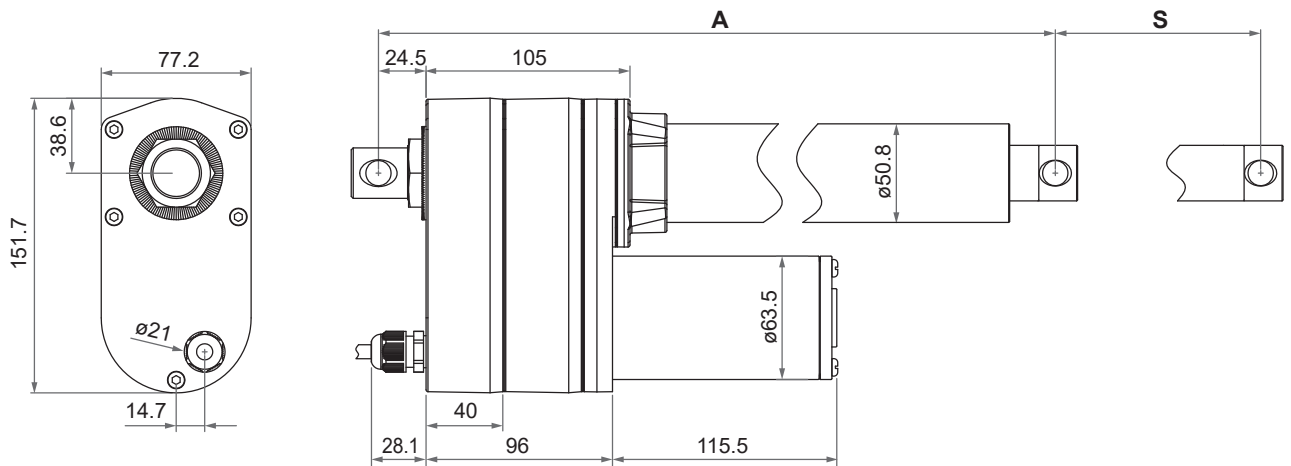
Retracted length (A)

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

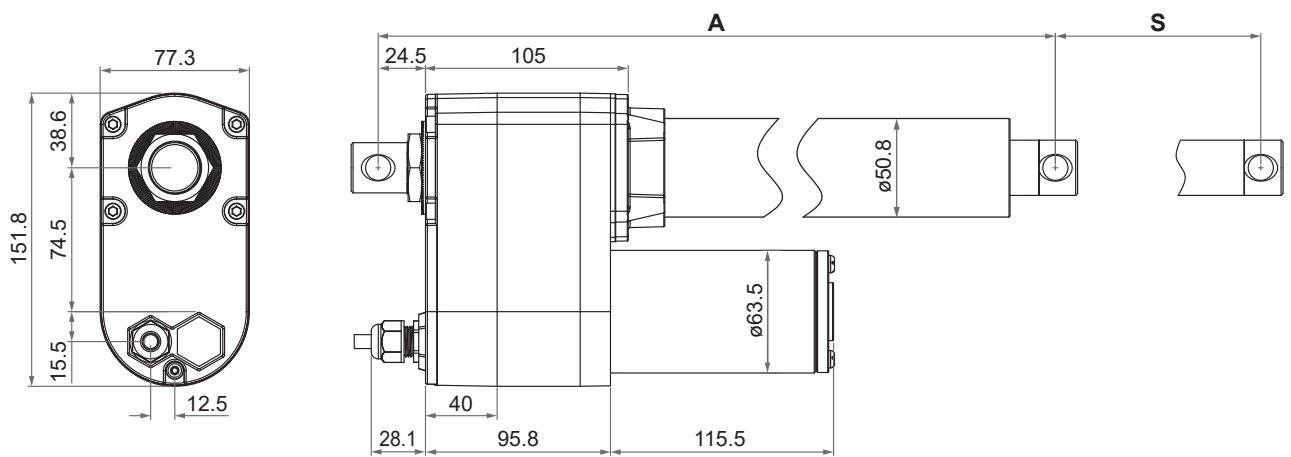
(Tolerance: ±5mm)

Drawing

- IP65 (Standard)

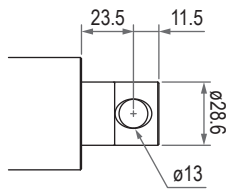


- IP66/IP69K (Option)

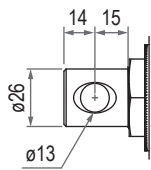


Unit: mm

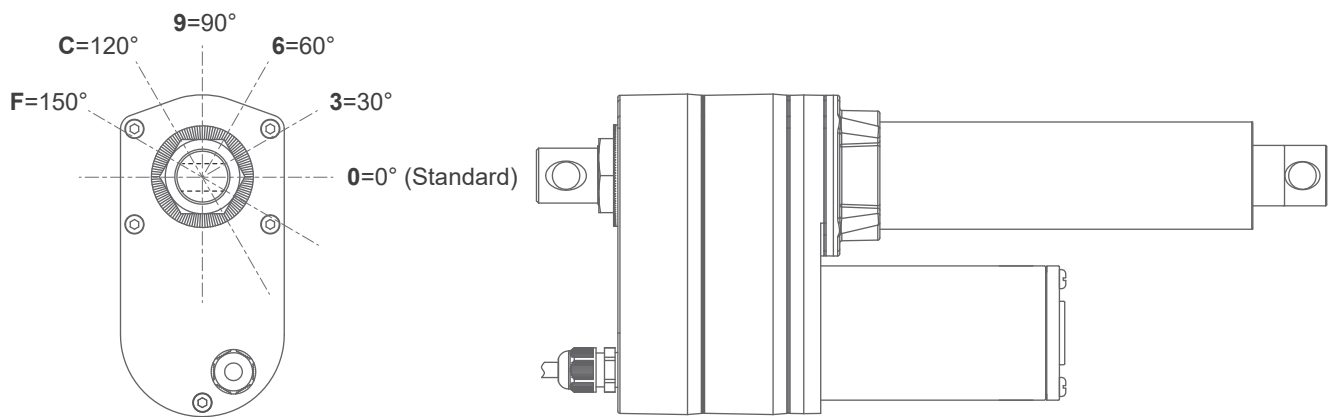
Front connector



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 \varnothing 13mm



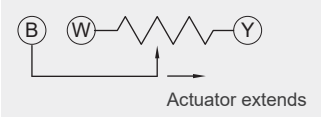
Fig. 1

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	<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 (mm)</th> <th>Resistance (tolerance: $\pm 0.3K\Omega$)</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: $\pm 0.3K\Omega$)	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
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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") 153: 153mm (6") 203: 203mm (8") 254: 254mm (10") 305: 305mm (12") 457: 457mm (18")
Reserved	0
Pivot orientation of rear connector (Refer to Page 4)	0: 0° (Standard) 3: 30° 6: 60° 9: 90° C: 120° F: 150°
Reserved	0
Positioning feedback	0: None P: Potentiometer (POT)
Limit switch	L: Limit switches (Default)
IP level	5: IP65 (Standard) 9: IP66/IP69K
Cable length	0: 250mm straight 1: 500mm straight 3: 1000mm straight 5: 1500mm straight

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