MOTECK®

Actuator
ID10G

ID10G has similar appearance and waterproof performance as ID10. It adopts ACME screw design to achieve a maximum push/pull force of 9,000N and high speed, which is a good value actuator. For applications in various industry fields, agriculture and construction machinery, ID10G is a very competitive and good choice when high speed and high load capability are required.

Features and Options

**Main applications:** Industry, Agriculture, Construction
Standard features:
● Input voltage: 12V DC / 24V DC
● Max. rated load: 9,000N
● Max. static load: 18,000N
● Max. speed at no load: 14mm/sec (Typical value)
● Stroke: 102 / 153 / 203 / 254 / 305 / 457 / 610mm
● IP level: IP65 (Static; non-action)
● Overload protection by clutch
● Preset limit switches
● Spindle type: ACME screw
● Extension tube material: Stainless steel
● Color: Black
● Duty cycle: 10%, max. 2 min. continuous operation in 20 min.
● Operating ambient temperature: -25°C～+65°C
● Certified: CE Marking, EMC Directive 2014/30/EU

Options:
● Relative positioning signal feedback with single Hall effect sensor
● 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) *			
		No load	Full load	No load		Full load	
				12V	24V	12V	24V
ID10G	9,000	14	10	1.6	0.8	22	11

Speed VS. Load

Current VS. Load

12V DC 24V DC
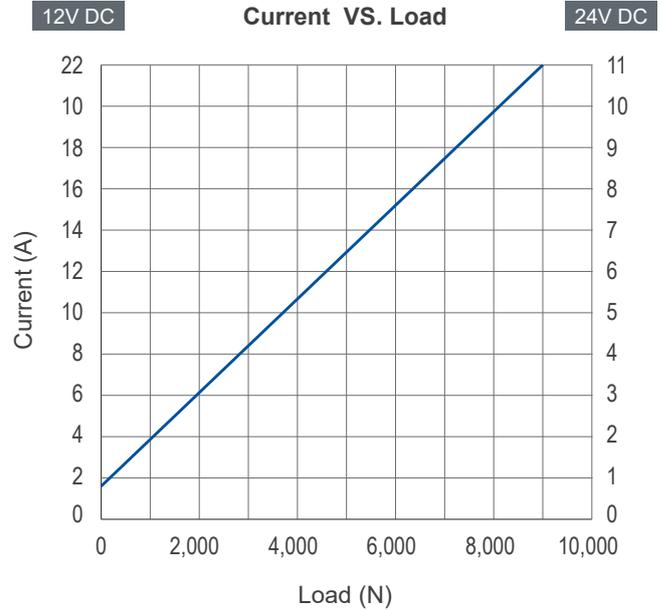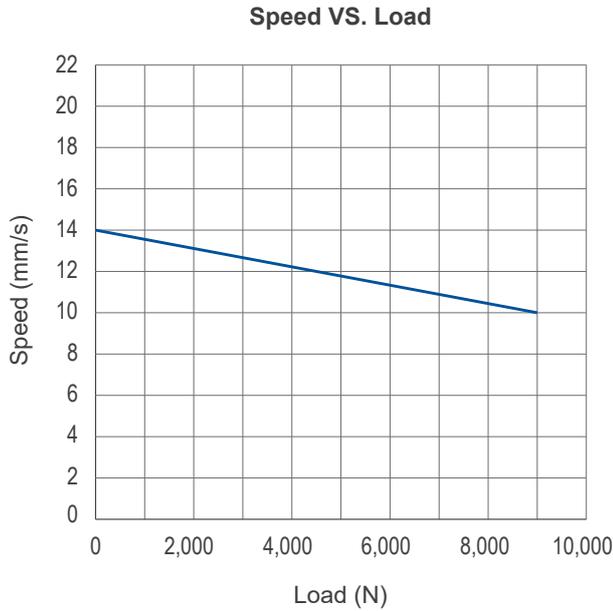
Remarks:

* 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.

Dimensions

Retracted length (A)

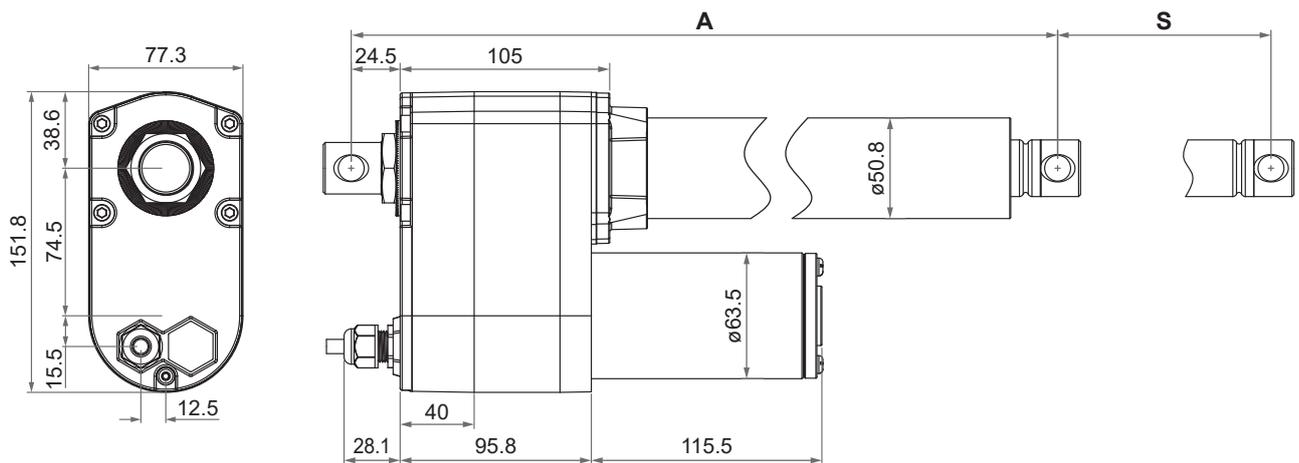| Stroke (S) mm	102 (4")	153 (6")	203 (8")	254 (10")	305 (12")	457 (18")	610 (24")
Retracted length (A)	399	450	501	552	680	832	985

(Tolerances: ±5mm)

Drawing

● IP65 (Standard)
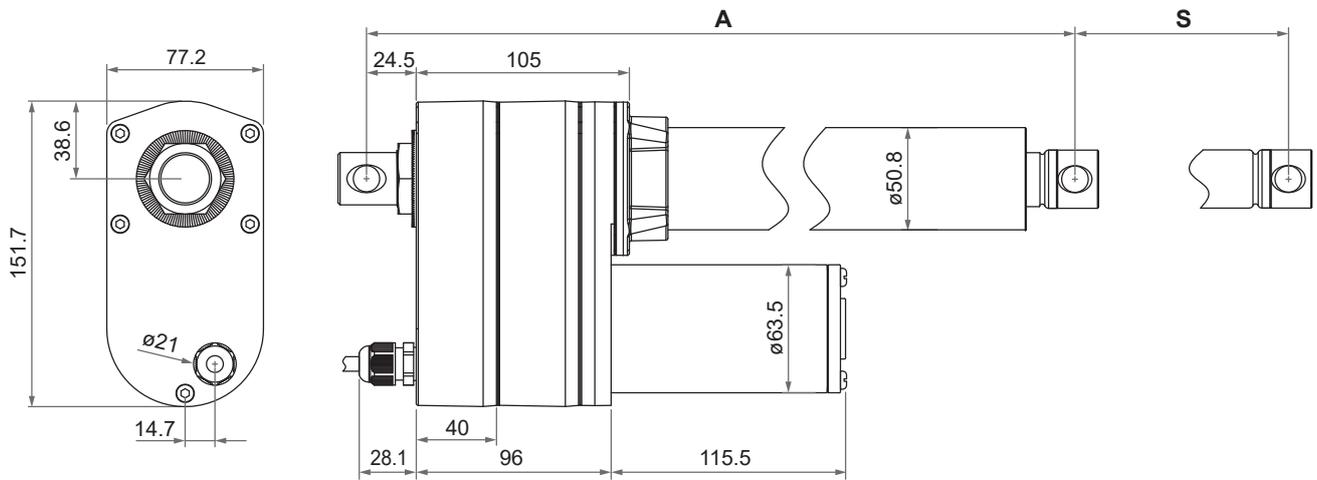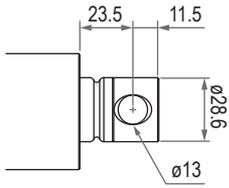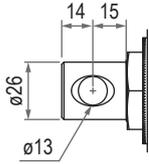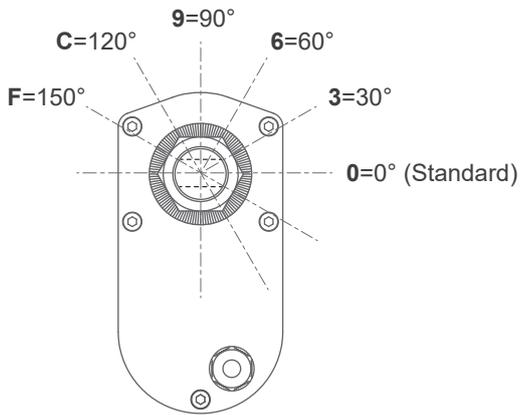
● IP66/IP69K (Option)

Unit: mm

Front connector

23.5   11.5

ø28.6

ø13

Rear connector

14   15

ø26

ø13

Unit: mm

Pivot orientation of rear connector

9=90°
C=120°
6=60°
F=150°
3=30°
0=0° (Standard)
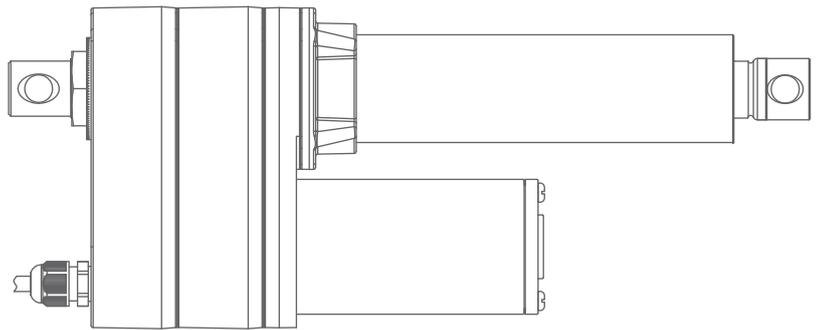
Note: As an example in 0° pivot of rear connector.

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Compatibility

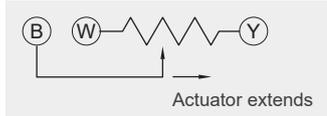| Product	Model	ID10G spec
Controller	CI72	Standard
Accessory	MB30 mounting bracket (Fig. 1)	Standard, mounting hole ø13mm.

Fig. 1

Wiring

● **With limit switches**

	Wire color	Definitions	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 single Hall effect sensor positioning feedback**

	Wire color	Definitions	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	High= Input - 1.2V (±0.6V) Low= GND Hall signal data: Hall effect sensor resolution: 0.5 pulse/mm
	White	GND	

● With Potentiometer (POT) absolute positioning feedback

	Wire color	Definitions	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	1. Potentiometer specification: - 10K ohm, 10 turns. - Tolerance ±5% 2. Output voltage: The voltage (resistance) between blue and white increases linearly from about 0 when the actuator extends, and decreases when it retracts. Actuator extends 3. There are different resolutions according to the stroke length (as table below)
	White	GND	

Table (within Blue / POT output cell):

Stroke (mm)	Resistance (tolerance: ±0.3KΩ)
102 (4")	0.3 ~ 5.2K
153 (6")	0.3 ~ 5.5K
203 (8")	0.3 ~ 5.9K
254 (10")	0.3 ~ 7.3K
305 (12")	0.3 ~ 5.6K
457 (18")	0.3 ~ 6.0K
610 (24")	0.3 ~ 6.4K

Certifications

ID10G actuator is compliant with the following regulations, in terms of the essential conformity requirements of EMC Directive of 2014/30/EU.

Emission	Immunity
BS EN IEC 61000-6-3:2021	BS EN IEC 61000-6-1:2019 IEC 61000-4-2:2008 IEC 61000-4-3:2020 IEC 61000-4-8:2009

Ordering Key

ID10G- 12 - G8A - 40 - 102 - 0 0 0 P L 5 0

Category	Options
Input voltage	**12**: 12V DC **24**: 24V DC
Motor and spindle type	**G8A**: 4500rpm / 8mm pitch / ACME screw
Gear ratio	**40**: 40:1
Stroke	**102**: 102mm (4") **153**: 153mm (6") **203**: 203mm (8") **254**: 254mm (10") **305**: 305mm (12") **457**: 457mm (18") **610**: 610mm (24")
Front connector	**0**: Standard
Rear connector	**0**: Standard
Pivot orientation of rear connector (Refer to Page 4)	**0**: 0° (Standard) **3**: 30° **6**: 60° **9**: 90° **C**: 120° **F**: 150°
Positioning feedback	**0**: None **P**: Potentiometer (POT) **H**: Single Hall effect sensor
Limit switches	**L**: Preset limit switches
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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