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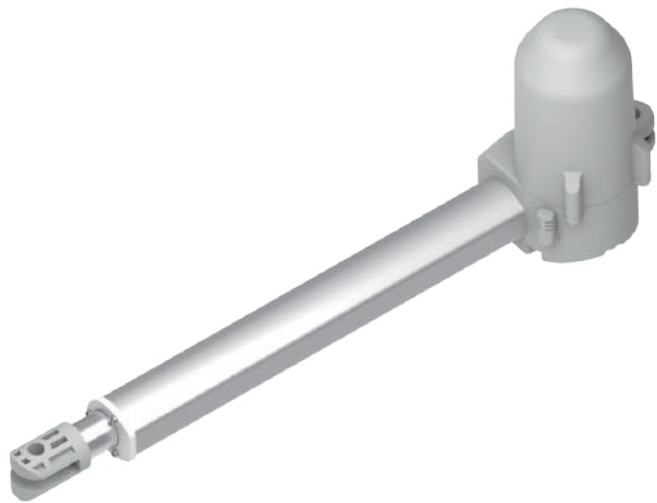
Actuator
MK67

MK67 is an economical actuator for medical applications with the advantages of short installation dimension and small size of the motor box. It can be equipped with dual Hall sensors to feedback positioning signals. Mainly used in applications such as home care and medical beds.

Features and Options

**Main applications:** Medical, Home care

Standard features:
- Input voltage: 24V DC
- Max. load: 6000N (push) / 3000N (pull)
- Typical speed at full load: 2.6mm/sec (6000N load)
- Stroke: 50 ~ 300mm
- Noise level: ≦50dB
- IP level: IPX5
- Aluminum alloy outer tube
- Color: Light gray RAL 7035
- Duty cycle: 10%, max. 2 min. continuous operation in 20 min.
- Operating ambient temperature: +5°C ~ +40°C
- Storage ambient temperature: -25°C ~ +65°C
- Certified: CE Marking, EN 60601-1-2, BS EN 60601-1-2, IEC 60601-1-2

Options:
- Positioning signal feedback with dual Hall effect sensors
- Push only
- Pivot orientation of rear connector 90°

Performance Data

Model No.	Push Max. (N)	Pull Max. (N)	*Braking ability (N)	**Typical Speed (mm/s)		**Typical Current (A)	
				No load	Full load	No load	Full load
MK67-24-**A4**...	6000	3000	6000	4.1	2.6	0.4	3.1
MK67-24-**A6**...	4000	3000	4000	6.1	4.1	0.4	2.9
MK67-24-**A8**...	3000	3000	3000	8.0	6.0	0.4	2.6
MK67-24-**AC**...	2000	2000	2000	12.1	9.1	0.4	2.4

Speed vs. Load

Current vs. Load
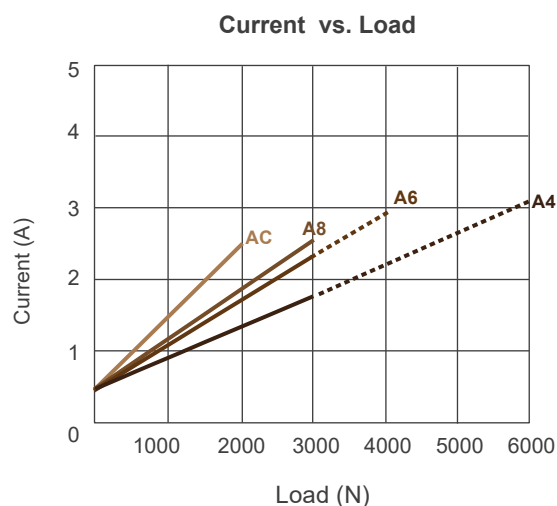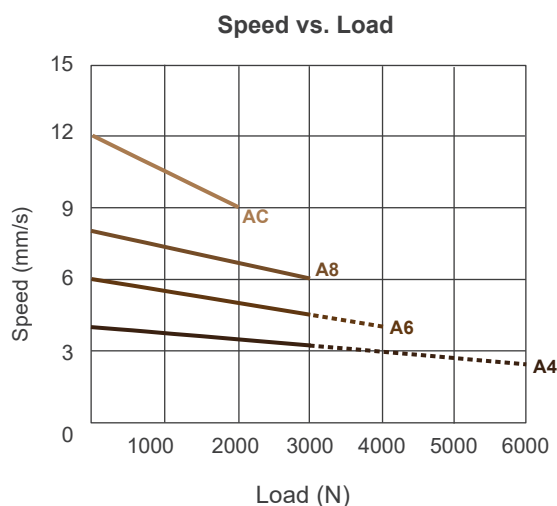
Push / Pull Load ⸺   Push Load ‐ ‐ ‐

Remarks:

* Equipped with mechanical brakes for thrust applications only.

** The typical speed and current are 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 MK67 can reach about 3 times of the typical current under the actuator 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.
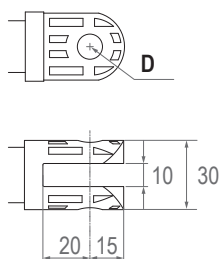
Dimensions

● Retracted length (A):

Front connector	Retracted length(A)
1	A≥S+170mm
3, 7	A≥S+142mm

● Available stroke (S) range = 50 ～ 300 mm
● Extended length (B) = Retracted length (A) + Stroke (S)
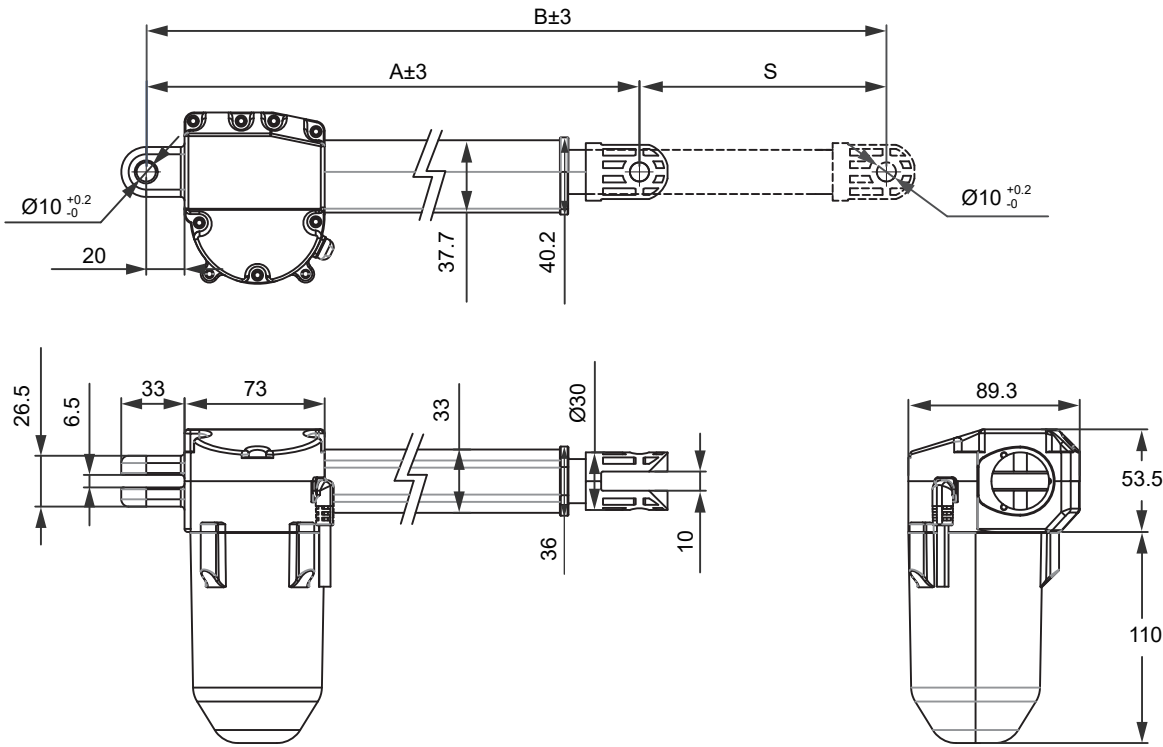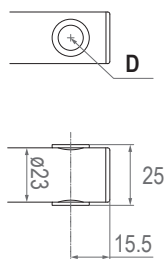
● Front connector

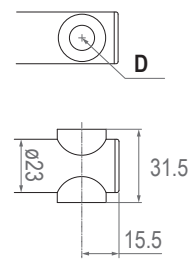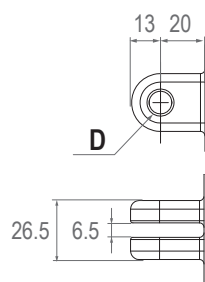**1** : Plastic   **3**: Drilled hole with bushing   **7**: Plastic bushing
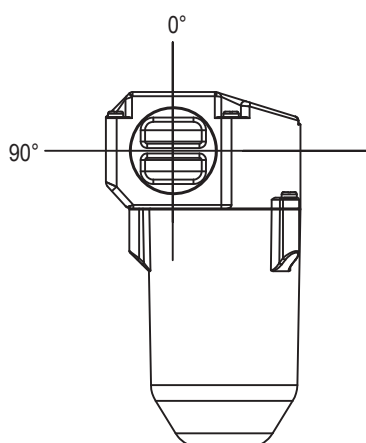
● Rear connector

1 : Plastic

Front connector code	Diameter of pivot (D)
1	Ø8, Ø10, Ø12
3	Ø8, Ø10
7	Ø10
Rear connector code	**Diameter of pivot (D)**
1	Ø10

● Pivot orientation of rear connectors

***Remarks:** As an example in 0° orientation for rear connector.

Compatibility

| Product	Model	MK67 spec
Control box	CB4P	- Without positioning sensor feedback - With Moteck H-type 4-pin DIN plug
	CB5P-M, CM41-M	- With dual Hall effect sensors - With Moteck LR-type minifit 6-pin plug
	CM45, MD6C-M	- Without positioning sensor - With Moteck V-type or H-type 4-pin DIN plug
	MD6C-M	- With dual Hall effect sensors - With Moteck V-type or H-type 6-pin DIN plug

Cable Plug

● **With Moteck H-type, V-type or LR-type plug:**
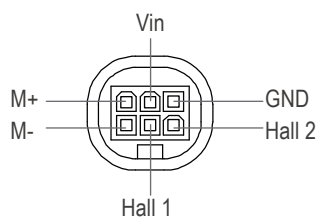
- Without Hall effect sensor
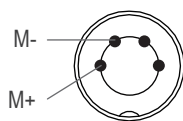
H-type or V-type 4-pin DIN plug

- With dual Hall effect sensors
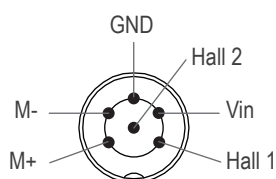
H-type or V-type 6-pin DIN plug

LR-type minifit 6-pin plug

H-type

V-type

LR-type

Cable with Flying Leads

Without positioning feedback

	Wire color	Definition	Comments
Power wires	Red / Black	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.

With dual Hall effect sensors for positioning

	Wire color	Definition	Comments
Power wires	Blue / Brown	DC power	Connect blue wire to "Vdc +" & Brown wire to "Vdc -" of DC power to extend the actuator. Switch the polarity of DC input to retract it.
Signal wires	Yellow	Vin	Voltage input range: 5 ~ 20V
	Red	Hall 1 output	High= Input - 1.2V (±0.6V) Low= GND Hall signal data: Actuator extends Actuator retracts
	Green	Hall 2 output	Hall effect sensor resolution: <table>
	Black	GND	

Hall effect sensor resolution:

Model No.	Resolution (pulses/mm)
MK67-24-A4-XXX.XXX-XXXXXXX	10.00
MK67-24-A6-XXX.XXX-XXXXXXX	3.33
MK67-24-A8-XXX.XXX-XXXXXXX	2.50
MK67-24-AC-XXX.XXX-XXXXXXX	0.83

Ordering Key

MK67 - 24 - A4 - 220 . 270 - 1 - 1 - 0 - H - P - 5 - 0

Input voltage	**24:** 24V DC
Motor and Spindle type	**A4:** 2500rpm / 4mm pitch **A4:** 2500rpm / 4mm pitch **A6:** 2500rpm / 6mm pitch **AC:** 2500rpm / 12mm pitch
Retracted length	**XXX** (Refer to Page 3)
Extended length	**XXX** (Refer to Page 3)
Front connector	**1:** Plastic **3:** Drilled hole with bushing **7:** Plastic bushing
Rear connector	**1:** Plastic
Pivot orientation of rear connector	**0:** 0° (standard) **9:** 90°
Positioning feedback	**0:** None **H:** dual Hall effect sensors
Option	**0:** None **P:** Push only (PO)
IP Level	**5:** IPX5
Cable length	**0:** 300mm straight **3:** 1000mm straight **6:** 2000mm straight **A:** 450mm with 300mm coiled

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