

# Actuator

## MD80M

MD80M is a powerful actuator up to 8000N thrust, integrated with control unit and power supply in the housing. In addition to its own actuator, MD80M can connect up to additional 2 actuators and become a 3-motor driving system. MD80M is quiet and water-proof which is designed for use in a variety of medical and home care applications such as patient hoist, hospital bed, nursing bed...etc.



### Features

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- Main applications: Homecare, medical
- Max. load: 8000N (push) / 6000N (pull)
- Stroke: 50 ~ 400 mm
- Preset limit switches
- Steel extension tube
- Input voltage: 230V AC 50Hz / 110V AC 60Hz
- Power supply: 24V/8A Toroidal transformer
- Output voltage: 24V DC
- Max. number of controls: 1 channel
- Max. number of additional actuators: 2 channels (except for own actuator)
- Max. current: 6A per channel
- Protection class: Class I
- Noise level:  $\leq 53$ dB
- IP Protection level: IPX4 (static, non-action)
- Color: Light gray RAL 7035
- Duty cycle: 10%, max. 2 min. continuous operation in 20 min.
- Ambient operation temperature: +5°C ~ +40°C
- Certified: CE Marking, EN 60601-1-2, IEC 61000-3-2, IEC 61000-3-3, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11

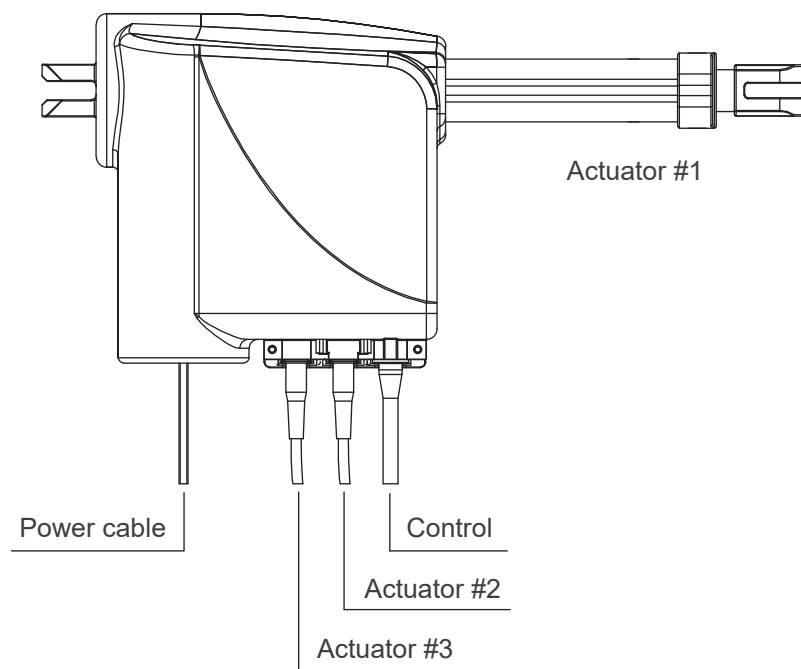
## Option

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- Mechanical push only extension tube
- Safety nut (in push direction)
- IPX5 protection level (static, non-action)

## I/O Introduction

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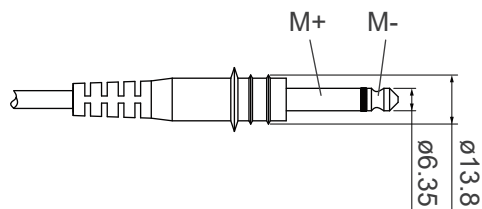
## Compatibility

Product	Model	MD80M spec
<b>Actuator</b>	MD80, MD82, MD60, LD60	- Without positioning feedback sensors - With Moteck J1-type Ø6.35 Phone jack
<b>Control</b>	HF, H3F, HT, H3T, FS1, FS2, HS12	- Moteck P1 control category - With Moteck H-type 5-pin or 8-pin DIN plug

## Socket

- **Actuator socket**

- Moteck J1-type



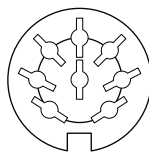
J1-type

**Remarks:**

Connect (M+) to '+' & (M-) to '-' of DC power, the actuator will extend.

- **Control socket**

- Moteck H-type DIN plug



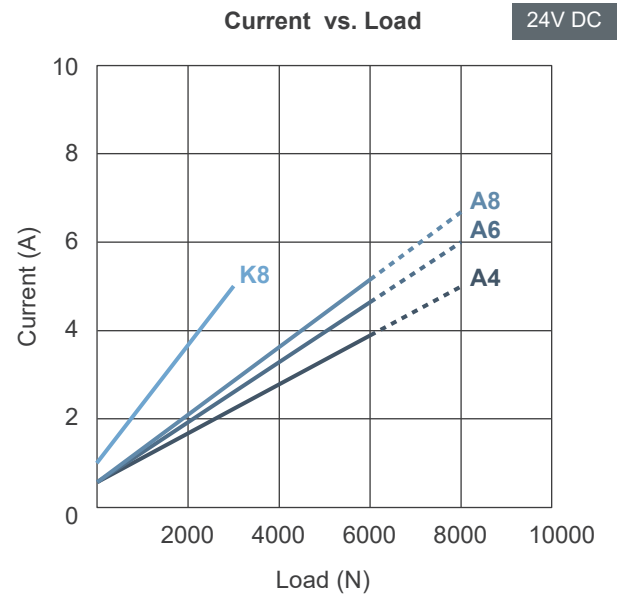
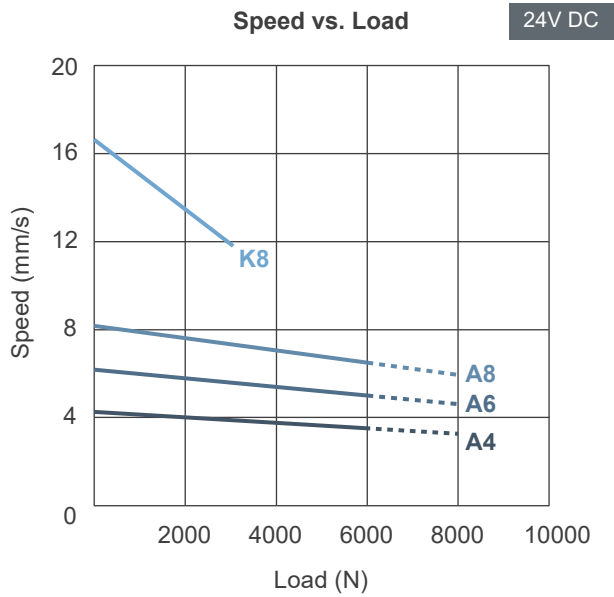
8-pin socket



H-type

## Performance Data

Model No.	Push Max. (N)	Pull Max. (N)	Typical speed (mm/s)		Typical current (A)	
			No load	Full load	No load	Full load
MD80M-XXA4-XXX.XXX	8000	6000	4.2	3.3	0.6	5.0
MD80M-XXA6-XXX.XXX	8000	6000	6.2	4.6	0.6	6.0
MD80M-XXA8-XXX.XXX	8000	6000	8.1	5.9	0.6	6.7
MD80M-XXK8-XXX.XXX	3000	3000	16.6	11.8	1.0	5.0



Push / Pull Load —      Push Load - - -

### Remarks:

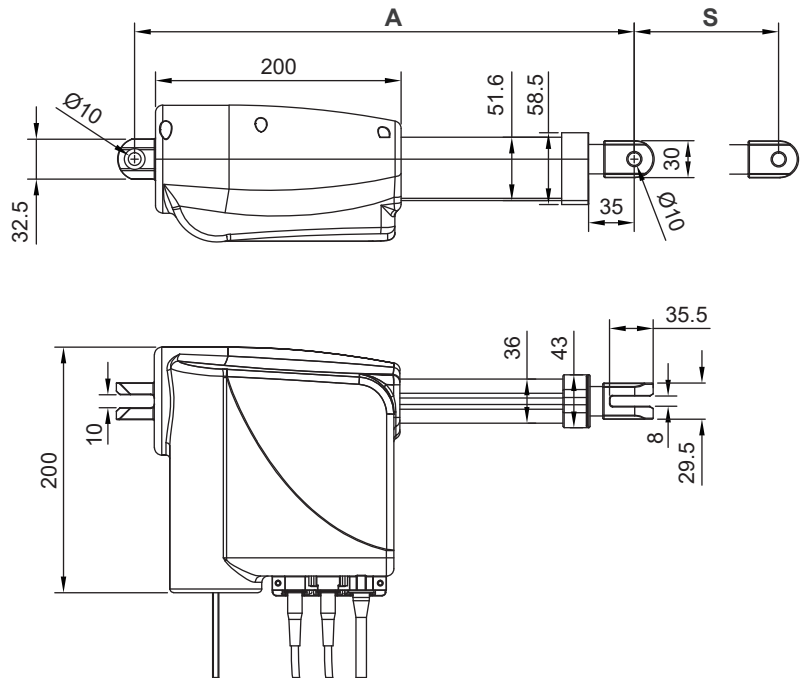
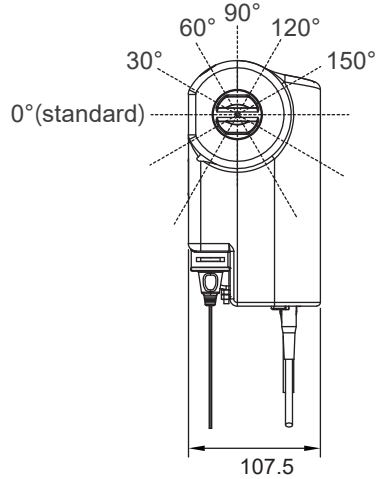
- \* The typical speed or typical current means the average value neither upper limit nor lower limit. The performance curves are made with typical values.

# Dimensions

Stroke(S)	50 ≤ S ≤ 300mm		
Retracted length (A)	Front connector	7	8
	Safety option		
	No safety option	$A \geq S+180\text{mm}$	$A \geq S+210\text{mm}$
With Safety Nut (SN)	$A \geq S+185\text{mm}$	$A \geq S+215\text{mm}$	

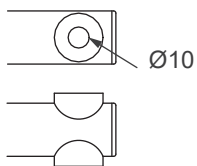
• 301 ≤ S ≤ 400mm, retracted length (A) + 30mm      • Tolerance: ±3mm  
 • S ≥ 401mm, Please consult MOTECK sales representative for feasibility and the available retracted length.

Pivot orientation of Rear connector

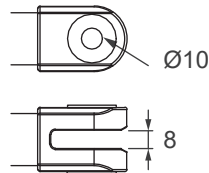


## • Front Connector

7: Plastic bushing

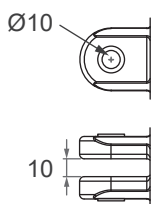


8: Zinc alloy clevis with plastic bushing



## • Rear Connector

1: Zinc alloy clevis



## Ordering Key

**MD80M - 2 2 A6 - 420 . 620 - 8 1 - A 0 G 4 1**

<b>Input voltage</b>	2: 230V AC 1: 120V AC
<b>Additional actuator port</b>	0: None 1: 1 port 2: 2 ports
<b>Motor and Spindle type</b>	<b>A4:</b> 2500 rpm / 4mm pitch <b>A6:</b> 2500 rpm / 6mm pitch <b>A8:</b> 2500 rpm / 8mm pitch <b>K8:</b> 2500 rpm / 8mm pitch (Refer to Performance Data)
<b>Retracted length</b>	<b>XXX</b> (Refer to Dimensions)
<b>Extended length</b>	<b>XXX</b> (Refer to Dimensions)
<b>Front connector type</b>	8: Zinc alloy clevis with plastic bushing (standard) 7: Plastic bushing (Refer to Dimensions)
<b>Pivot orientation of Rear connector</b>	Zinc alloy clevis with following orientation options 1: 0° (standard)      3: 30°      6: 60° 9: 90°      C: 120°      F: 150°
<b>Option</b>	0: None P: Push only S: Safety nut A: Push only + Safety nut
<b>Reserved</b>	0: No meaning
<b>Color</b>	G: Light gray RAL 7035
<b>IP Protection level</b> (static, non-action)	4: IPX4 5: IPX5
<b>Power cord length</b>	3: 3000mm straight (standard) 4: 4000mm straight

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