

Actuator MK40



MK40 is a slim actuator but providing a maximum thrust of 6,000N. This, combined with its short installation length, makes it ideal for applications in confined spaces.

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Features and Options

• Main application: Furniture

• Input voltage: 24V DC

• Max. load: 6,000N (Push) / 4,000N (Pull)

• Max. speed at no load: 23.0mm/sec (Typical value)

• Speed at full load: 2.7mm/sec (Typical value @6,000N loaded)

Stroke: 50~400mm
Noise level: ≦50dB
Preset limit switches

• Duty cycle: 10%, max. 2 min. continuous operation in 20 min.

ullet Operating ambient temperature: -20°C \sim +65°C

Storage ambient temperature: -25°C∼+65°C

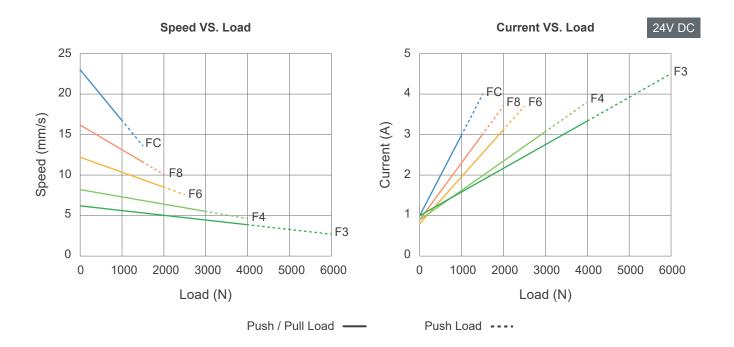
• Positioning: Optional digital positioning feedback with dual Hall effect sensors

• Optional mechanical push only extension tube



Performance Data

Model No.	Max. load (N)		Typical speed (mm/s) (1)		Typical current (A) (1)	
wiodei No.	Push	Pull	No load	Full load	No load	Full load
MK40-XX F3 -XXX.XXX-XXXXXXX	6,000	4,000	6.2	2.7	1.0	4.5
MK40-XX F4 -XXX.XXX-XXXXXXX	4,000	3,000	8.2	4.6	0.9	3.8
MK40-XX F6 -XXX.XXX-XXXXXXX	2,500	2,000	12.2	7.6	0.8	3.7
MK40-XXF8-XXX.XXX-XXXXXXX	2,000	1,500	16.2	10.1	0.9	3.7
MK40-XXFC-XXX.XXX-XXXXXXX	1,500	1,000	23.0	13.6	1.0	4.0



Note:

(1) The typical speed or typical current means the average value neither upper limit nor lower limit. 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 MK40 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

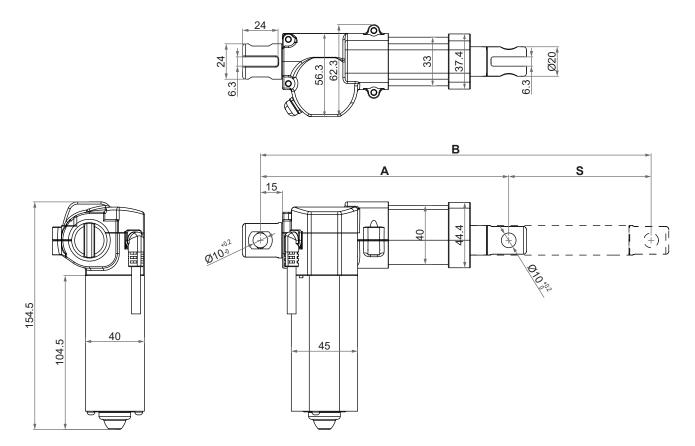
1. Installation dimension

- Available stroke (S) range = 50~400mm (±3mm)
- Retracted length (A) \ge S + 110 + E + F + L (Unit: mm)

Stroke	E
≦200mm	+0 mm
201≦S≦250mm	+10 mm
251≦S≦300mm	+20 mm
301≦S≦400mm	+40 mm
Front connector code	F
2 (only available for ≦2000N)	+0 mm
3	+13 mm
6 (only available for ≦2000N)	+13 mm
Feature option	L
Motor and spindle type: F4, F6, F8, FC (≦4,000N)	+0 mm
Motor and spindle type: F3 (> 4,000N)	+10 mm

- S≧401mm, please consult MOTECK sales representative for feasibility and the available.
- Extended length (B) = Retracted length (A) + Stroke (S)

2. Drawing



Unit: mm



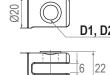
3. Front connector type

2=Drilled hole (1)



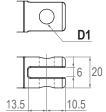


3=Metal slot



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Front connector code	Diameter of pivot without bushing (D1)	Diameter of pivot with bushing (D2)
2 ⁽¹⁾	Ø8, Ø10	Ø8
3	Ø8, Ø10	Ø8
6 ⁽²⁾	Ø8, Ø10	N/A

Notes:

- $^{\text{(1)}}$ Only for models with max. load $\leqq\!2000N$
- $^{(2)}$ Only for models with max. load $\leqq\!2000N$

4. Rear connector type

2=Metal









Rear connector code	Diameter of pivot without bushing (D1)	Diameter of pivot with bushing (D2)
2	Ø8, Ø10	Ø8
4 (1)	Ø8, Ø10	N/A

Note:

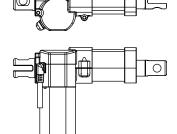
 $^{(1)}$ Only for models with max. load $\leqq\!2000N$

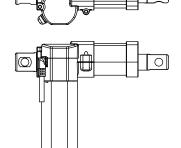
Unit: mm

5. Pivot orientation of rear connectors

0=0° (standard)









Compatibility

Product	Model	Application condition (1)	MK40 spec
	T-control, CS1, CS2, CB3T, CB4M, CBT2	Max. 3A current per channel	Without positioning sensor With Moteck F-type DIN plug
	CF11H, CF12H	Max. 3.6A current per channel	Without positioning sensor With Moteck L3-type minifit plug
Control	CB3T-SY	Max. ≦5A current 2 channels	With dual Hall effect sensors
box	CB4M-S, CB4M-B	Max. 3A current per channel	for positioning • With Moteck F-type DIN plug
	CF11S	Max. ≦6A current 2 channels	With dual Hall effect sensors
	CF12S	Max. 3.6A current per channel	for positioning • With Moteck L3-type minifit plug
Hand	Depend on control box		Powered by control box
control	HS15, H2B, H2G		• With Moteck S-type DIN 41529 male plug (2)

Notes:



⁽¹⁾ If the current limit of the selected control box is lower than the typical current of the actuator model under full load, the actuator could not be operated in full performance.

⁽²⁾ The S-type DIN 41529 plug of the actuator is connected to the HS15 hand control directly, no control box.

Cable Plug

• Connecting control devices that provide power

	Without positioning feedback	Positioning feedback with dual Hall effect sensors
	M- M+	GND Hall 2 M- Vin Hall 1
Moteck F-type DIN male plug	4p2c	6p6c
Moteck L3-type Minifit male plug	M-	Vin M- GND M+ Hall 2 Hall 1 6p6c
Moteck S-type DIN 41529 male plug	M- M+ 2p2c	N/A

Note: Pin definition

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	Definition	Descriptions			
Power	M+	Connect M+ to "Vdc +" & M- to "Vdc -" of DC power to extend the actuator.			
rowei	M-	Switch the polarity of DC input to retract it.			
		Voltage input range: 5~60V			
	Vin	If this voltage input must share the motor's power supply, be sure to use a separate power cord to draw power from the source, not tapping it from the control board's power input. Otherwise, the motor's inrush current will cause the Hall IC circuit to malfunction.			
Signal	Hall 1 output	High= Input - 1.2V (±0.6V) Low= GND Hall signal data: High Low High Low Hall 1 Low High Low Actuator extends Actuator retracts Hall effect sensor resolution:			
		Model No. Resolution (pulses/mm)			
		MK40-24F3-XXX.XXX-XXXHXXX 9.33			
	Hall 2	MK40-24F4-XXX.XXX-XXXHXXX 7.00			
	output	MK40-24F6-XXX.XXX-XXXHXXX 4.66			
		MK40-24F8-XXX.XXX-XXXHXXX 3.50			
		MK40-24FC-XXX.XXX-XXXHXXX 2.33			
	GND				



Ordering Key

