

Actuator

MK33

MK33 actuator has a short installation length and a maximum thrust of 6000N. It has reasonable speed options and low noise quality requirements. It can also be equipped with dual Hall sensors to feedback positioning signals. It is suitable for matching with Moteck's many electronic control solutions for furniture applications.



Features and Options

Main application: Furniture

Standard features:

- Input voltage: 24V DC
- Max. load: 6000N (Push) / 3000N (Pull)
- Max. speed at no load: 4.2mm/sec (Typical value)
- Speed at full load: 2.9mm/sec (Typical value @6000N Loaded)
- Stroke: 50 ~ 300mm
- Noise level: ≤ 48 dB
- IP level: IP42 (Static; non-action)
- Preset limit switches
- Duty cycle: 10%, max. 2 min. continuous operation in 20 min.
- Operating ambient temperature: -20°C ~ +65°C
- Certified: CE Marking, EMC Directive 2014/30/EU, UKCA

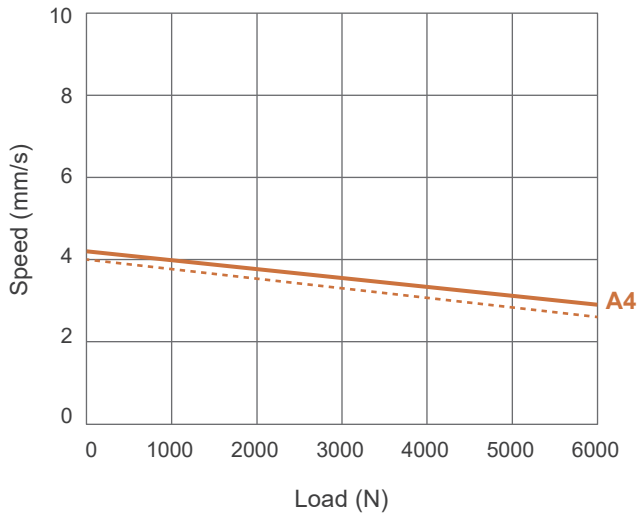
Options:

- Positioning signal feedback with dual Hall effect sensors
- Push only

Performance Data

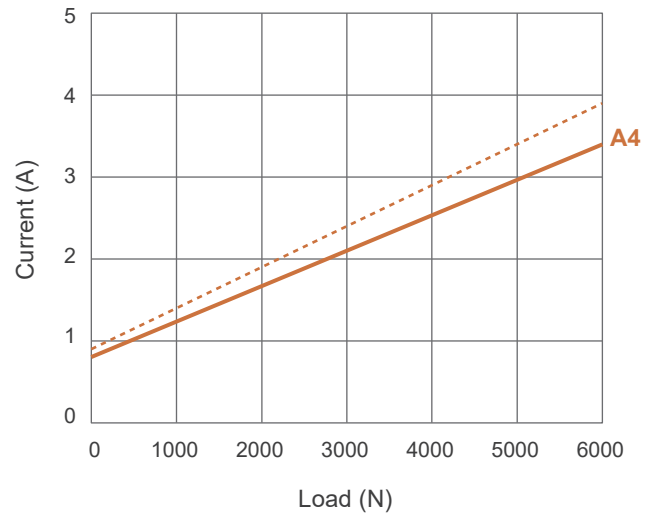
Model	Push Max. (N)	Pull Max. (N)	Typical speed (mm/s)		Typical current (A) @ 24V DC	
			No load	Full load	No load	Full load
MK33	6000	3000	4.2	2.9	0.8	3.4

Speed VS. Load



— Typical speed - - - Min. speed

Current VS. Load



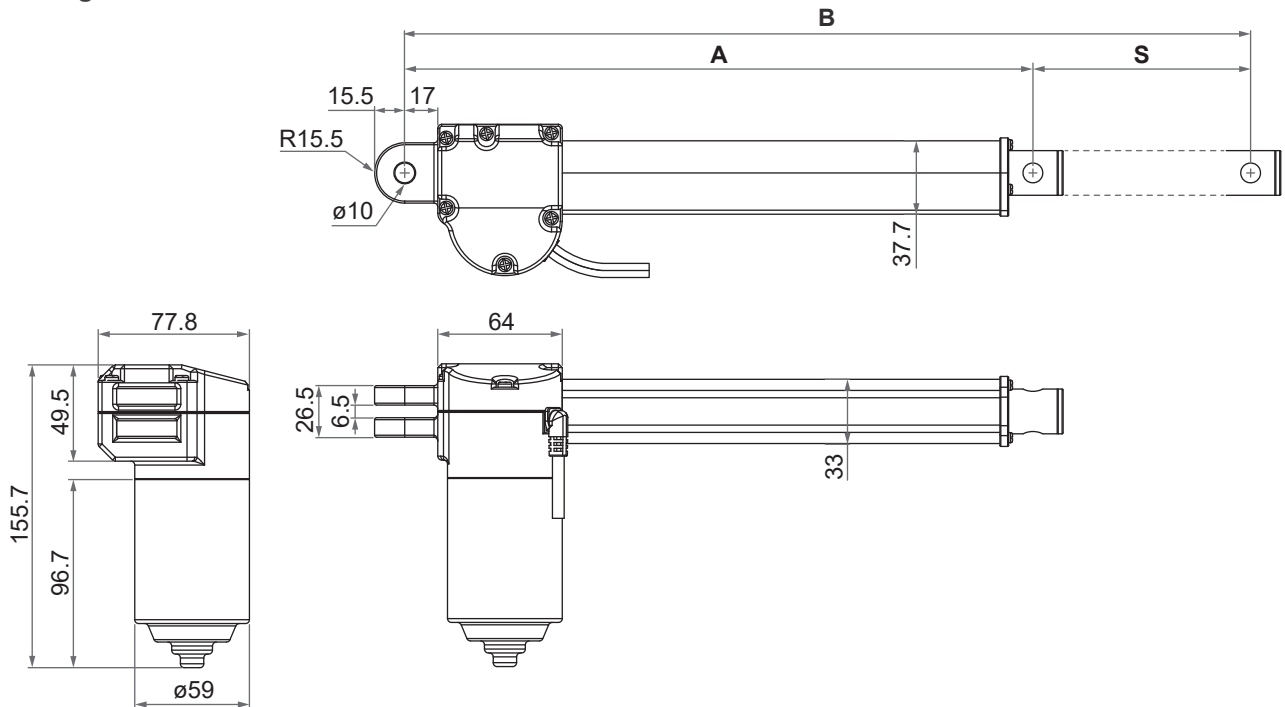
— Typical current - - - Max. current

Dimensions

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

Front connector code	Rear connector type	Retracted length (A)
1, 5	Plastic	$A \geq S + 153\text{mm} (\pm 3\text{mm})$
3, 7		$A \geq S + 125\text{mm} (\pm 3\text{mm})$

• Drawing



Note: Pivot orientation of rear connector is 0°

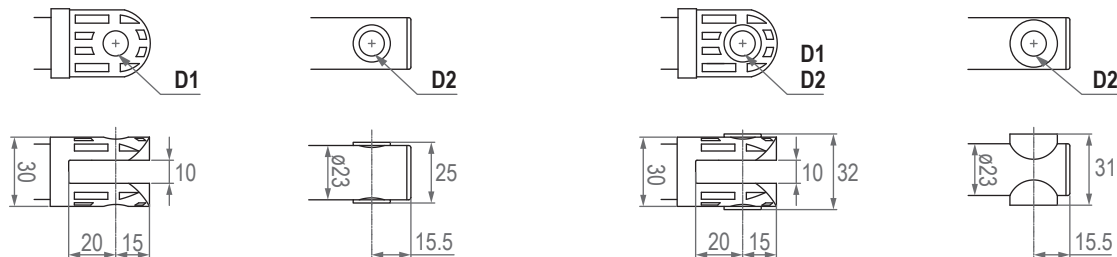
• Front connector

1: Plastic

3: Drilled hole

5: Metal

7: Plastic bushing



Front connector code	Diameter of pivot without bushing (D1)	Diameter of pivot with bushing (D2)
1	$\phi 8, \phi 10, \phi 12$	N/A
3	N/A	$\phi 8, \phi 10$
5	$\phi 8, \phi 10, \phi 12$	$\phi 8, \phi 10$
7	N/A	$\phi 10$

Unit: mm

Compatibility

Product	Model	MK33 spec
Control box	T-control, CS1, CS2, CB3T, CB4M, CBT2	<ul style="list-style-type: none"> • Without positioning feedback • With Moteck F-type 4-pin DIN plug
	CF11H, CF12H	<ul style="list-style-type: none"> • Without positioning feedback • With Moteck L3-type minifit 6-pin plug
	CB3T-SY, CB4M-S, CB4M-B	<ul style="list-style-type: none"> • With dual Hall effect sensors for positioning • With Moteck F-type 6-pin DIN plug
	CF11S, CF12S	<ul style="list-style-type: none"> • With dual Hall effect sensors for positioning • With Moteck L3-type minifit 6-pin plug
	TX2A	<ul style="list-style-type: none"> • With Moteck direct-cut power cable DL1
Hand control	Depend on control box	<ul style="list-style-type: none"> • Powered by control box
	HS15	<ul style="list-style-type: none"> • With Moteck S-type DIN 41529 male plug ⁽¹⁾
	HB, TPSL, HS02, HZ02, HZ03, HZ04, HZ05, HZ06	<ul style="list-style-type: none"> • With Moteck direct-cut power cable DL1 ⁽²⁾
Accessory	Power adapter: DPA-58-2920-C8 (formerly TSW1), DPA-87-2930-C6 (formerly TSW3), WPA-29-2910-SR (formerly TSW4), DPA-87-2930-C8	<ul style="list-style-type: none"> • With Moteck direct-cut power cable DL1

Remarks:

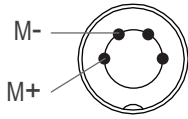
(1) The S-type DIN 41529 plug of the actuator is connected to the HS15 hand control directly, no control box.

(2) The actuator is connected to the hand control through the DL1 cable directly, no control box.

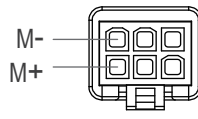
Cable Plug

A. Connecting control devices that provide power

- Without positioning feedback



With Moteck F-type 4-pin DIN plug

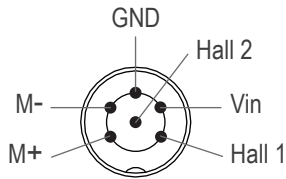


With Moteck L3-type Minifit 6-pin plug

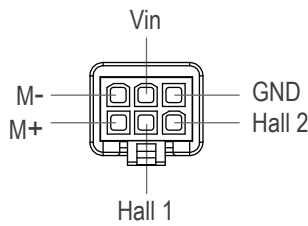


F-type plug

- Positioning feedback with dual Hall effect sensors



With Moteck F-type 6-pin DIN plug



With Moteck L3-type Minifit 6-pin plug



L3-type plug

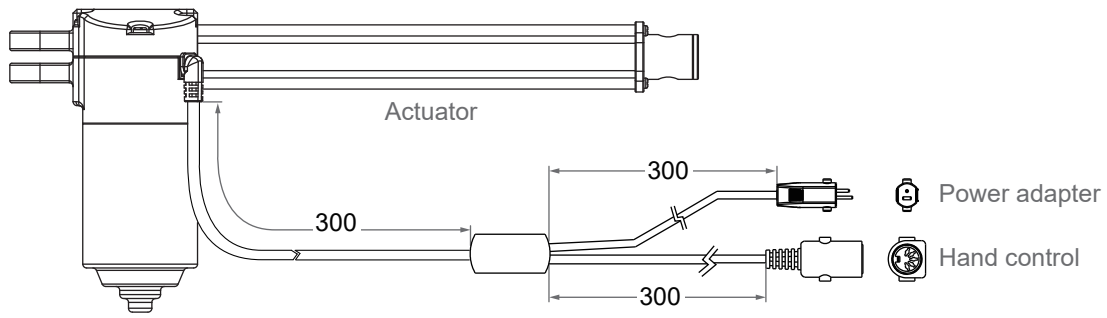
Note: Pin definition

	Definition	Descriptions
Power	M+	Connect M+ to "Vdc +" & M- to "Vdc -" of DC power to extend the actuator. Switch the polarity of DC input to retract it.
	M-	
Signal	Vin	Voltage input range: 5 ~ 20V
	Hall 1 output	High= Input - 1.2V ($\pm 0.6V$) Low= GND Hall signal data:
	Hall 2 output	<p>Actuator extends Actuator retracts</p>
	GND	Hall effect sensor resolution: 10.0 pulses/mm

B. Connecting control devices that DO NOT provide power

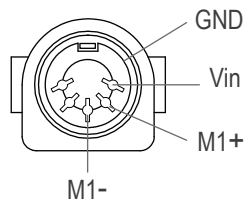
1. Cable solution

- With direct-cut power cable DL1



2. Hand control connector: Moteck U-type DIN 5-pin female connector

- 1 drive

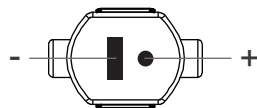


Note: Connect M1+ to "Vdc +" & M1- to "Vdc -" of DC power to extend the M1 actuator. Switch the polarity of DC input to retract it.



U-type female connector

3. Power connector: Moteck S-type DIN 41529 2-pin male plug



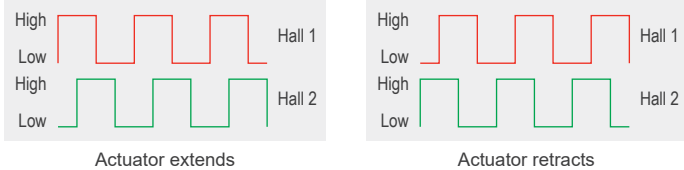
S-type male plug

Cable with Flying Leads

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 dual Hall effect sensors for positioning

	Wire color	Definition	Descriptions
Power wires	Blue	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.
	Brown		
Signal wires	Yellow	Vin	Voltage input range: 5 ~ 20V
	Red	Hall 1 output	High= Input - 1.2V ($\pm 0.6V$) Low= GND Hall signal data:  Hall effect sensor resolution: 10.0 pulses/mm
	Green	Hall 2 output	
	Black	GND	

Certifications

MK33 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	EN 55014-2:2015

Ordering Key

	MK33 - 24 D A4 - 125 . 325 - 1 0 0 H P 0 0
Input voltage	24: 24V DC
Motor	D: Default motor
Motor and spindle type	A4: 2500rpm / 4mm pitch
Retracted length (Refer to Page 3)	XXX
Extended length (Refer to Page 3)	XXX
Front connector (Refer to Page 3)	1: Plastic 3: Drilled hole 5: Metal 7: Plastic bushing
Reserved	0
Reserved	0
Positioning feedback	0: None H: Dual Hall effect sensors
Push only	0: None P: Push only
Reserved	0
Cable length	0: 300mm straight 3: 1000mm straight A: 450mm with 300mm coiled D: Direct-cut power cable DL1 (Refer to Page 6)

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