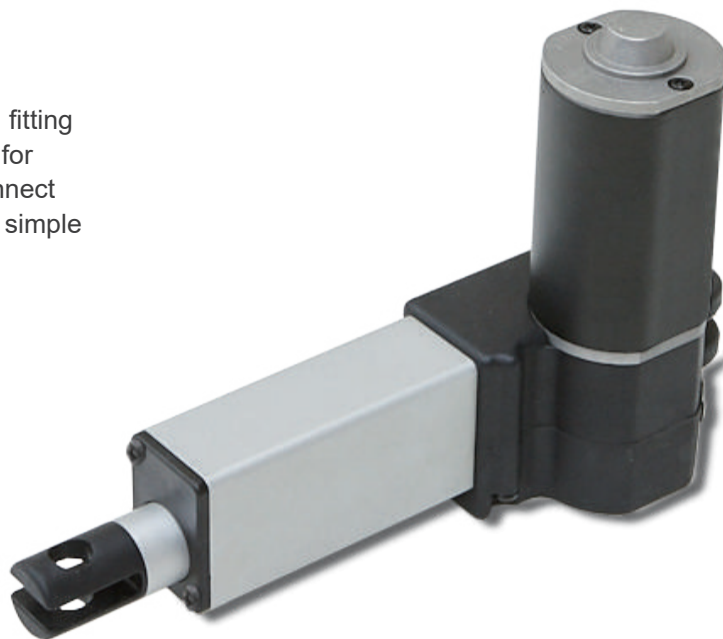


Actuator

FD10

FD10 is a small and quiet actuator. It allows small fitting dimensions, which makes FD10 an ideal solution for recliner and bed as neck actuator. It is able to connect with hand control and power supply to make up a simple system without control box.



Features

- Main applications: Furniture
- Input voltage: 24V DC
- Max. load: 1000N (Push) / 500N (Pull)
- Typical speed at no load: 15.1 mm/sec
- Typical speed at full load: 6.2 mm/sec (1000N load)
- Stroke: 50 ~ 300 mm
- Noise level: ≤ 50 dB
- IP Protection level: IP42
- Color: Black
- Preset limit switches
- Duty cycle: 10%, max. 2 min. continuous operation in 18 min.
- Ambient operation temperature: -20°C ~ +65°C
- Certified: CE Marking, EMC Directive 2014/30/EU

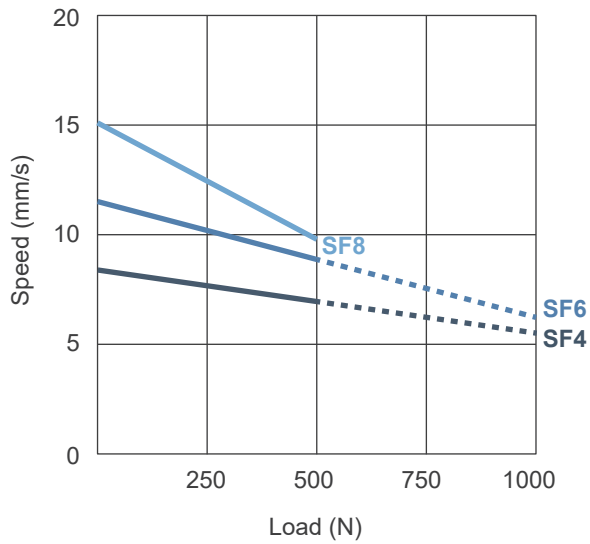
Options

- Positioning signal feedback with Hall effect sensor x 2
- Mechanical push only extension tube
- PTC thermistor for thermal protection

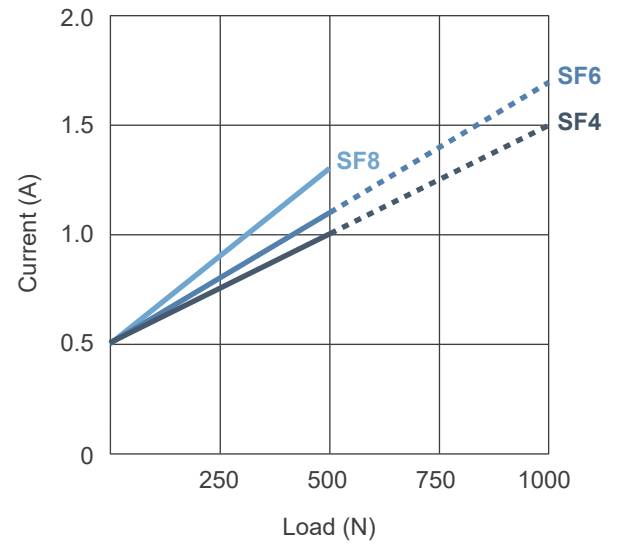
Performance Data

Model	Push Max. (N)	Pull Max. (N)	*Typical Speed (mm/s)		*Typical Current (A) @ 24V	
			No load	Full load	No load	Full load
FD10-24SF4-XXX.XXX-XXXXX0X	1000	500	8.4	5.5	0.5	1.5
FD10-24SF6-XXX.XXX-XXXXX0X	1000	500	11.5	6.2	0.5	1.7
FD10-24SF8-XXX.XXX-XXXXX0X	500	500	15.1	9.8	0.5	1.3

Speed vs. Load



Current vs. Load

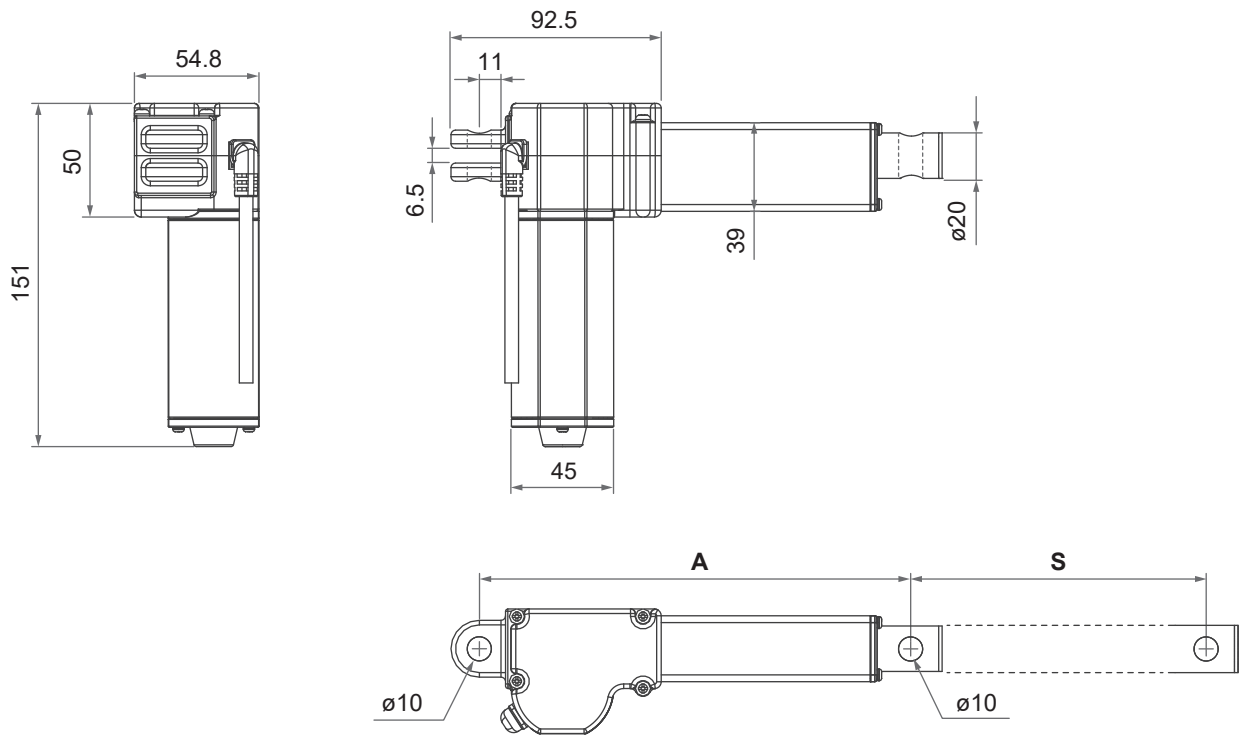


Remarks:

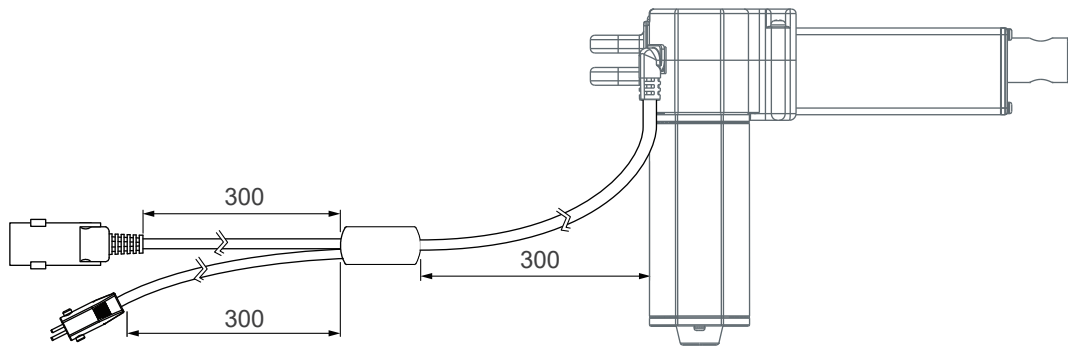
- * The typical speed or typical current means the average value neither upper limit nor lower limit. The performance curves are made with typical values.

Dimensions

Unit: mm



Direct-Cut cable DL1



Installation Dimension

● Retracted length (A)

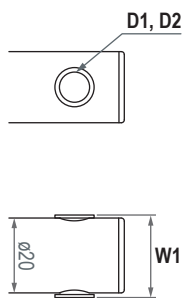
Front connector code	Stroke (S)		
	$\leq 200\text{mm}$	201~250mm	251~300mm
2	$A \geq S + 120\text{mm} (\pm 3\text{mm})$	$A \geq S + 130\text{mm} (\pm 3\text{mm})$	$A \geq S + 140\text{mm} (\pm 3\text{mm})$
3, 6	$A \geq S + 135\text{mm} (\pm 3\text{mm})$	$A \geq S + 145\text{mm} (\pm 3\text{mm})$	$A \geq S + 155\text{mm} (\pm 3\text{mm})$

Available stroke (S) range = 50 ~ 300mm

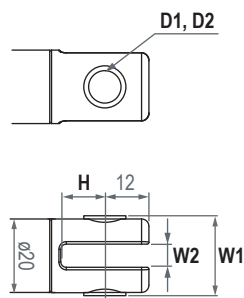
Extended length (B) = S + A

● Front connector

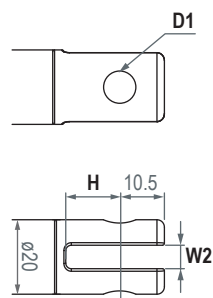
2: Drilled hole



3: Metal slot

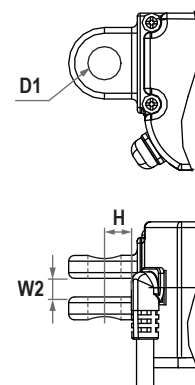


6: Plastic slot



● Pivot orientation of rear connector

4: Plastic, 0°



Front connector code	Diameter of pivot without bushing (D1)	Diameter of pivot with bushing (D2)	Width with bushing (W1)	Slot width (W2)	Slot depth (H)
2	ø8, ø10	ø8	22	N/A	N/A
3	ø8, ø10	ø8	22	6.4	13.5
6	ø8, ø10	N/A	N/A	6.4	15
Rear connector code	Diameter of pivot without bushing (D1)	Diameter of pivot with bushing (D2)	Width with bushing (W1)	Slot width (W2)	Slot depth (H)
4	ø10	N/A	N/A	6.5	11

Compatibility

Product	Model	FD10 spec
Control box	T-control, CS1, CS2, CB3T, CB4M, CBT2	- Without positioning sensor feedback - 4-pin MOTECK F-type DIN plug
	CF11H, CF12H	- Without positioning sensor - With Moteck L3-type minifit 6-pin plug
	CB3T-SY, CB4M-S, CB4M-B	- With dual Hall effect sensors - 6-pin MOTECK F-type DIN plug
	CF12S	- With dual Hall effect sensors - With Moteck L3-type minifit 6-pin plug
Hand control	Depend on control box	- Powered by control box
	HB, H2G, HZ02, HZ03, HZ04, HZ05, HZ06	- With MOTECK Direct-Cut cable DL1*
Accessory	Switching mode power supply: TSW1, TSW4	- With MOTECK Direct-Cut cable DL1

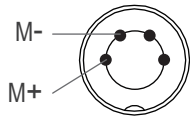
Remarks:

* Connect Direct-Cut cable to DC power supply and hand control directly, no control box.

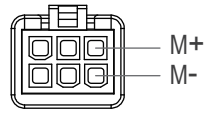
Cable Plug

With Moetck F-type or L3-type plug (Required to be connected to the control box):

- Without Hall effect sensor



F-type 4-pin DIN plug



L3-type Minifit 6-pin plug

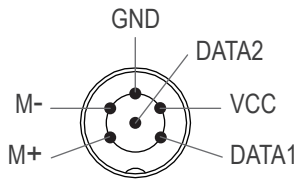


F-type

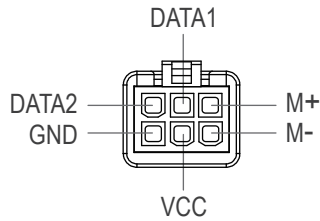


L3-type

- With dual Hall effect sensors



F-type 6-pin DIN plug

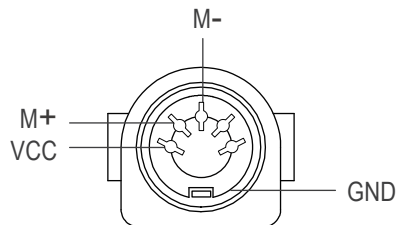


L3-type Minifit 6-pin plug

Note: Connect Pin (M+) to "+" & Pin (M-) to "-" of DC power, the actuator will extend.

With Direct-Cut cable DL1 (NOT required to be connected to any control box):

- Hand control connector: with MOTECK U-type female connector



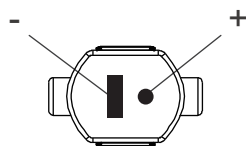
5-pin connector
(Moteck pinout: C-DIN-51R)



U-type

Note: Connect Pin (M+) to "+" & Pin (M-) to "-" of DC power, the actuator will extend.

- Power plug: with Moteck S-type DIN 41529 male plug



DIN 41529 plug (S-type for DL1 only)



S-type

Wiring

Wire definitions:

• Without positioning sensor feedback

Power	
White	Black
M+	M-

Note:

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

• With dual Hall effect sensors

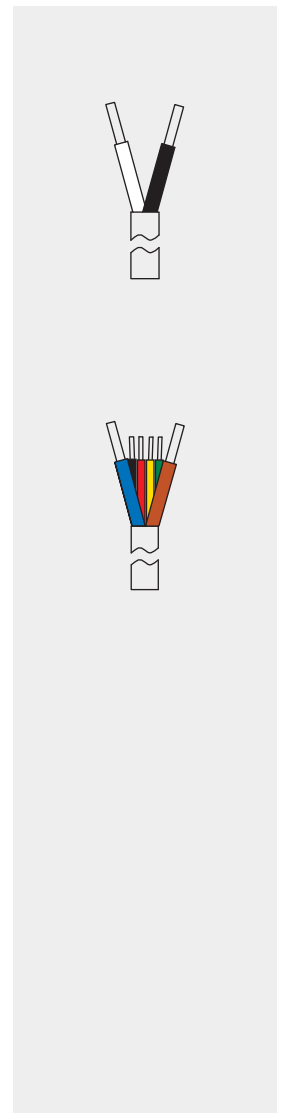
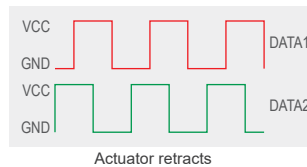
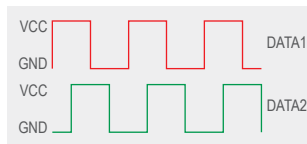
Power		Signal			
Blue	Brown	Black	Yellow	Red	Green
M+	M-	GND	VCC	DATA1	DATA2

Note:

1. Connect Blue (M+) to '+' & Brown (M-) to '-' of DC power, the actuator will extend.
2. Hall effect sensor resolution

Model No.	Resolution (pulses/mm)
FD10-24SF4-XXX.XXX-XXXHX0X	7.0
FD10-24SF6-XXX.XXX-XXXHX0X	4.66
FD10-24SF8-XXX.XXX-XXXHX0X	3.5

3. Voltage input range (VCC): 3.5~20V
4. Output voltage of signal (Data) = Input voltage of VCC
5. Hall signal data



Certifications

The FD10 actuator is compliant with the following regulations, in terms of the essential conformity requirements of EMC Directive of 2014/30/EU.

Emission	Immunity
EN 55014-1:2006+A1:2009+A2:2011	EN 55014-2:1997+A1:2001+A2:2008 Category I

Ordering Key

	FD10 - 24 S F8 - 160 . 210 - 6 4 0 H 1 0 A
Input voltage	24: 24V DC
Motor power	S: Short motor
Motor and spindle type	F4: 3500rpm / 4mm pitch F6: 3500rpm / 6mm pitch F8: 3500rpm / 8mm pitch <i>(Refer to page 2)</i>
Retracted length	XXX <i>(Refer to page 2 & 3)</i>
Extended length	XXX <i>(Refer to page 2 & 3)</i>
Front connector	2: Drilled hole 3: Metal 6: Plastic <i>(Refer to page 3)</i>
Rear connector	4: Plastic <i>(Refer to page 3)</i>
Pivot orientation of rear connector	0: 0° <i>(Refer to page 3)</i>
Positioning feedback	0: None H: Hall effect sensor x 2
Option	0: None 1: Push only extension tube 2: PTC thermal protection 3: Push only + PTC thermal protection
Reserved	0: No meaning
Cable	0: 300 mm straight 1: 1000 mm straight 2: 450 mm with 300 mm coiled A: Direct-Cut cable DL1, without control box <i>(Refer to page 3)</i>

Terms of Use

The user is responsible for application suitability of Moteck products. As ongoing improvement process continues, products listed on the Moteck website are subject to change without prior notice. Moteck reserves the right to terminate the sales or remove any product displayed on the website, or listed in its catalogues.