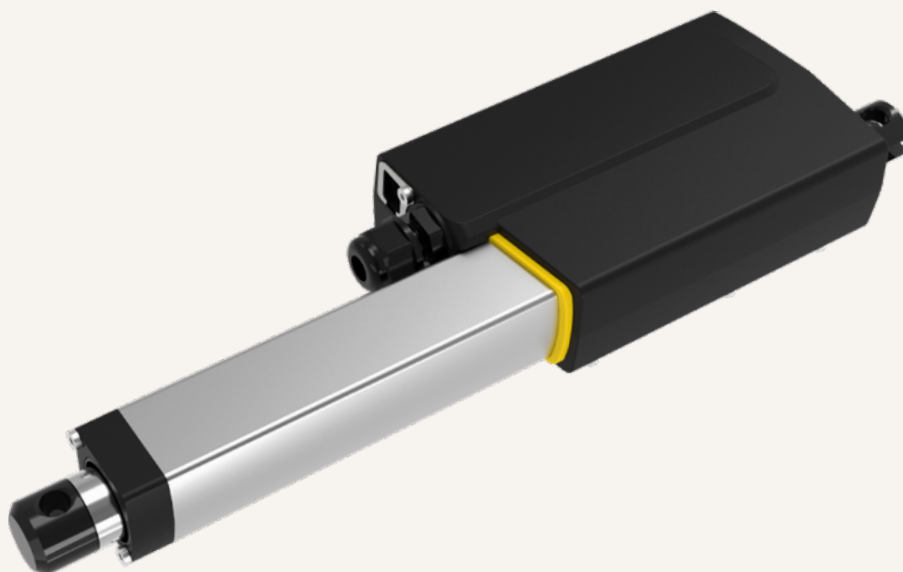


SR1

series



Product Segments

• Industrial Motion

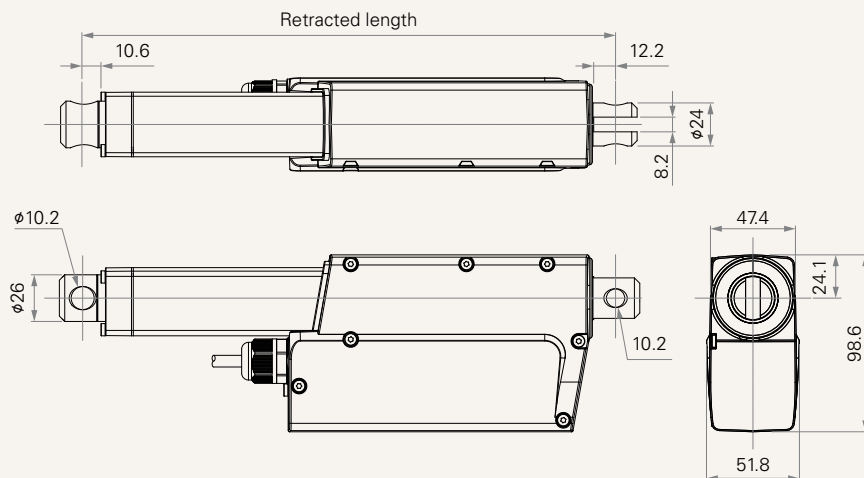
TiMOTION's SR1 series is a low-noise industrial linear actuator specifically designed for applications requiring a resilient and quiet solution. Constructed with plastic helical gearing and a sturdy metal housing, the SR1 has a noise level lower than 58 dBA. Available with an optional IP rating of up to IP69K, suppressed noise and robust quality, it's capable of working in almost any environment. Compact, silent, and weather-resistant, the SR1 series is an ideal choice for light industrial use.

General Features

Max. load	6,000N (push); 4,000N (pull)
Max. speed at max. load	3mm/s
Max. speed at no load	7.6mm/s
Retracted length	≥ 230mm
IP rating	IP69K
Stroke	50~1000mm
Output signals	Mechanical pot., Hall sensors(5-36V input)
Options	Manual drive
Voltage	12/24V DC; 12/24V DC (PTC)
Operational temperature range	-25°C~+65°C
Operational temperature range at full performance	+5°C~+45°C
Low noise	

Drawing

Standard Dimensions
(mm)



Load and Speed

CODE	Load (N)		Self Locking Force (N)	Duty	Typical Current (A)		Typical Speed (mm/s)		Noise (db)
	Push	Pull			No Load 24V DC	With Load 24V DC	No Load 24V DC	With Load 24V DC	
Motor Speed (4800RPM)									
B	2000	2000	2600	25%	2.0	3.8	7.6	6.0	≤ 58
C	4000	4000	5200	25%	1.8	3.4	3.8	3.0	≤ 58
D	6000	4000	6000	10%	1.8	4.5	3.8	3.0	≤ 59

Note

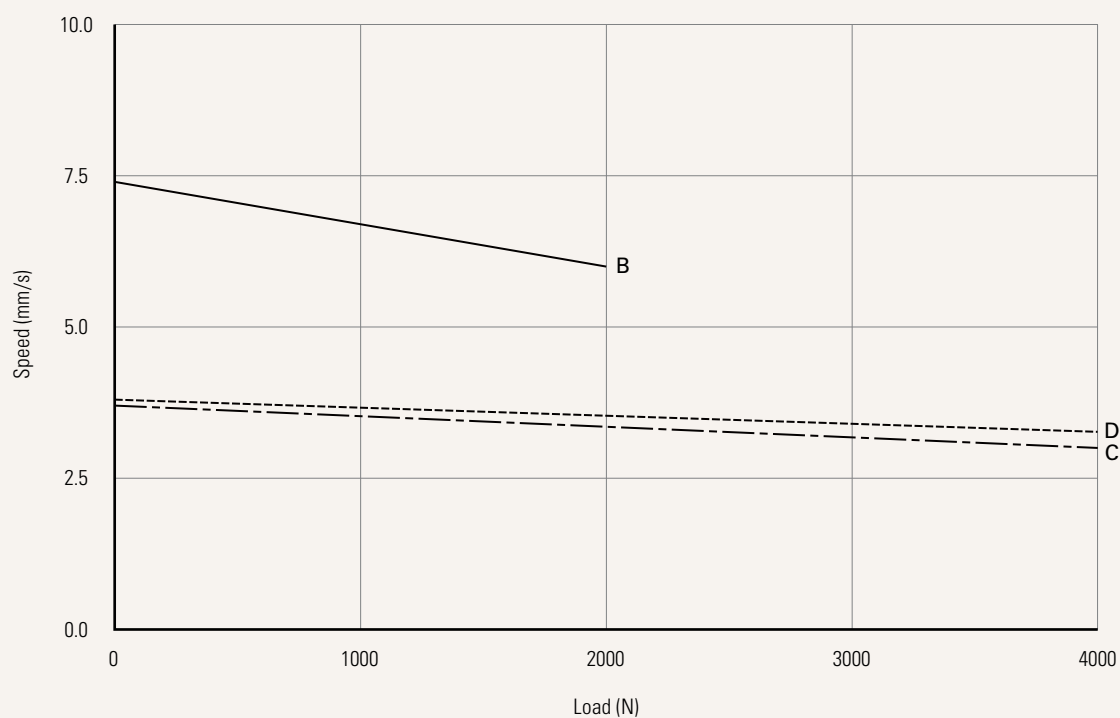
- 1 Please refer to the approved drawing for the final authentic value.
- 2 The current & speed in table are tested with 24V DC motor. With a 12V DC motor, the current is approximately twice the current measured in 24V DC; speed will be similar for both voltages.
- 3 The current & speed in table is tested when the actuator is extending under push load.
- 4 Without load, noise level ≤ 59dBA (by TiMOTION test standard, ambient noise level ≤ 36dBA)
- 5 Standard stroke: Min. ≥ 50mm, Max. please refer to the table below.

CODE	Load (N)	Max Stroke (mm)
B	≤ 2000	1000
C	≤ 4000	600
D	≤ 6000	450

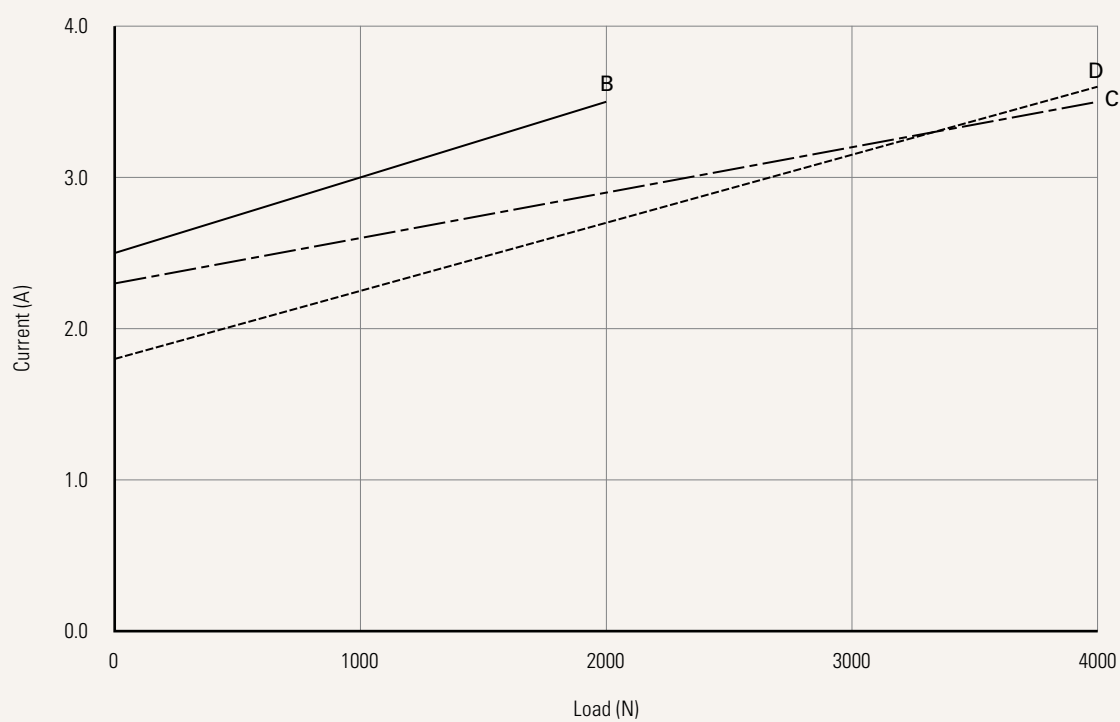
Performance Data (24V DC Motor)

Motor Speed (4800RPM)

Speed vs. Load



Current vs. Load



SR1

Type	N = Normal			
Voltage	1 = 12V DC	2 = 24V DC	5 = 24V DC, PTC	6 = 12V DC, PTC
Load and Speed	See page 2			
Stroke (mm)	See page 2			
Retracted Length (mm)	See page 5			
Rear Attachment (mm) See page 6	1 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 10.2 2 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 12.2		3 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 12.8	
Front Attachment (mm) See page 6	1 = Aluminum, slotless, hole 10.2 2 = Aluminum, slotless, hole 12.2 3 = Aluminum, slotless, hole 12.8		4 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 10.2 5 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 12.2 6 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 12.8	
Direction of Rear Attachment (Counterclockwise) See page 7	1 = 0°		3 = 90°	
IP Rating	6 = IP66M		9 = IP69K	
Special Function of Spindle Subassembly	0 = Without (Standard)		1 = Safety nut	
Function of Limit Switches See page 8	1 = Two limit switches cut off the actuator at end of stroke 2 = Two limit switches cut off the actuator at end of stroke + third one in between sends signal 3 = Two limit switches send signal at end of stroke			
Output Signal	0 = Without P = Mechanical pot.		N = Hall sensor*2 (5-36V input)	
Connector (mm) See page 7	2 = Tinned leads, unsheathed wire 50, stripped wire 10			
Cable Length (mm)	1 = Straight, 500mm	3 = Straight, 1000	5 = Straight, 1500	6 = Straight, 2000
Manual Drive	0 = Without		1 = With	

Retracted Length (mm)

1. Calculate $A+B = Y$
2. Retracted length needs to $\geq \text{Stroke}+Y$
3. Retracted length needs to $\geq 230\text{mm}$

A. Front Attach. Load & Speed Type(N)

	B	C, D
Slotless 1,2,3	+118	+125
U clevis 4,5,6	+128	+135

B. Stroke (mm)

25~150	-
151~200	-
201~250	+10
251~300	+20
301~350	+30
351~400	+40
401~450	+50
451~500	+60
501~550	+70
551~600	+80
601~650	+90
651~700	+100
701~750	+110
751~800	+120
801~850	+130
851~900	+140
901~950	+150
951~1000	+160

C. Output Signals

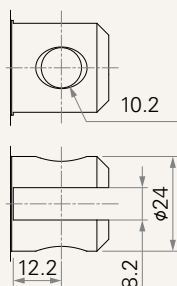
P_Mechanical Pot.	+20
--------------------------	-----

D. Spindle Set

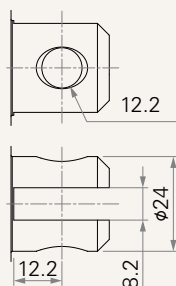
0_Without	-
1_Safety nut	+12

Rear Attachment (mm)

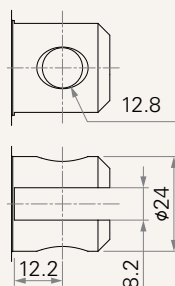
1 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 10.2



2 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 12.2

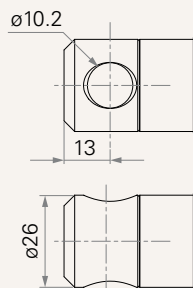


3 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 12.8

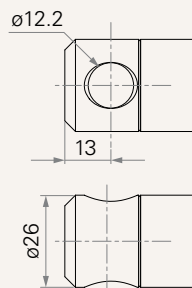


Front Attachment (mm)

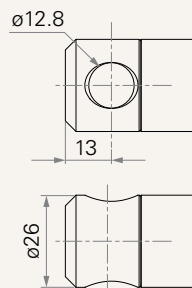
1 = Aluminum, slotless, hole 10.2



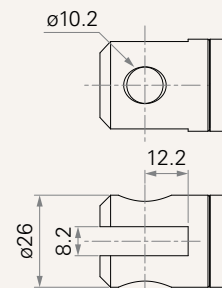
2 = Aluminum, slotless, hole 12.2



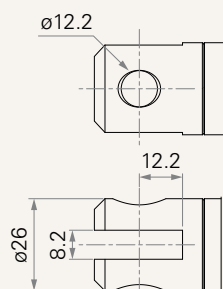
3 = Aluminum, slotless, hole 12.8



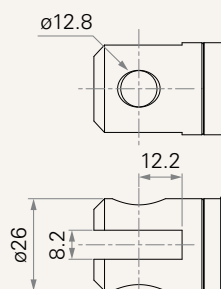
4 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 10.2



5 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 12.2

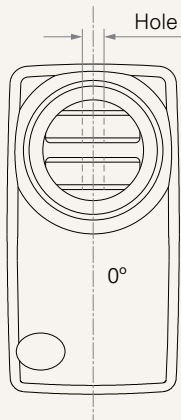


6 = Aluminum, U clevis, slot 8.2, depth 12.2, hole 12.8

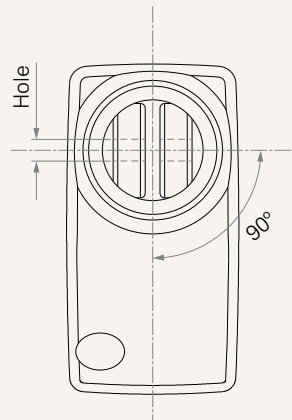


Direction of Rear Attachment (Counterclockwise)

1 = 0°

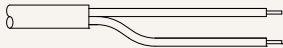


3 = 90°



Connector (mm)

2 = Tinned leads, unsheathed wire
50, stripped wire 10



Wire Definition

N_Normal

Port Number	Functions for Limit Switches	Wire Color	Wire Gauge (AWG)	Position Feedback		
				0. Without	1. Mechanical Pot.	5, N. Hall sensor*2
A1	1. Two limit switches cut off the actuator at end of stroke	● RD	16	EXT+	EXT+	EXT+
		● BK	16	RET+	RET+	RET+
		● RD	26	-	POT-out	Vcc+
		○ WH	26	-	POT-Vin (5V)	S1
		● BK	26	-	GND	Hall-GND
		● BU	26	-	-	S2
		● BN	26	-	-	-
		● GY	26	-	-	-
		● OG	26	-	-	-
		● VT	26	-	-	-
A1	2. Two limit switches cut off the actuator at end of stroke + third one in between sends signal	● RD	16	EXT+	EXT+	EXT+
		● BK	16	RET+	RET+	RET+
		● RD	26	-	-	Vcc+
		○ WH	26	3rd LS pin1	3rd LS pin1	S1
		● BK	26	3rd LS pin2	POT-GND	Hall-GND
		● BU	26	-	3rd LS pin2	S2
		● BN	26	-	POT-Vin (5V)	3rd LS pin1
		● GY	26	-	-	-
		● OG	26	-	POT-Vout	3rd LS pin2
		● VT	26	-	-	-
A1	3. Two limit switches send signal at end of stroke	● RD	16	EXT+	EXT+	EXT+
		● BK	16	RET+	RET+	RET+
		● RD	26	LS-COM	LS-COM	Vcc+
		○ WH	26	LS-Upper	LS-Upper	S1
		● BK	26	-	POT-GND	Hall-GND
		● BU	26	LS-Lower	LS-Lower	S2
		● BN	26	-	POT-Vin (+5V)	LS-Upper
		● GY	26	-	-	-
		● OG	26	-	POT-Vout	LS-Lower
		● VT	26	-	-	LS-COM

Terms of Use

The user is responsible for determining the suitability of TiMOTION products for a specific application. TiMOTION products are subject to change without prior notice.