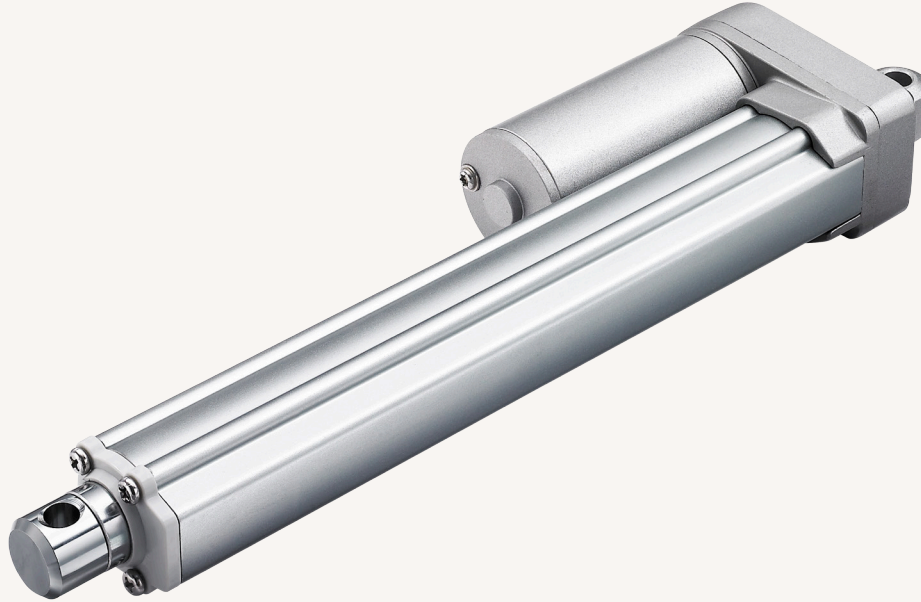


TA2

series



Product Segments

- **Industrial Motion**

TiMOTION's TA2 series linear actuator is compact, robust and fully sealed. This linear actuator is perfect for use in small spaces where force or capability cannot be sacrificed. Options include feedback sensors, signal sending limit switches and 90 degree clevis mounting. Industry certifications for the TA2 linear actuator include IEC60601-1, EMC, and RoHS.

General Features

Voltage of motor	12V DC, 24V DC, 36V DC, or 48V DC
Maximum load	1,000N in pull/push
Maximum speed at full load	51.0 mm/s (with 120N in a push or pull condition)
Standard stroke	20~1000mm
Minimum installation dimension	Stroke+105mm (without output signals)
Color	Silver
Certificate	IEC60601-1, EMC, and RoHS
Operational temperature range	+5°C~+45°C
Option	Potentiometer, Optical, Hall/Reed sensor(s)
Compact size for limited space	

Load and Speed

CODE	Load (N)		Self Locking Force (N)	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 (4200RPM)								
A	120	120	120	0.8	1.2	44.0	32.0	≤ 70
B	240	240	240	0.7	1.2	22.0	16.5	≤ 70
C	500	500	500	0.6	1.0	11.0	8.5	≤ 68
D	750	750	750	0.6	1.0	7.5	6.2	≤ 68
E	1000	1000	1000	0.6	1.0	5.6	4.6	≤ 68
Motor Speed (6000RPM)								
F	120	120	120	1.0	1.8	67.5	51.0	≤ 74
G	240	240	240	0.9	1.8	33.5	26.5	≤ 74
H	500	500	500	0.8	1.5	17.0	14.0	≤ 70
K	750	750	750	0.8	1.5	11.0	10.0	≤ 70
L	1000	1000	1000	0.8	1.5	9.0	7.6	≤ 70

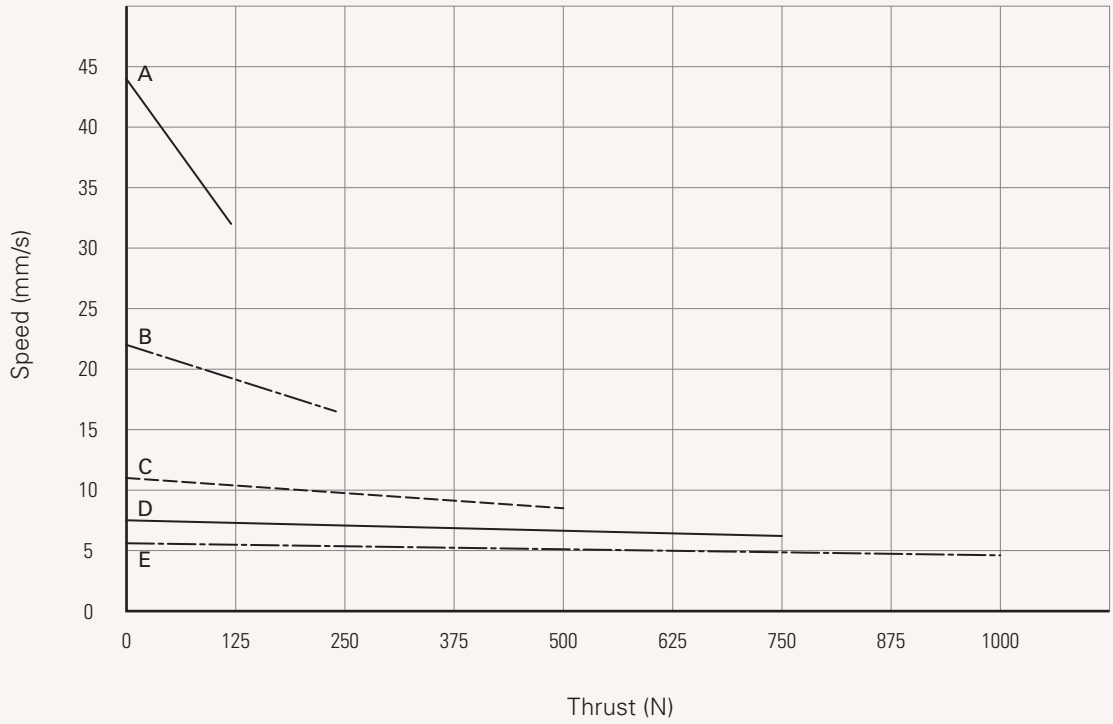
Note

- 1 Motor 12V current is around 2 times in 24V; Motor 36V current is around 2/3 in 24V; Motor 48V current is around 1/2 in 24V; speed is around the same.
- 2 Above self lock performance needs working with Timotion control system in push direction.
- 3 Please refer to approval drawing for final value.
- 4 Environmental noise ≤ 38db.

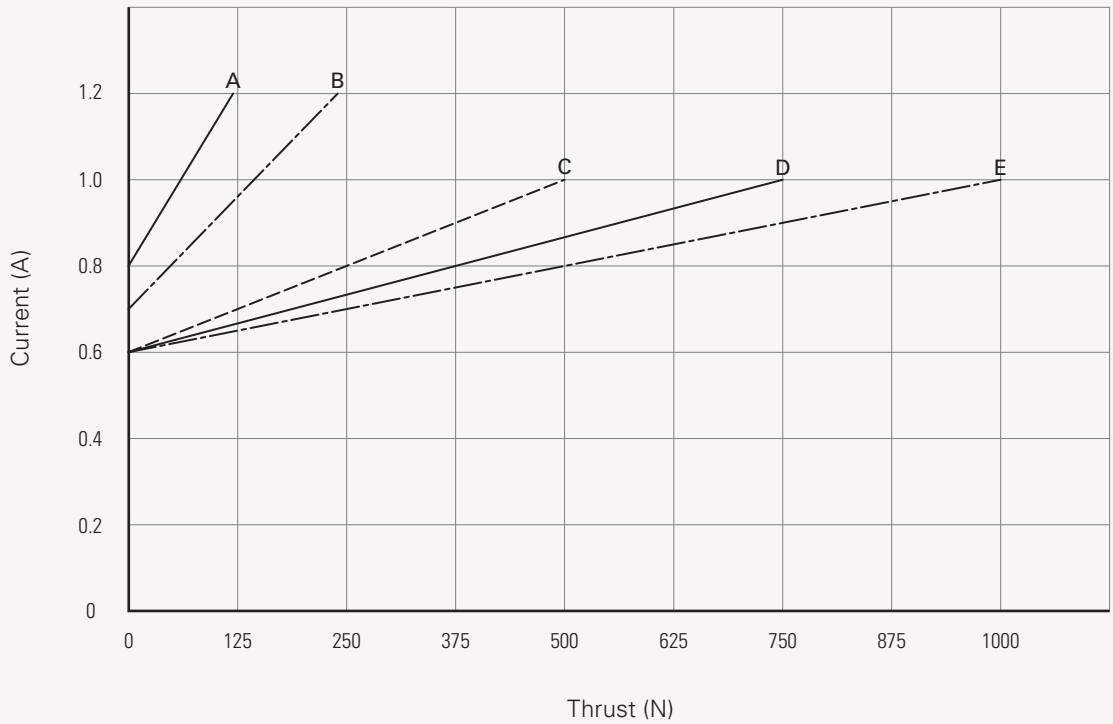
Performance Data (24V)

Motor Speed (4200RPM)

Speed vs. Thrust



Current vs. Thrust



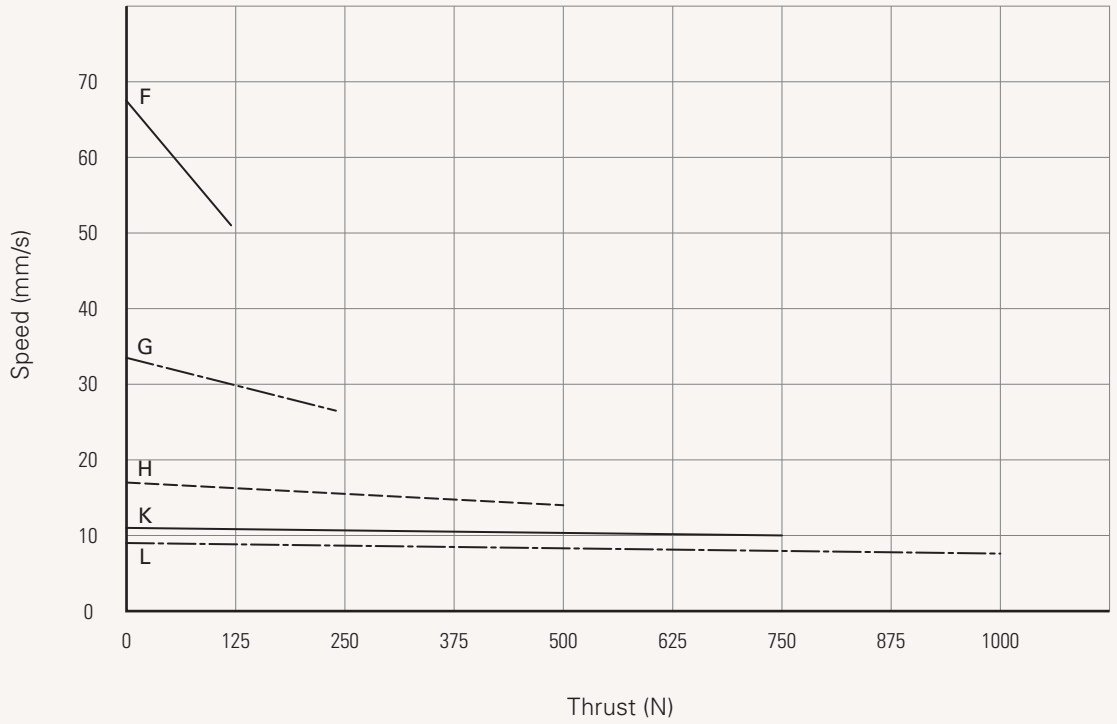
Note

1 The performance data in the curve charts shows theoretical value only.

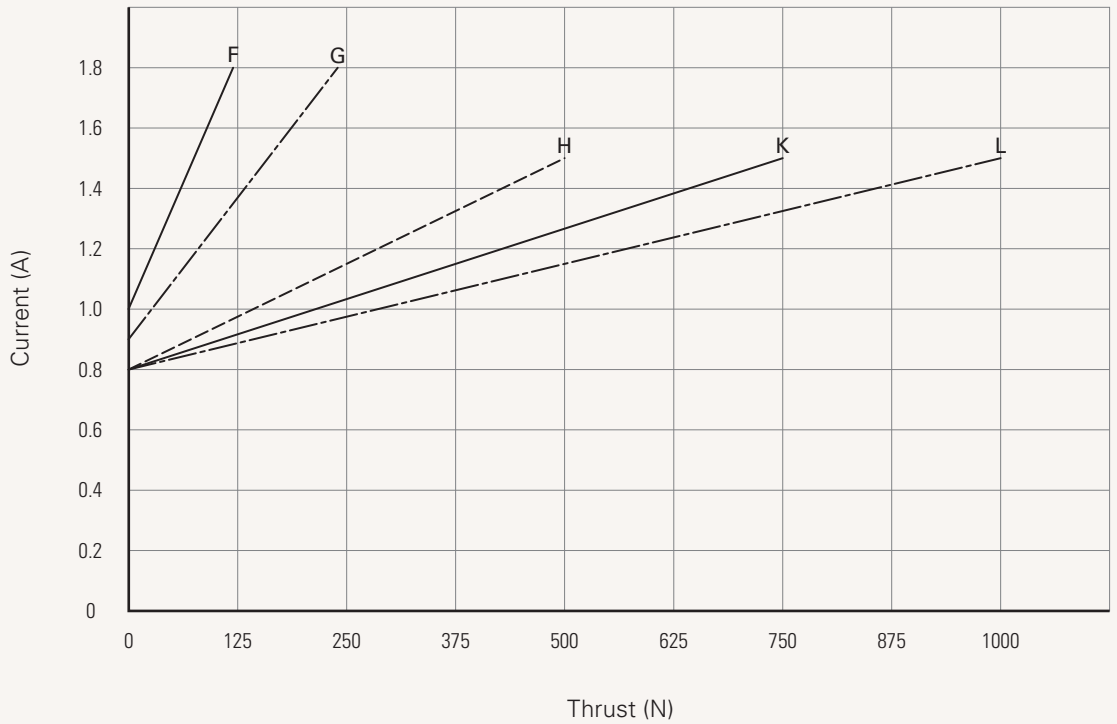
Performance Data (24V)

Motor Speed (6000RPM)

Speed vs. Thrust



Current vs. Thrust

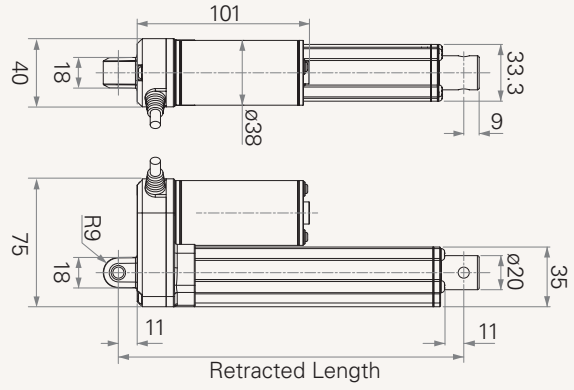


Note

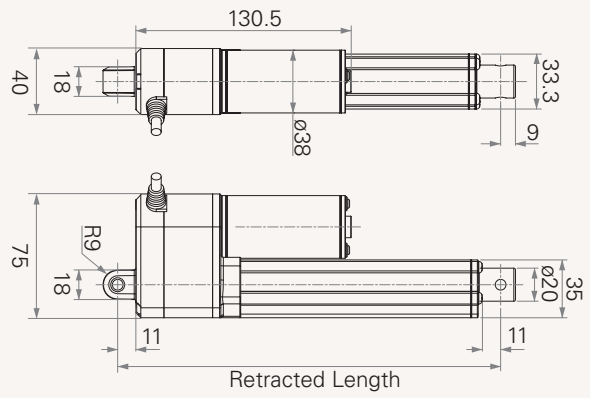
1 The performance data in the curve charts shows theoretical value only.

Drawing

Dimensions without
Output Signals
(mm)



Dimensions with
Output Signals
(mm)



Retracted length (mm)

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

A. Attachment	Rear Attachment Code	
Front Attachment Code	1, 2, 3	4, 5, 6
1	+105	+109
2	+105	+109
3	+115	+119
4	+115	+119
5	+115	+119

B. Stroke vs Load

Stroke (mm)	
20~150	-
151~200	+2
201~250	+2
251~300	+2
301~350	+12
351~400	+22

For stroke over 400mm, +10mm for each incremental 50mm stroke.

C. Output signal

Code	
0	-
1	+30
2	+30
3	+30
4	+30
5	+30

Wire Definitions

CODE*	Pin					
	1	2	3	4	5	6
	● (green)	● (red)	○ (white)	● (black)	● (yellow)	● (blue)
1	extend (VDC+)	N/A	N/A	N/A	retract (VDC+)	N/A
2	extend (VDC+)	N/A	middle switch pin B	middle switch pin A	retract (VDC+)	N/A
3	extend (VDC+)	common	upper limit switch	N/A	retract (VDC+)	lower limit switch
4	extend (VDC+)	common	upper limit switch	medium limit switch	retract (VDC+)	lower limit switch

Note

* See ordering key - functions for limit switches

TA2

Version: 20160711-M

<input type="checkbox"/>	Voltage	1 = 12V 2 = 24V	3 = 36V 4 = 48V	5 = 24V, PTC
<input type="checkbox"/>	Load and Speed	See page 2.		
<input type="checkbox"/>	Stroke (mm)			
<input type="checkbox"/>	Retracted Length (mm)	See page 6.		
<input type="checkbox"/>	Rear Attachment	1 = Aluminum casting, hole 6.4mm, One piece casting with gear box 2 = Aluminum casting, hole 8.0mm, One piece casting with gear box 3 = Aluminum casting, hole 10.0mm, One piece casting with gear box 4 = Aluminum casting, clevis U, slot 6.0mm, depth 10.5mm, hole 6.4mm, One piece casting with gear box 5 = Aluminum casting, clevis U, slot 6.0mm, depth 10.5mm, hole 8.0mm, One piece casting with gear box 6 = Aluminum casting, clevis U, slot 6.0mm, depth 10.5mm, hole 10.0mm, One piece casting with gear box		
<input type="checkbox"/>	Front Attachment	1 = Aluminum casting, hole 6.4mm 2 = Aluminum casting, hole 8.0mm 3 = Aluminum CNC, clevis U, slot 6.0mm, depth 16.0mm, hole 10.0mm 4 = Aluminum CNC, clevis U, slot 6.0mm, depth 16.0mm, hole 6.4mm 5 = Aluminum CNC, clevis U, slot 6.0mm, depth 16.0mm, hole 8.0mm		
<input type="checkbox"/>	Direction of rear attachment (counterclockwise)	1 = 90°	2 = 0°	
<input type="checkbox"/>	Functions for Limit Switches	1 = Two switches at full retracted/extended positions to cut current 2 = Two switches at full retracted/extended positions to cut current + third one in between to send signal 3 = Two switches at full retracted/extended positions to send signal 4 = Two switches at full retracted/extended positions to send signal + third one in between to send signal		
<input type="checkbox"/>	Output Signals	0 = Without 1 = POT	2 = Optical 3 = Reed sensor	4 = One Hall sensor 5 = Two Hall sensors
<input type="checkbox"/>	Connector	1 = DIN 6pin, 90° plug	2 = Tinned leads	
<input type="checkbox"/>	Cable Length	1 = Straight, 300mm 2 = Straight, 600mm	3 = Straight, 1000mm B-H = For direct cut system, please contact TiMOTION	
<input type="checkbox"/>	IP	1 = Without	2 = IP54	3 = IP66 6 = IP66D

Terms of Use

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