TA2
series

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Product Segments

• Industrial Motion

TecHome's TA2 series linear actuator is compact, robust and capable of performing well in outdoor environments. 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 EN60601-1, 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 (Load<500N)
	-25°C~+65°C (Load≥500N)
Operational temperature range at full performance	+5°C~+45°C
Option	POT, Optical, Hall/Reed sensor(s)
Compact size for limited space	

MOTION AND AUTOMATION

Load and Speed

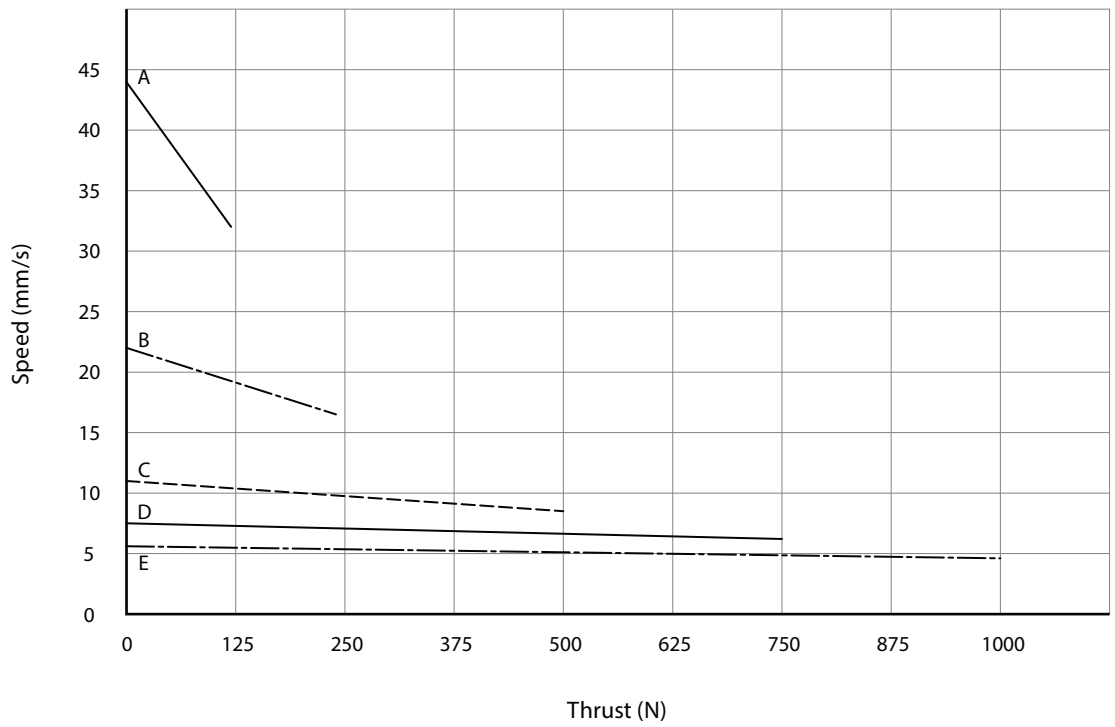| CODE	Load (N)		Self Locking Force (N)	Typical Current (A)		Typical Speed (mm/s)		Noise (db)
	Push	Pull		No Load 24V DC	With Load 24V DC	No Load 24V DC	With Load 24V DC	
Motor Speed (4200RPM)								
A	120	120	120	0.8	1.2	44.0	32.0	≤ 70
B	240	240	240	0.7	1.2	22.0	16.5	≤ 70
C	500	500	500	0.6	1.0	11.0	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

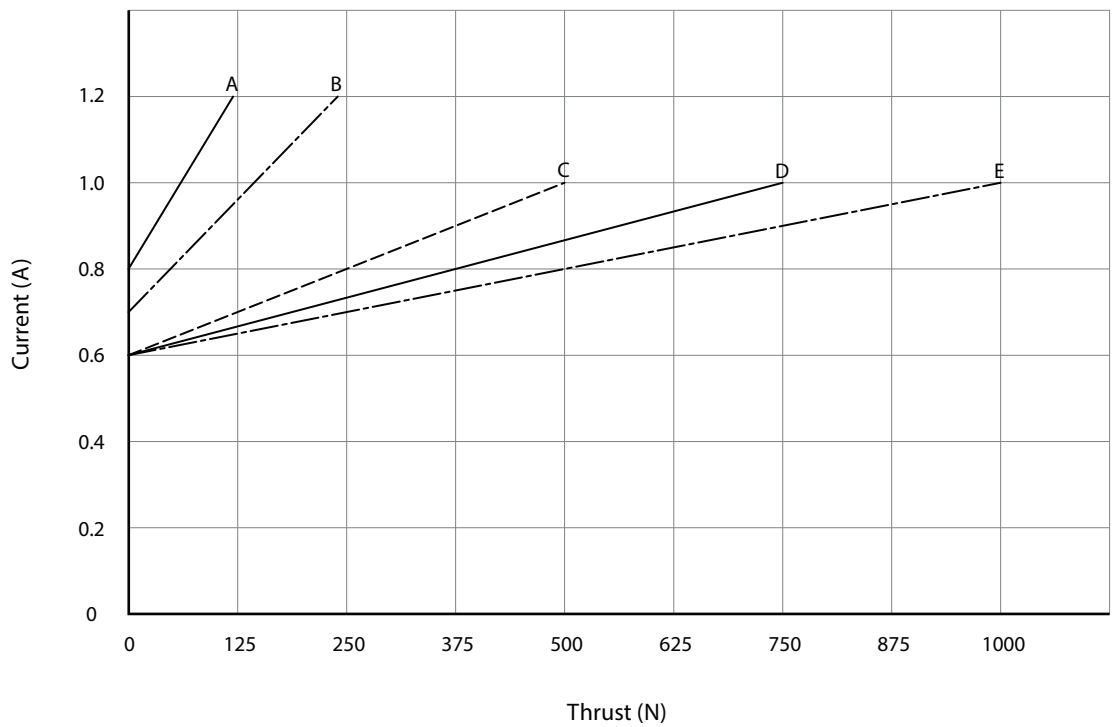3 Please refer to approval drawing for final value.

4 Environmental noise ≤ 38db.

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Performance Data (24V)

Motor Speed (4200RPM)

Speed vs. Thrust

Speed (mm/s) vs. Thrust (N)

- A
- B
- C
- D
- E

Current vs. Thrust

Current (A) vs. Thrust (N)

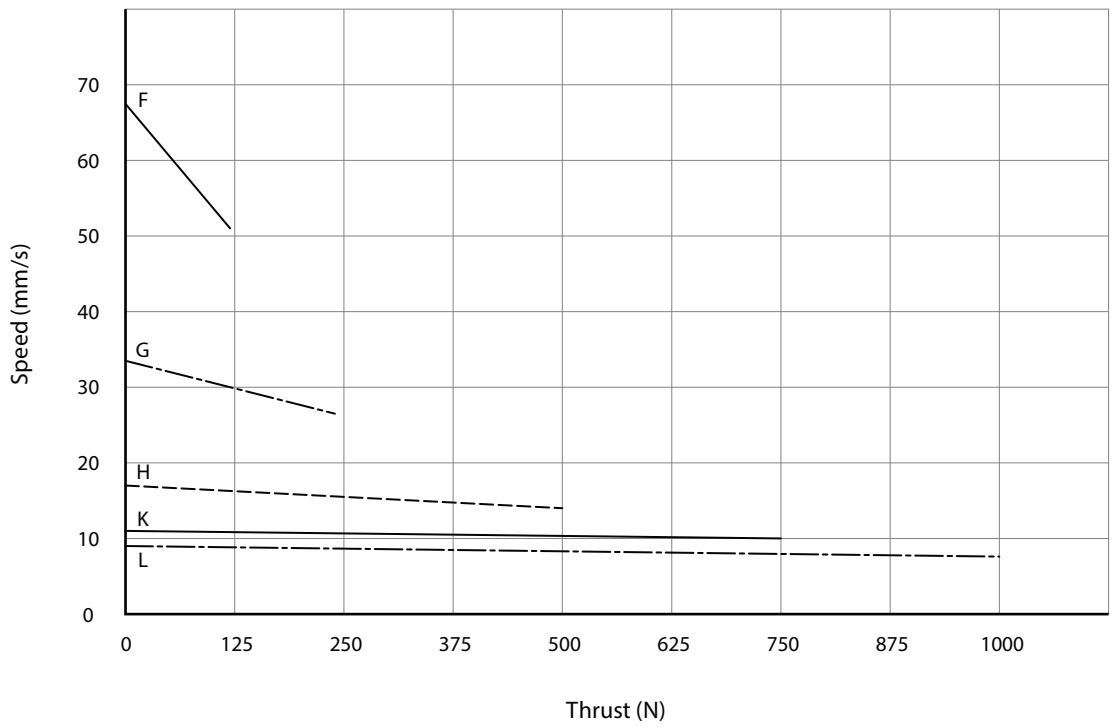- A
- B
- C
- D
- E

Note

1 The performance data in the curve charts shows theoretical value only.
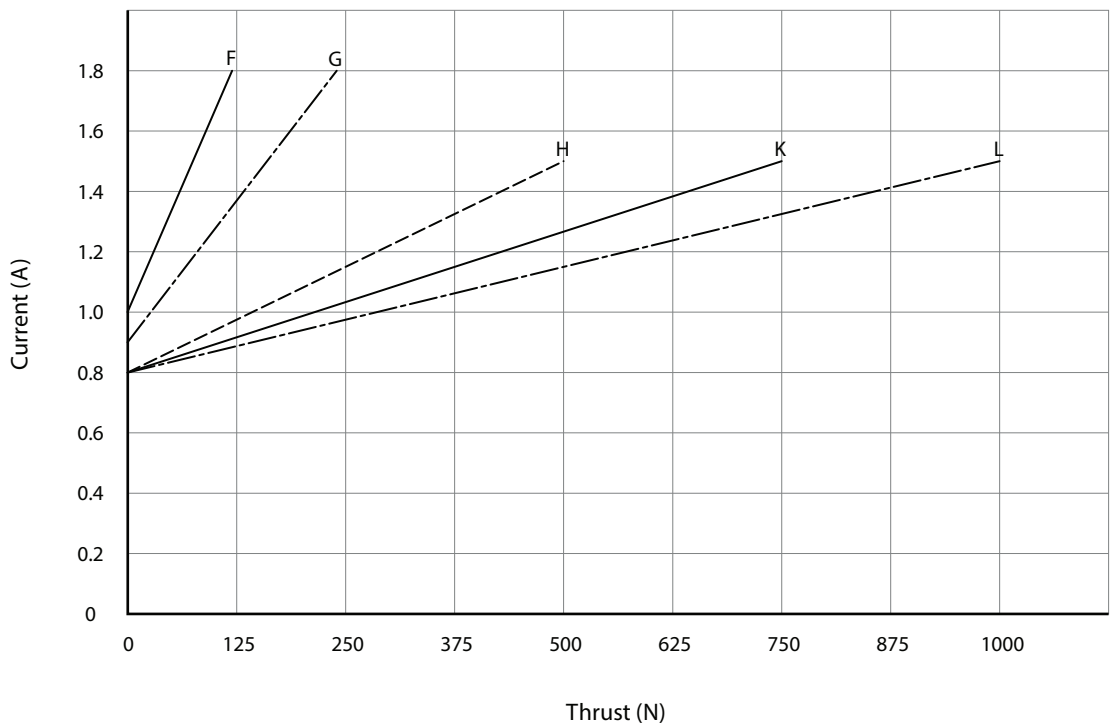
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Performance Data (24V)
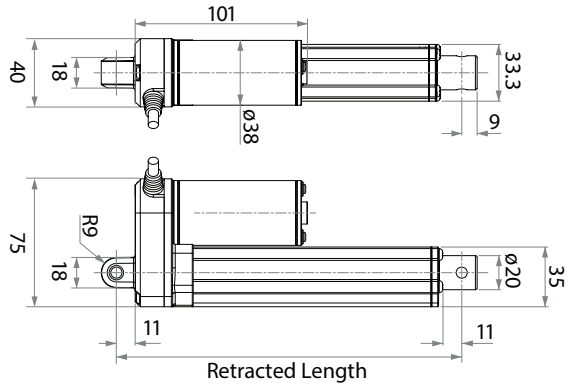
Motor Speed (6000RPM)

Speed vs. Thrust

Current vs. Thrust

Note

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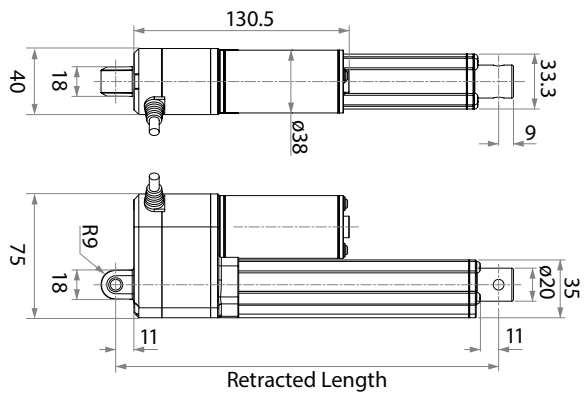
Drawing

Dimensions without
Output Signals
(mm)

101

40

18

33.3

Ø38

9

75

R9

18

Ø20

35

11

11

Retracted Length

Dimensions with
Output Signals
(mm)

130.5

40

18

33.3

Ø38

9

75

R9

18

Ø20

35

11

11

Retracted Length

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Retracted length (mm)

1. Calculate A+B+C = Y

2. Retracted length needs to ≥ 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

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TA2 Ordering Key

TA2

Voltage	1 = 12V	3 = 36V	5 = 24V, PTC	
	2 = 24V	4 = 48V		

Load and Speed	See page 2.

Stroke (mm)

Retracted Length (mm)	See page 6.

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

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

Direction of rear attachment (counterclockwise)	1 = 90°	2 = 0°

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

Output Signals	0 = Without	2 = Optical	4 = One Hall sensor
	1 = POT	3 = Reed sensor	5 = Two Hall sensors

Connector	1 = DIN 6pin, 90° plug	2 = Tinned leads

Cable Length	1 = Straight, 300mm	3 = Straight, 1000mm
	2 = Straight, 600mm	B~H = For direct cut system, please contact TiMOTION

IP	1 = Without	2 = IP54	3 = IP66	6 = IP66D

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