TA2P

series

Product Segments

- **Industrial Motion**

TecHome's TA2P series linear actuator is the high powered version of the TA2 linear actuator. A more powerful motor makes the TA2P capable of handling load ratings up to 3500N (787 pounds) while retaining its compact size.

In addition to the high power motor, the TA2P linear actuator is available with multiple choices for feedback sensors. Industry certifications for the TA2P linear actuator include IEC60601-1 and ES60601-1.

General Features

Voltage of motor	12V DC, 24V DC, 36V DC, or 48V DC
Maximum load	3,500N in push
Maximum load	2,000N in pull
Maximum speed at full load	45.0mm/s (with 250N in a push or pull condition)
Standard stroke	20~1000mm (for load S: stroke ≤ 500mm)
Minimum installation dimension	Stroke+108mm (with Hall sensor(s) or without output signals)
Color	Silver
Certificate	IEC60601-1 and ES60601-1
Operational temperature range	+5°C~+45°C
Option	Potentiometer, Optical, Hall/Reed sensor(s)

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 (5200RPM)								
A	250	250	250	1.2	2.3	43.0	36.0	≤ 72
B	500	500	500	1.1	2.3	25.8	23.0	≤ 72
C	1000	1000	1000	1.1	2.3	14.0	11.8	≤ 70
D	1500	1500	1500	1.0	2.2	9.0	8.0	≤ 70
E	2000	2000	2000	1.0	2.2	7.1	6.2	≤ 70
Motor Speed (6600RPM)								
F	250	250	250	1.6	2.8	56.5	45.0	≤ 74
G	500	500	500	1.5	2.8	32.5	28.5	≤ 74
H	1000	1000	1000	1.5	2.8	16.5	14.3	≤ 72
K	1500	1500	1500	1.3	2.8	11.1	10.0	≤ 72
L	2000	2000	2000	1.3	2.8	8.8	7.7	≤ 72
Motor Speed (3800RPM)								
S	3500	2000	3500	0.9	2.8	3.2	2.4	≤ 72
Motor Speed (2200RPM)								
T	2000	2000	2000	0.3	1.2	3.2	2.4	≤ 68

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.

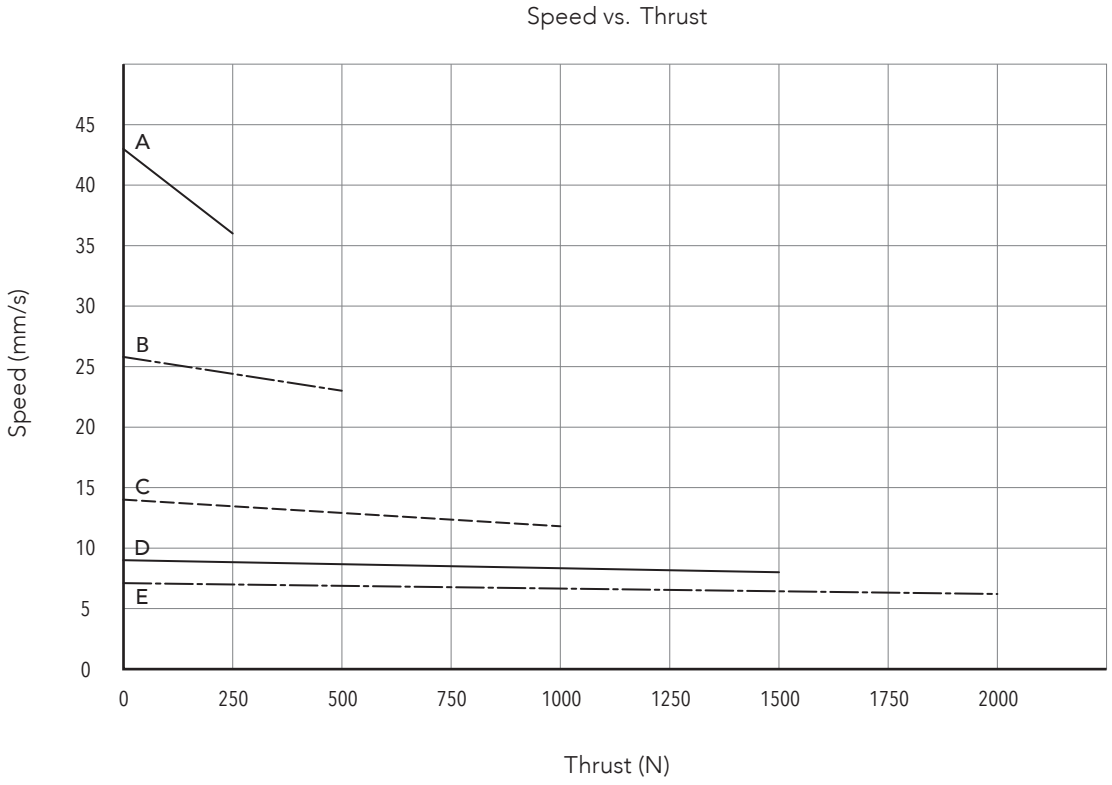
2 Above self lock performance needs working with TiMOTION control system in push direction.

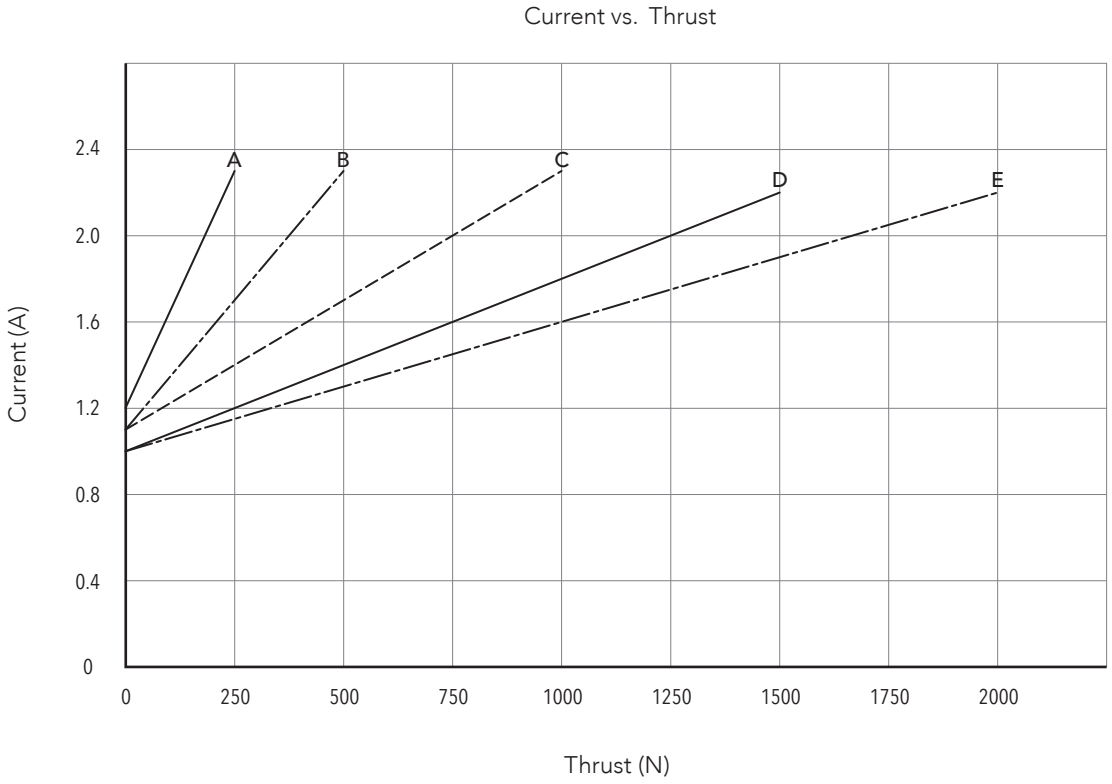
3 Please refer to approval drawing for final value.

4 Environmental noise ≤ 38db.

Performance Data (24V)

Motor Speed (5200RPM)





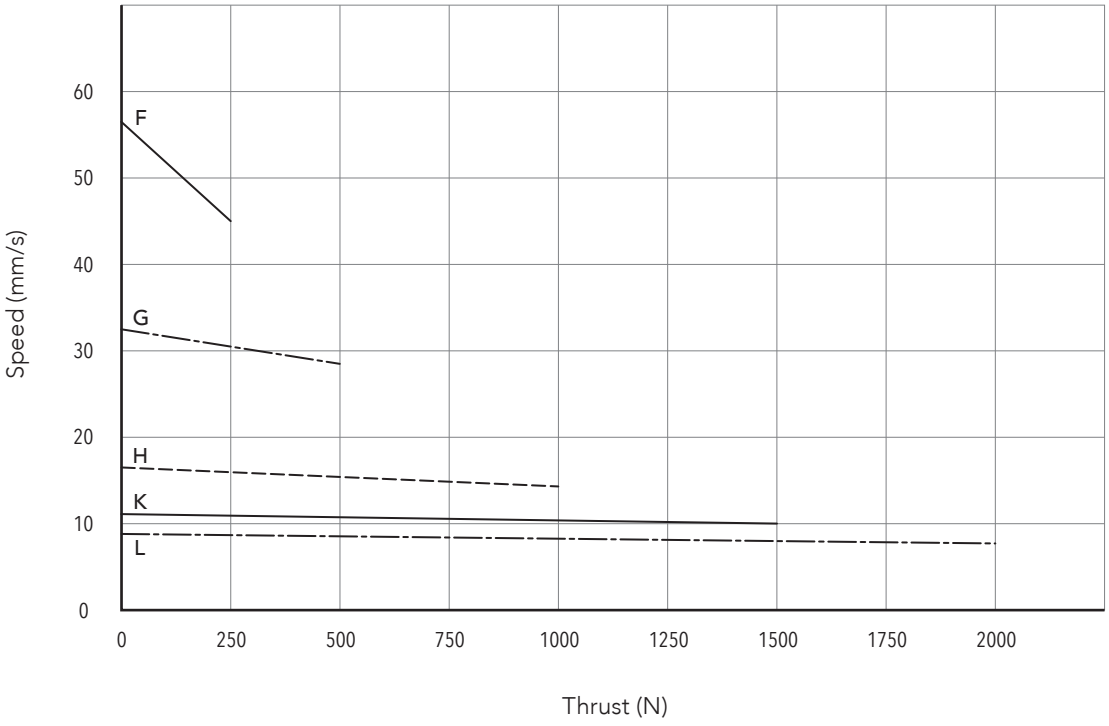
Note

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

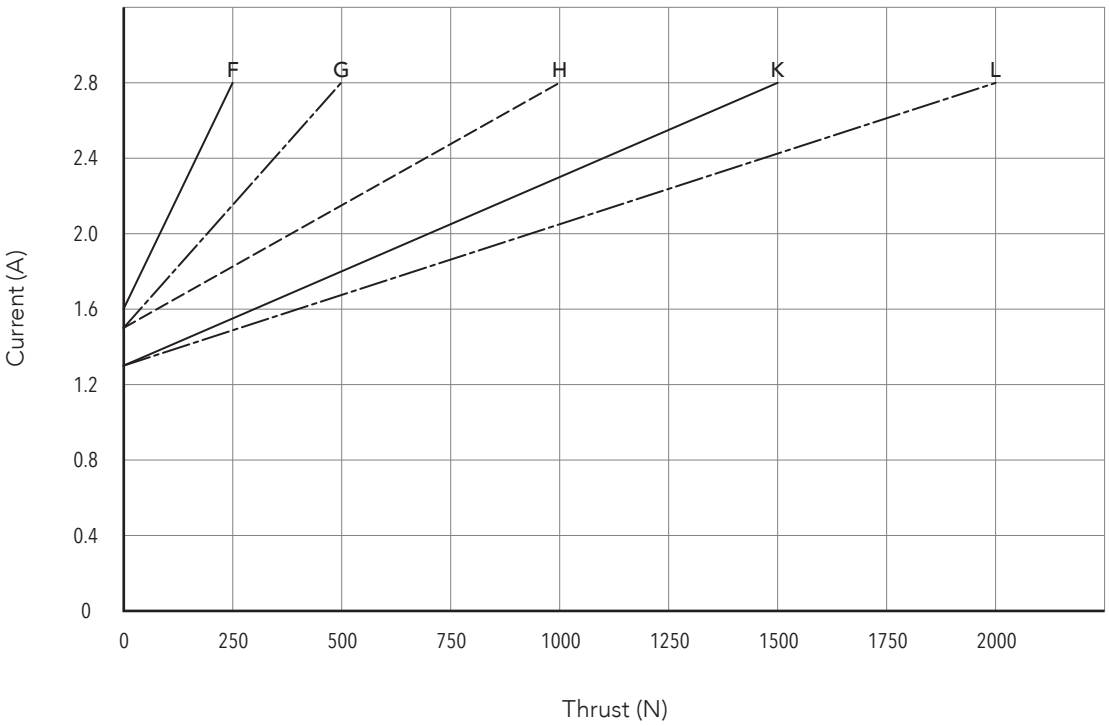
Performance Data (24V)

Motor Speed (6600RPM)

Speed vs. Thrust



Current vs. Thrust

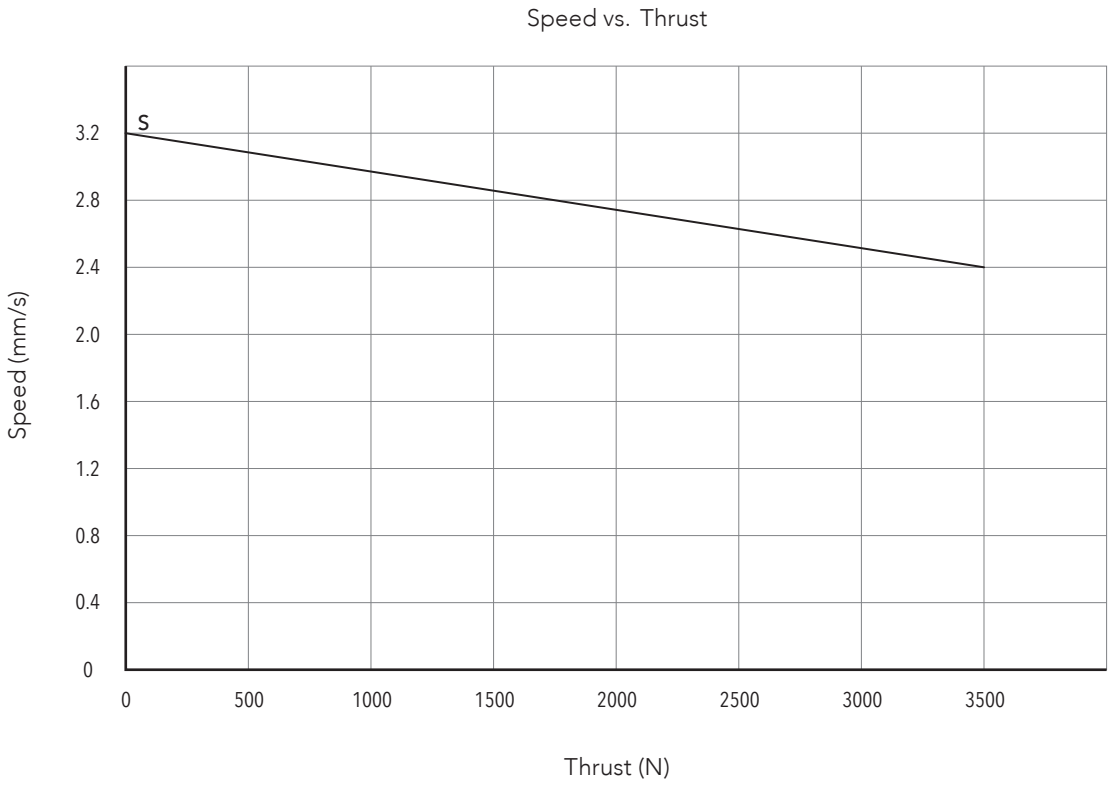


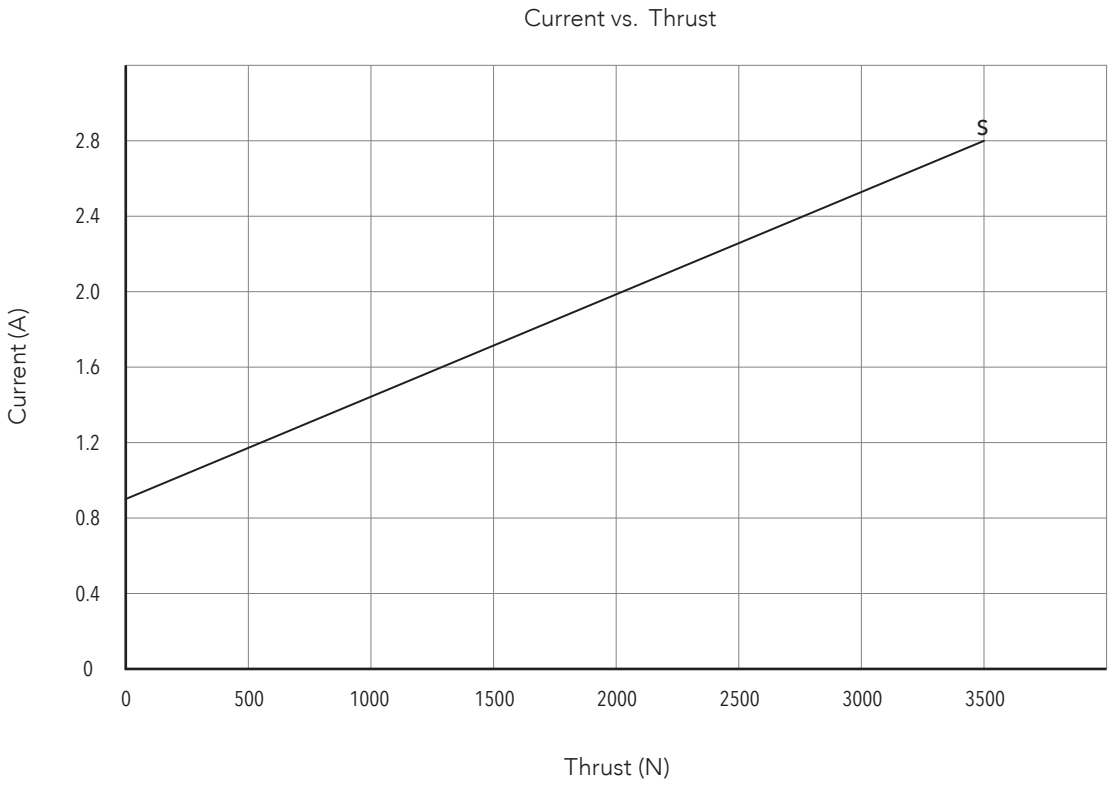
Note

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

Performance Data (24V)

Motor Speed (3800RPM)



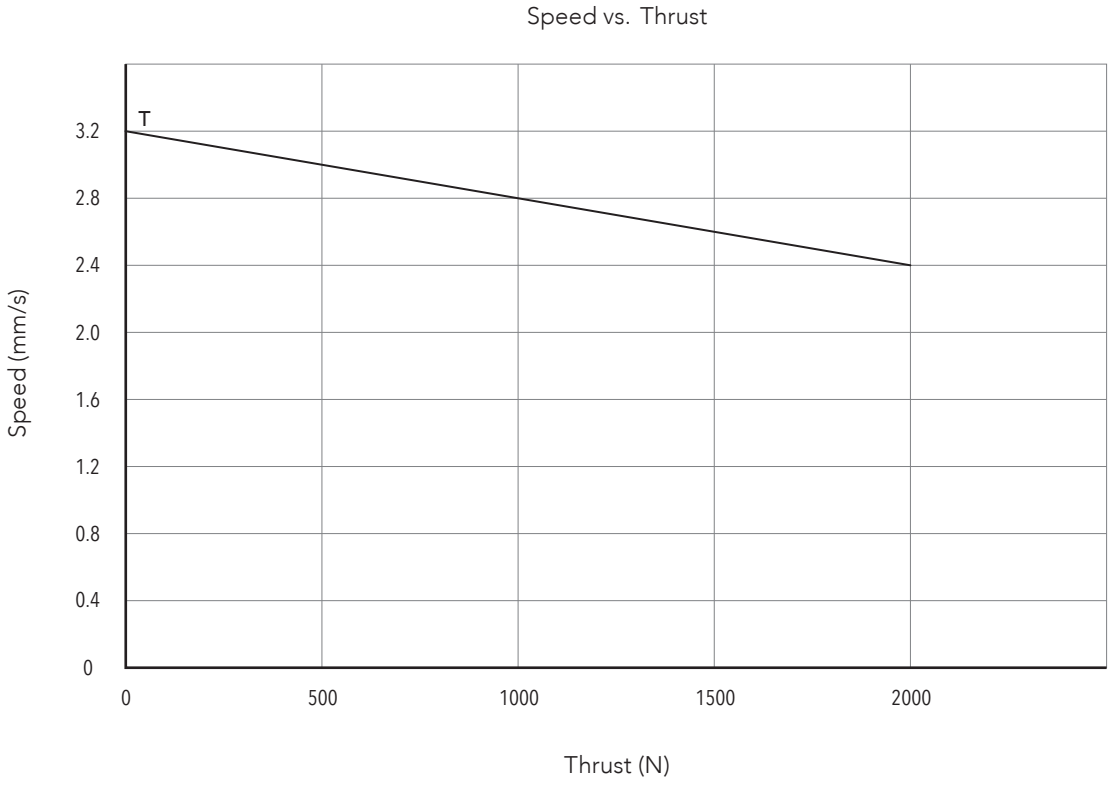


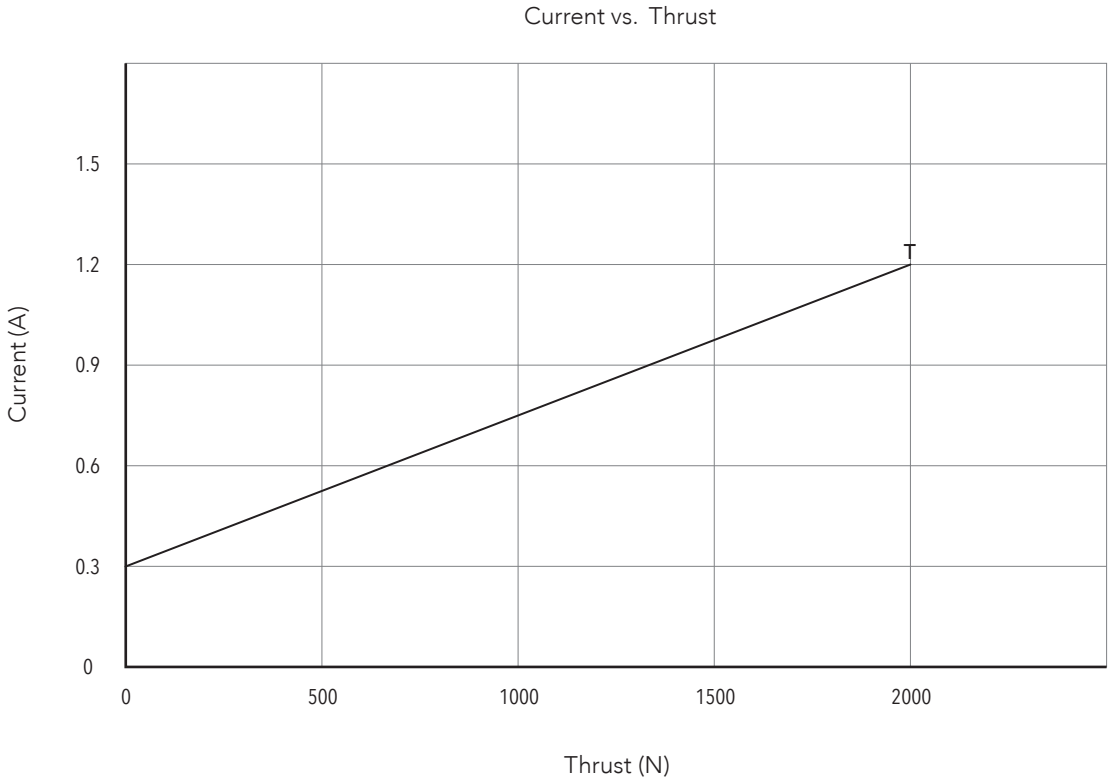
Note

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

Performance Data (24V)

Motor Speed (2200RPM)



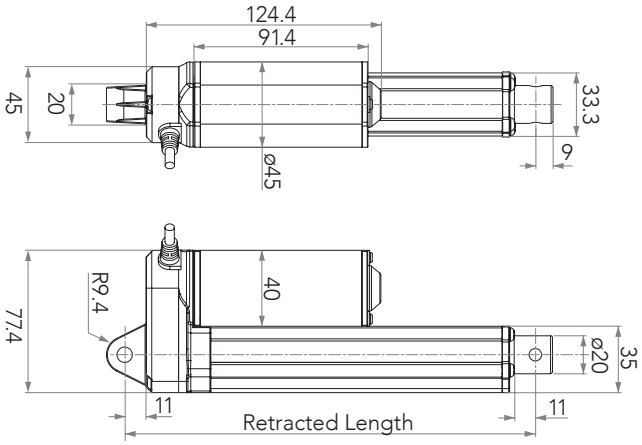


Note

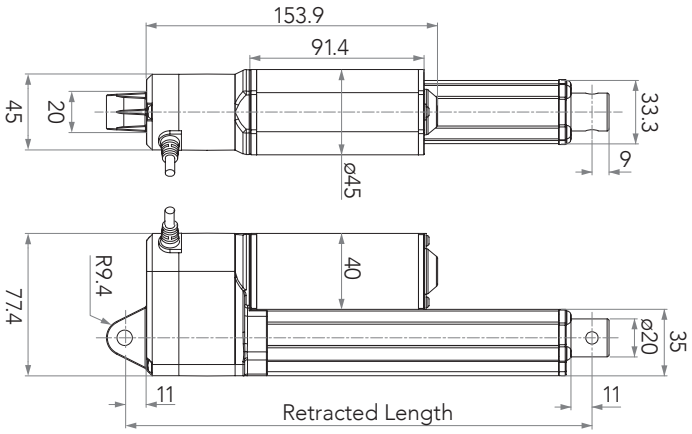
1 The performance data in the curve charts shows theoretical value only.

Drawing

Dimensions without Sensor or with Hall Sensor(s) (mm)



Dimensions with POT, Optical, or Reed Sensor (mm)



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	+108	+112
2	+108	+112
3	+120	+124
4	+120	+124
5	+120	+124

B. Stroke vs Load	Load (N)	
Stroke (mm)	< 3500	= 3500
20~150	-	+5
151~200	+2	+7
201~250	+2	+7
251~300	+2	+7
301~350	+12	+17
351~400	+22	+27

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

C. Output signal	
Code	
0	-
1	+30
2	+30
3	+30
4	-
5	-

Wire Definitions

CODE*	Pin					
	1 (green)	2 (red)	3 (white)	4 (black)	5 (yellow)	6 (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

TA2P Ordering Key

TA2P

Version: 20160711-L

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 8.			
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	
Plug	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 TecHome		
IP	1 = Without	2 = IP54	3 = IP66	6 = IP66D