

TA38

series



Product Segments

- **Comfort Motion**
- **Industrial Motion**

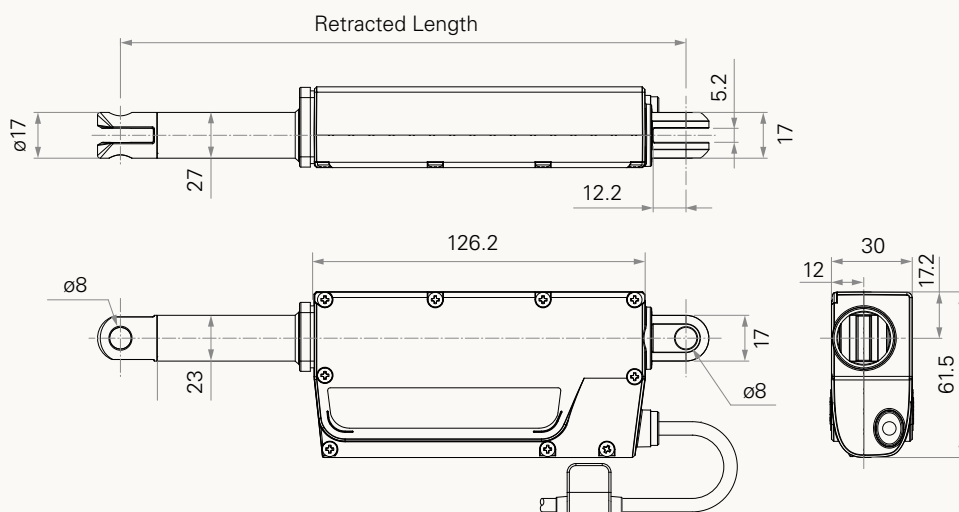
TiMOTION's TA38 series linear actuator is specially designed for low-noise applications, or where a compact linear actuator is needed. The TA38 features a very slim design with a small installation size of only 160mm, providing manufacturers great freedom during the design process. The palm sized motor with up to 1500N force is excellent for all kinds of space limited products.

General Features

Voltage of motor	24V DC, 12 / 24V DC (PTC)
Maximum load	1500N in push / pull
Maximum speed at full load	7.9mm/s (with 1500N in a push or pull condition)
Stroke	≥ 20~200mm
Minimum installation dimension	≥ 160mm
Color	Black or grey
IP Rating	Up to IP66
Operational temperature range	+5°C~+45°C
Options	Hall sensors

Drawing

Standard Dimensions
(mm)



Load and Speed

CODE	Load (N)		Self Locking Force (N)	Typical Current (A)		Typical Speed (mm/s)	
	Push	Pull		No Load 32V DC	With Load 24V DC	No Load 32V DC	With Load 24V DC
Motor Speed (5200RPM, Duty Cycle 10%)							
B	1500	1500	1200	0.8	2.8	12.5	7.9

Note

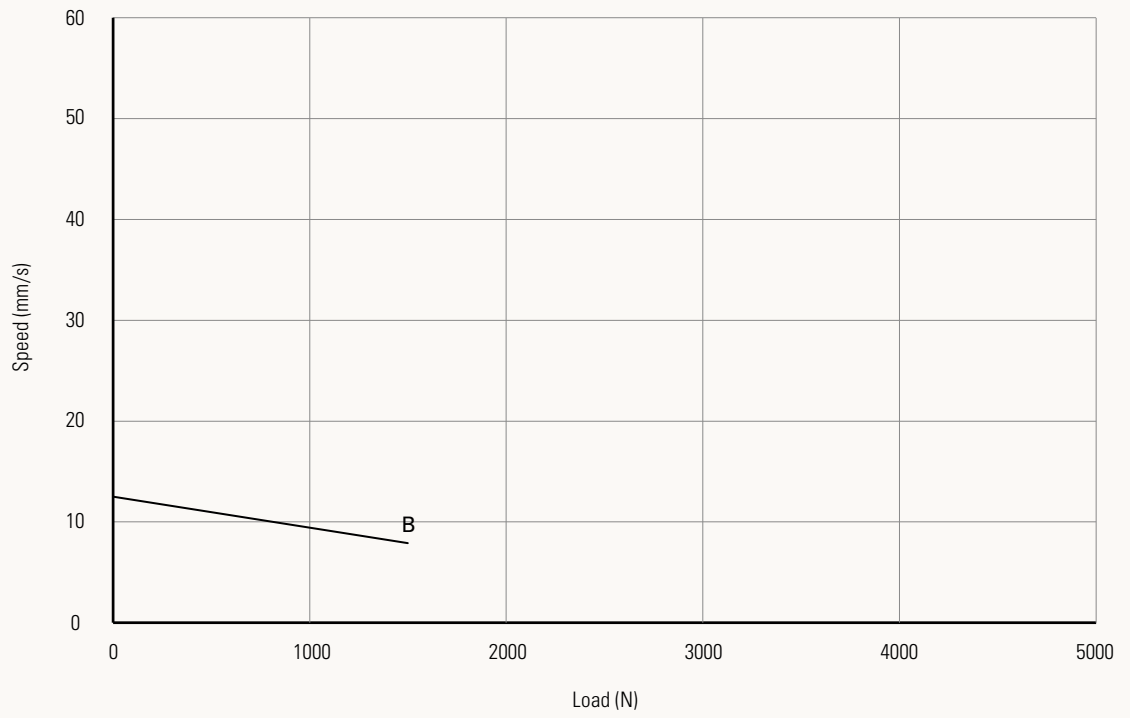
- 1 Please refer to the approved drawing for the final authentic value.
- 2 This self-locking force level is reached only when a short circuit is applied on the terminals of the motor. All the TiMOTION control boxes have this feature built-in.
- 3 The current & speed in table are tested with 24V DC motor. With a 12V DC motor, the current is approximately twice the current measured in 24V DC; speed will be similar for both voltages.
- 4 The current & speed in table are tested when the actuator is extending under push load.
- 5 The current & speed in table and diagram are tested with TiMOTION control boxes, and there will be around 10% tolerance depending on different models of the control box. (Under no load condition, the voltage is around 32V DC. At rated load, the voltage output will be around 24V DC)
- 6 Standard stroke: Min. ≥ 20 mm, Max. please refer to below table.

CODE	Load (N)	Max Stroke (mm)
B	≤ 1500	200

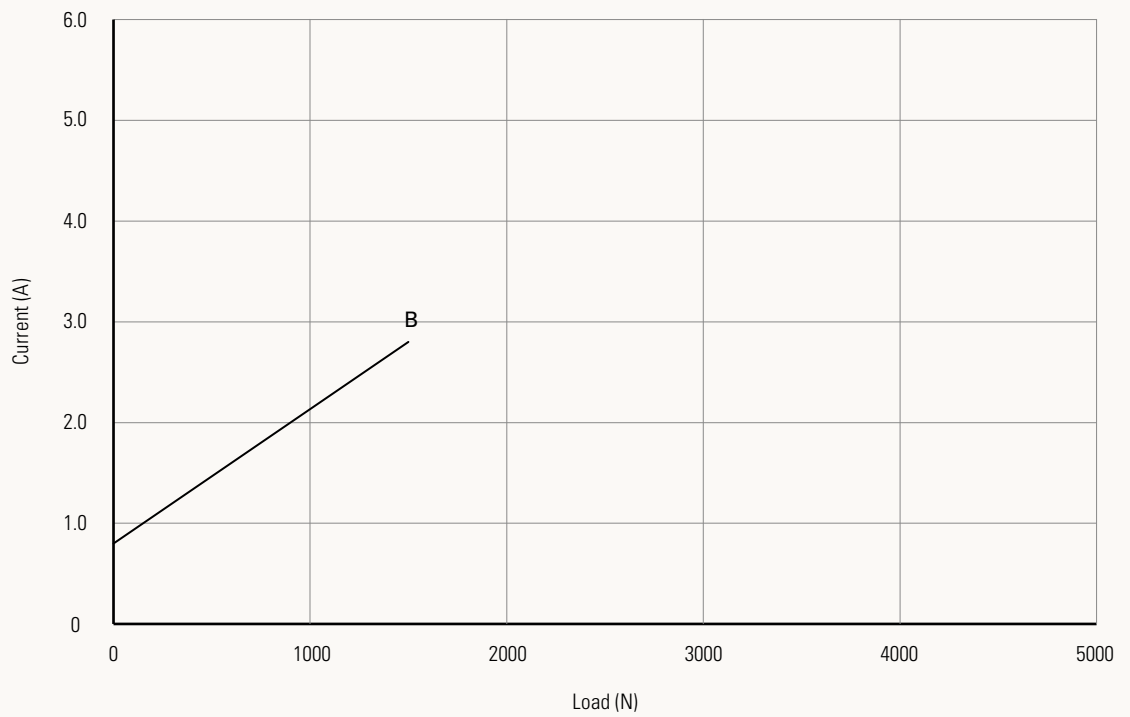
Performance Data (24V DC Motor)

Motor Speed (5200RPM, Duty Cycle 10%)

Speed vs. Load



Current vs. Load



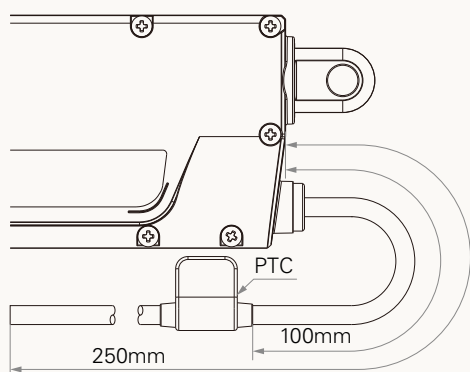
Voltage See page 5	1 = 12V DC, PTC	2 = 24V DC	5 = 24V DC, PTC
Load and Speed	See page 2		
Stroke (mm)	See page 2		
Retracted Length (mm)	See page 5		
Rear Attachment (mm) See page 5	E = Aluminum casting, U clevis, width 5.2, depth 12.2, hole 6.2	G = Aluminum casting, U clevis, width 5.2, depth 12.2, hole 8.2	
Front Attachment (mm) See page 5	E = Aluminum casting, U clevis, width 5.2, depth 12.2, hole 6.2	G = Aluminum casting, U clevis, width 5.2, depth 12.2, hole 8.2	
Direction of Rear Attachment (Counterclockwise) See page 6	1 = 90° (Standard)	2 = 0°	
Color	1 = Black	2 = Grey (Pantone 428C)	
IP Rating	1 = Without	2 = IP54	3 = IP66
Special Functions for Spindle Sub-Assembly	0 = Without		
Functions for Limit Switches See page 6	1 = Two switches at full retracted / extended positions to cut current	3 = Two switches at full retracted / extended positions to send signal	
Output Signals	0 = Without	5 = Hall sensor*2	
Connector See page 7	1 = DIN 6P, 90° plug 2 = Tinned leads 4 = Big 01P, plug	C = Y cable (For direct cut system, water proof, anti pull)	E = Molex 8P, plug F = DIN 6P, 180° plug
Cable Length (mm)	0 = Straight, 100 1 = Straight, 500 2 = Straight, 750	3 = Straight, 1000 4 = Straight, 1250 5 = Straight, 1500	6 = Straight, 2000 7 = Curly, 200 8 = Curly, 400 B-H = For direct cut system. See page 7

Retracted Length (mm)

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

A.		B.	
Front Attach.	Rear Attach.	Stroke (mm)	
E, G	E, G	20~200	-
E, G	+115		

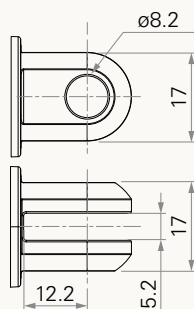
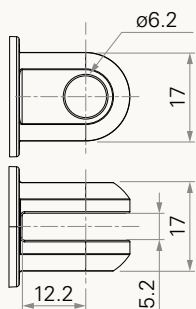
Voltae



Rear Attachment (mm)

E = Aluminum casting, U clevis, width 5.2, depth 12.2, hole 6.2

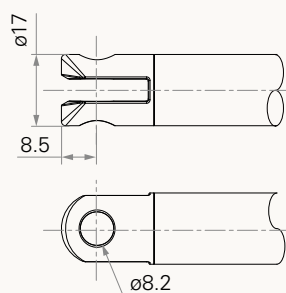
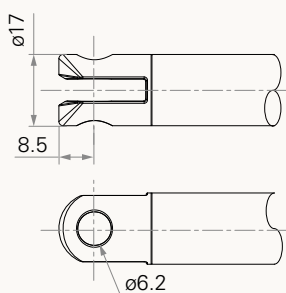
G = Aluminum casting, U clevis, width 5.2, depth 12.2, hole 8.2



Front Attachment (mm)

E = Aluminum casting, U clevis, width 5.2, depth 12.2, hole 6.2

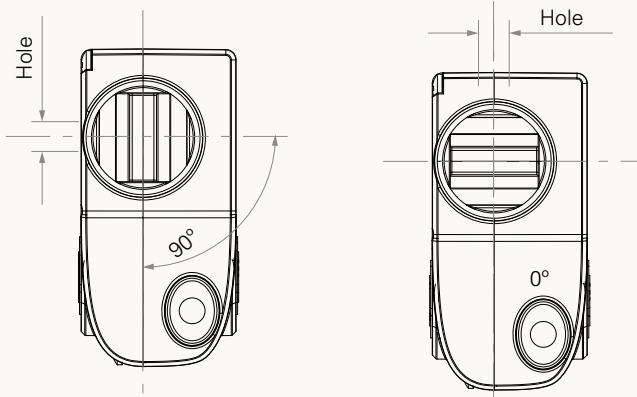
G = Aluminum casting, U clevis, width 5.2, depth 12.2, hole 8.2



Direction of Rear Attachment (Counterclockwise)

1 = 90° (Standard)

2 = 0°



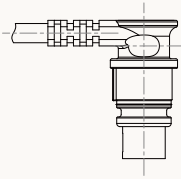
Functions for Limit Switches

Wire Definitions

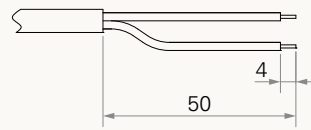
CODE	Pin					
	● 1 (Green)	● 2 (Red)	○ 3 (White)	● 4 (Black)	● 5 (Yellow)	● 6 (Blue)
1	extend (VDC+)	N/A	N/A	N/A	retract (VDC+)	N/A
3	extend (VDC+)	common	upper limit switch	N/A	retract (VDC+)	lower limit switch

Connector

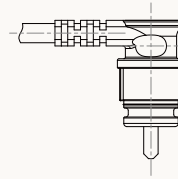
1 = DIN 6P, 90° plug



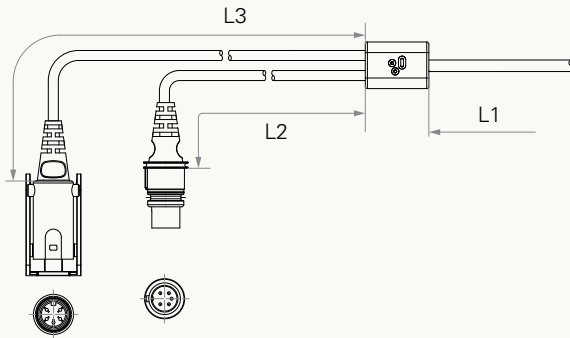
2 = Tinned leads



4 = Big 01P, plug



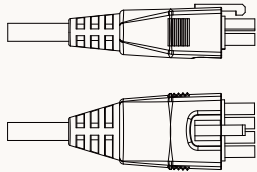
C = Y cable (direct cut, water proof, anti-pull)



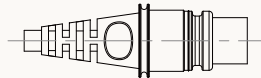
Cable length for direct cut system (mm)

CODE	L1	L2	L3
B	100	100	100
C	100	1000	400
D	100	2700	500
E	1000	100	100
F	100	600	1000
G	1500	1000	1000
H	100	100	1200

E = Molex 8P, plug



F = DIN 6P, 180° plug



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.