TA19

series

Product Segments

- **Care Motion**
- **Comfort Motion**

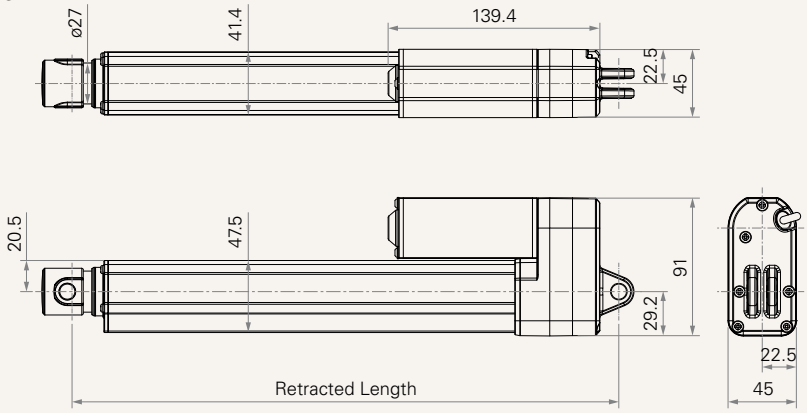
TiMOTION's TA19 series is a quiet and telescopic style linear actuator suited for height-adjustable work tables. The telescopic tube design of the TA19 linear actuator allows for a longer stroke with a shorter retracted length and reduced installation dimensions. This linear actuator can also be equipped with Hall sensors for position feedback.

General Features

Voltage of motor	12V DC, 24V DC or 24V DC (PTC)
Maximum load	1,000N in push
Maximum speed at full load	30mm/s (with 800N in a push condition)
Stroke	180~800mm
Minimum installation dimension	≥ Stroke / 2+165mm
Certificate	IEC60601-1, ES60601-1, EMC
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		No Load 32V DC	With Load 24V DC	No Load 32V DC	With Load 24V DC
Motor Speed (3800RPM, Duty Cycle 10%)						
A	600	400	2.5	3.2	51.0	27.0
B	1000	1000	2.0	4.0	22.5	11.0
Motor Speed (5200RPM, Duty Cycle 10%)						
C	800	400	2.5	6.5	64.0	30.0
D	1000	1000	2.5	5.0	32.0	18.0
E	800	500	2.5	6.0	54.0	26.5

Note

1 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.

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.

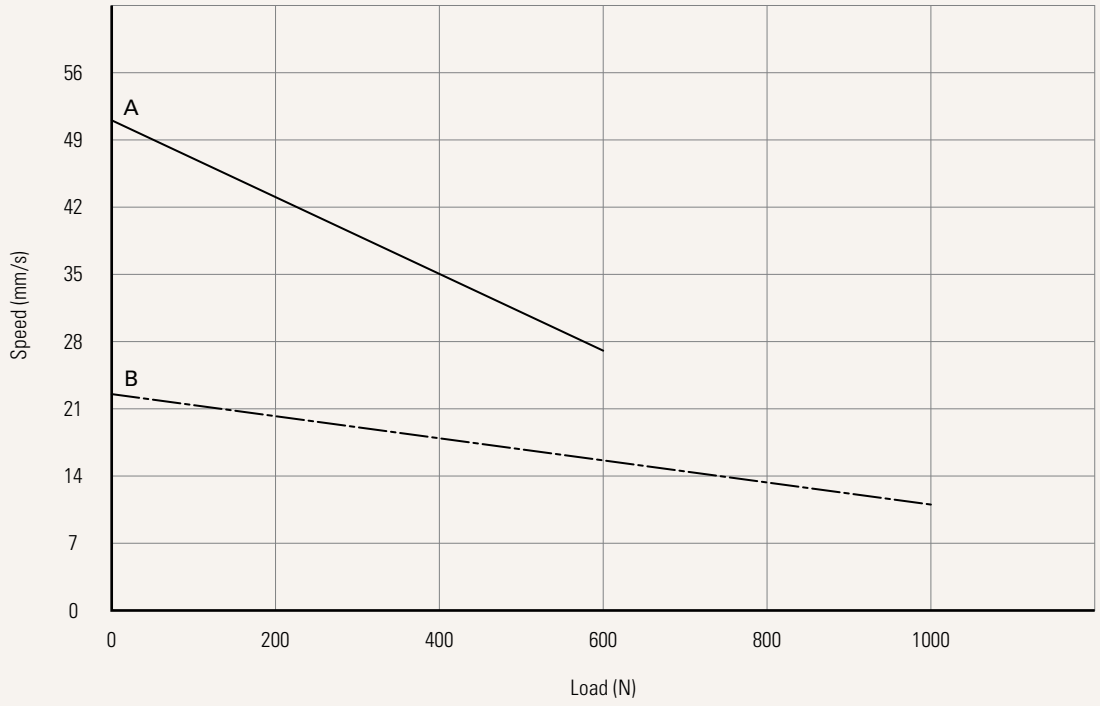
3 The current & speed in table are tested with 24V DC motor.

4 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)

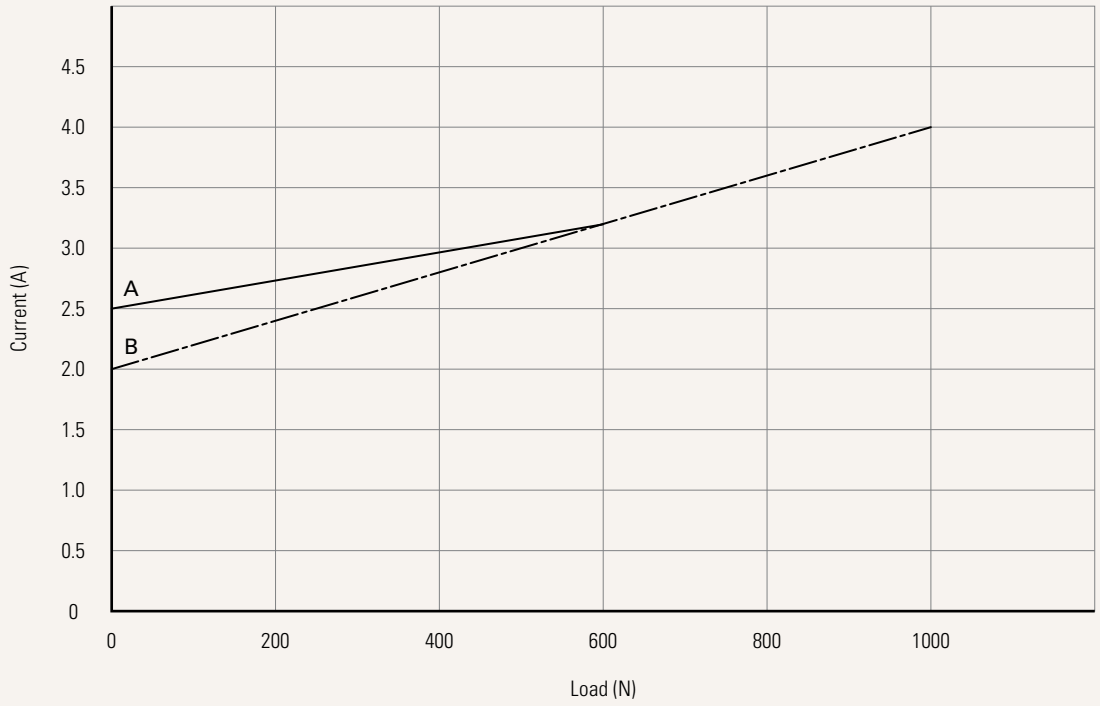
Performance Data (24V DC Motor)

Motor Speed (3800RPM, Duty Cycle 10%)

Speed vs. Load



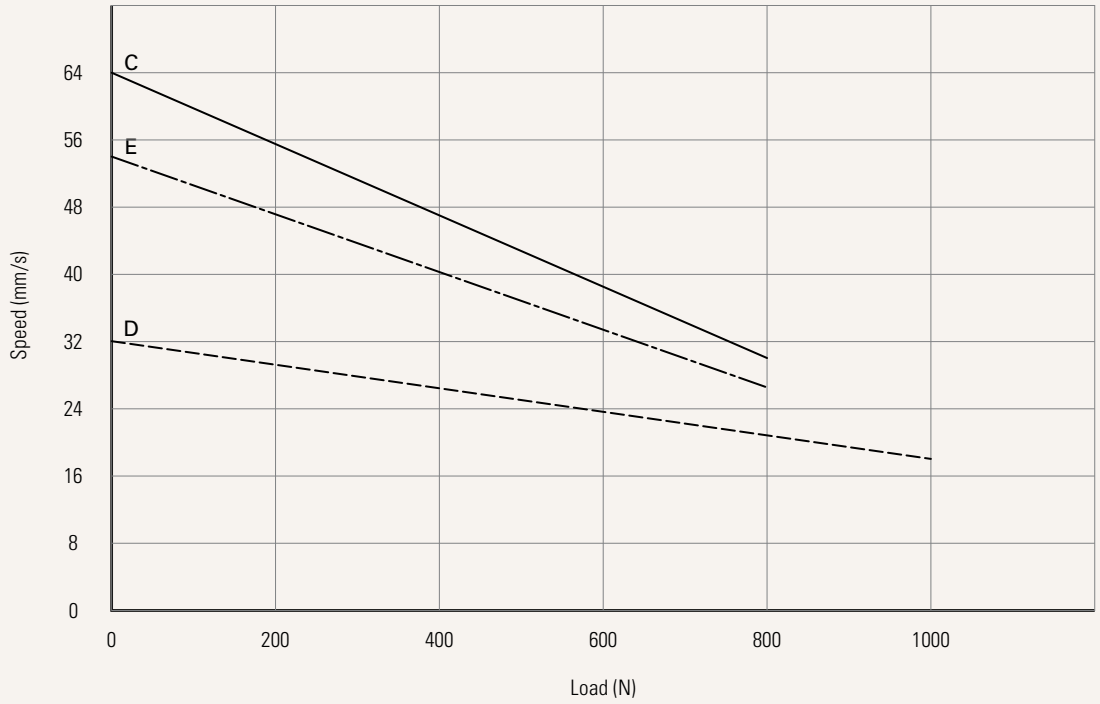
Current vs. Load



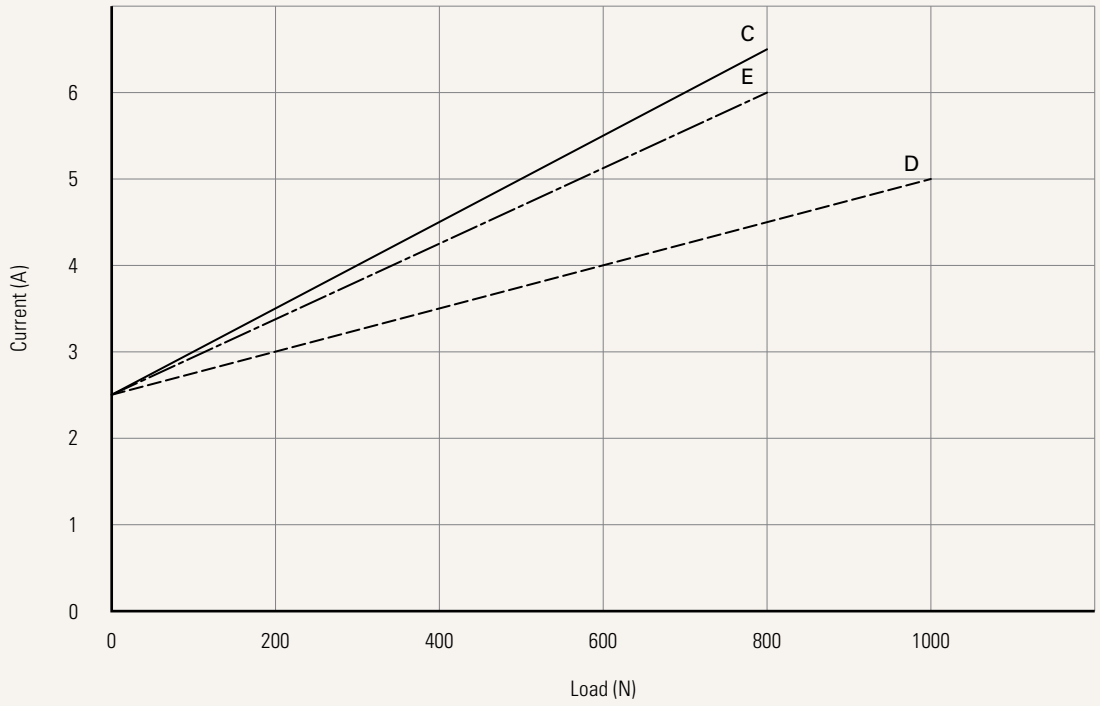
Performance Data (24V DC Motor)

Motor Speed (5200RPM, Duty Cycle 10%)

Speed vs. Load



Current vs. Load



TA19 Ordering Key

TiMOTION

TA19

Version: 20171023-G

Voltage	1 = 12V	2 = 24V	5 = 24V, PTC	
Load and Speed	See page 2			
Stroke (mm)				
Retracted Length (mm)	See page 6			
Rear Attachment (mm) See page 7	1 = Aluminum casting, U clevis, width 6.0, depth 12.5, hole 10.0 2 = Aluminum casting, U clevis, width 6.0, depth 12.5, hole 8.0			
Front Attachment (mm) See page 7	1 = Punched hole on the tube with plastic cover on, hole 10.0 2 = Punched hole on the tube with plastic cover on, hole 8.0			
Direction of Rear Attachment (Counterclockwise) See page 7	1 = 90°		2 = 0°	
IP protection	1 = Without			
Functions for Limit Switches See page 8	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			
Special Functions for Spindle Sub-Assembly	0 = Without (Standard)			
Output Signals	0 = Without		5 = Two Hall sensors	
Connector See page 8	1 = DIN 6P, 90° plug 2 = Tinned leads 3 = Small 01P, plug		B = Y cable (direct cut, no water proof, no anti-pull) E = MOLEX 8P, 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 8

TA19 Ordering Key Appendix

Retracted Length (mm)

1. Calculate A+B = Y
2. Retracted length needs to ≥ Stroke / 2 + Y (3 stages)

A. Rear/ Front Attachment

Front Attachment	Rear Attachment
	1, 2
1	+165
2	+165

B. Load V.S. Stroke

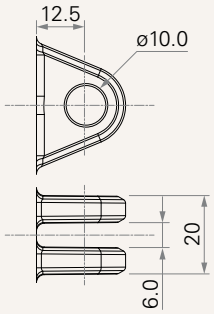
Stroke (mm)	
181~300	-
301~350	+10
351~400	+20
401~450	+30
451~500	+40
501~550	+50
551~600	+60
601~650	+70
651~700	+80
701~750	+90
751~800	+100

Note

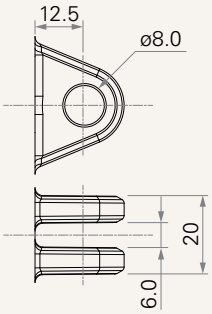
1 For stroke over 300mm, + 10 mm for each increment of 50mm stroke.

Rear Attachment (mm)

1 = Aluminum casting, U clevis, width 6.0, depth 12.5, hole 10.0

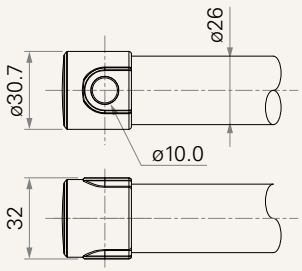


2 = Aluminum casting, U clevis, width 6.0, depth 12.5, hole 8.0

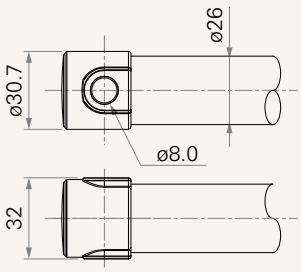


Front Attachment (mm)

1 = Punched hole on the tube with plastic cover on, hole 10.0

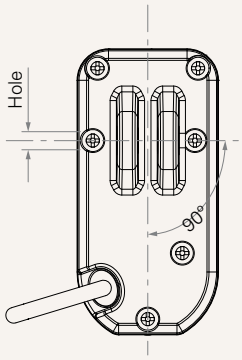


2 = Punched hole on the tube with plastic cover on, hole 8.0

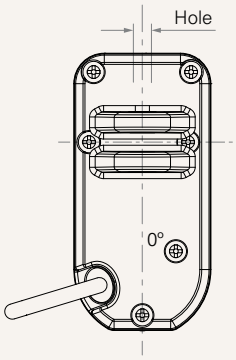


Direction of Rear Attachment (Counterclockwise)

1 = 90°



2 = 0°



TA19 Ordering Key Appendix

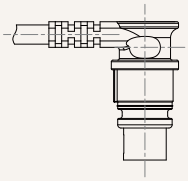
Functions for Limit Switches

Wire Definitions

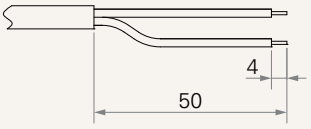
CODE	Pin					
	1 (Green)	2 (Red)	3 (White)	4 (Black)	5 (Yellow)	6 (Blue)
1	extend (VDC+)	N/A	N/A	N/A	retract (VDC+)	N/A
2	extend (VDC+)	N/A	middle switch pin B	middle switch pin A	retract (VDC+)	N/A
3	extend (VDC+)	common	upper limit switch	N/A	retract (VDC+)	lower limit switch
4	extend (VDC+)	common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

Connector

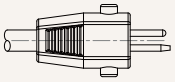
1 = DIN 6P, 90° plug



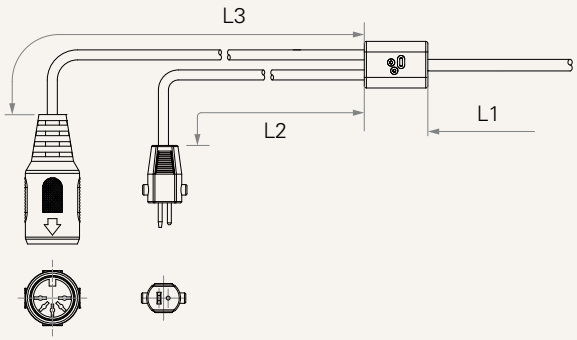
2 = Tinned leads



3 = Small 01P, plug



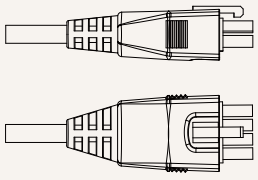
B = Y cable (direct cut, no water proof, no anti-pull)



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



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