TA19

series

TiMOTION

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

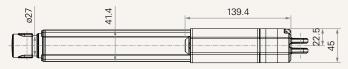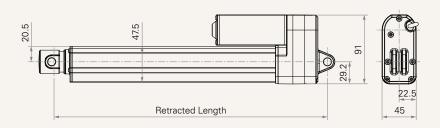|	
Voltage of motor	12V DC, 24V DC or 24V DC (PTC)
Maximum load	1,000N in push
Maximum speed at full load	30mm/s (with 800N in a push condition)
Stroke	180~800mm
Minimum installation dimension	≥ Stroke / 2+165mm
Certificate	IEC60601-1, ES60601-1, EMC
Operational temperature range	+5°C~+45°C
Options	Hall sensors

Drawing

Standard Dimensions
(mm)

Load and Speed

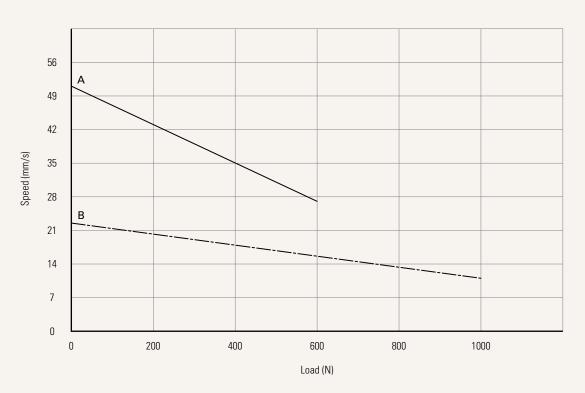| CODE	Load (N)	Self Locking Force (N)	Typical Current (A)		Typical Speed (mm/s)	
	Push		No Load 32V DC	With Load 24V DC	No Load 32V DC	With Load 24V DC
Motor Speed (3800RPM, Duty Cycle 10%)						
A	600	400	2.5	3.2	51.0	27.0
B	1000	1000	2.0	4.0	22.5	11.0
Motor Speed (5200RPM, Duty Cycle 10%)						
C	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.

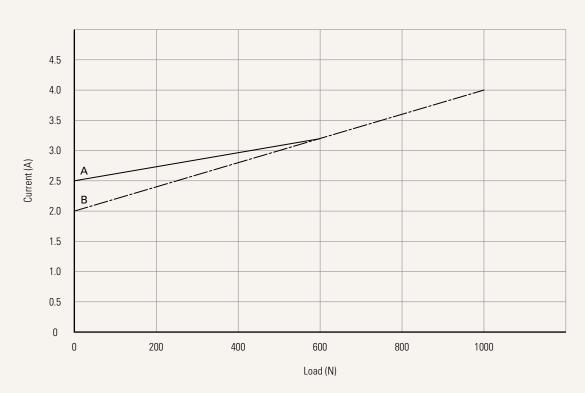**4** Standard stroke: 180~800mm, over 800mm,please contact our engineers.

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Performance Data (24V DC Motor)

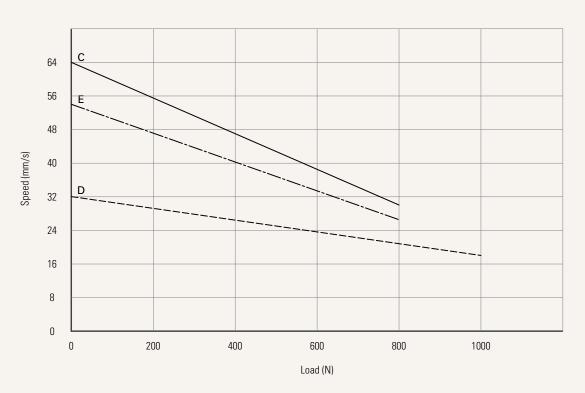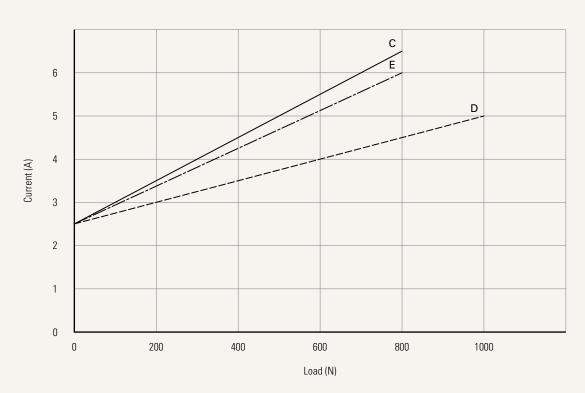Motor Speed (3800RPM, Duty Cycle 10%)

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

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Voltage	1 = 12V	2 = 24V	5 = 24V, PTC	
Load and Speed	See page 2			
Stroke (mm)	180 ~ 800			
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 4 = Big 01P, plug	C = Y cable (direct cut, water proof, 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

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

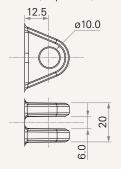***** For stroke over 300mm, +10mm for each increment of 50mm stroke.

Note

1 For stroke over 300mm, + 10 mm for each increment of 50mm stroke.
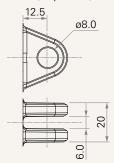
Rear Attachment (mm)

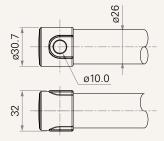1 = Aluminum casting, U clevis, width 6.0, depth 12.5, hole 10.0

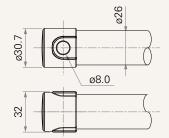2 = Aluminum casting, U clevis, width 6.0, depth 12.5, hole 8.0

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

Front Attachment (mm)

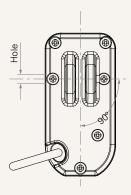1 = Punched hole on the tube with plastic cover on, hole 10.0

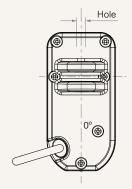2 = Punched hole on the tube with plastic cover on, hole 8.0
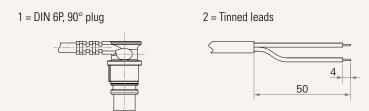
Direction of Rear Attachment (Counterclockwise)
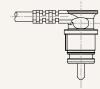
1 = 90°

2 = 0°

TA19 Ordering Key Appendix

Functions for Limit Switches

Wire Definitions

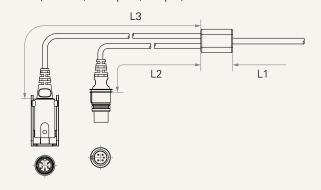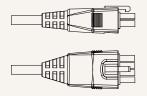| CODE	Pin					
	🟢 1 (Green)	🔴 2 (Red)	⚪ 3 (White)	⚫ 4 (Black)	🟡 5 (Yellow)	🔵 6 (Blue)
1	extend (VDC+)	N/A	N/A	N/A	retract (VDC+)	N/A
2	extend (VDC+)	N/A	middle switch pin B	middle switch pin A	retract (VDC+)	N/A
3	extend (VDC+)	common	upper limit switch	N/A	retract (VDC+)	lower limit switch
4	extend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

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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

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.