TA2PAC

series

Product Segments

- **Industrial Motion**

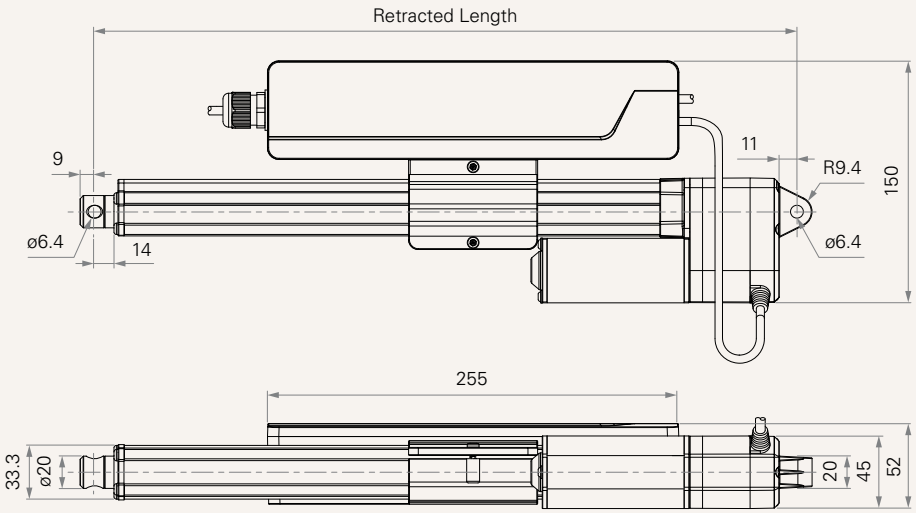
TiMOTION's TA2PAC is a linear actuator with an integrated AC/DC power supply. It is controlled by 1 neutral wire and 2 line wires (extension and retraction), making it ideal for automating ventilation systems in livestock farming.

General Features

Max. load	2,000N (push/pull)
Max. speed at max. load	7.5mm/s
Max. speed at no load	52mm/s
Retracted length	> 235mm (depending on chosen options)
IP rating	IP66D
Stroke	20~1000mm
Output signals	POT
Voltage	100~240V AC
Operational temperature range	-25°C~+65°C
Operational temperature range at full performance	+5°C~+45°C

Drawing

Standard Dimensions
(mm)



Load and Speed

CODE	Load (N)		Self Locking Force (N)	Typical Current (A)		Typical Speed (mm/s)		Typical Current (A)		Typical Speed (mm/s)	
	Push	Pull		No Load	With Load	No Load	With Load	No Load	With Load	No Load	With Load
				110V DC				220V DC			
Motor Speed (5200RPM, Duty Cycle 25%)											
A	250	250	250	0.26	0.50	52.0	43.5	0.13	0.25	52.0	43.5
B	500	500	500	0.24	0.54	31.0	27.7	0.12	0.27	31.0	27.7
C	1000	1000	1000	0.24	0.65	16.9	14.2	0.12	0.32	16.9	14.2
D	1500	1500	1500	0.21	0.61	10.8	9.6	0.11	0.30	10.8	9.6
E	2000	2000	2000	0.21	0.50	8.5	7.5	0.11	0.25	8.5	7.5

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 when the actuator is extending under push load.

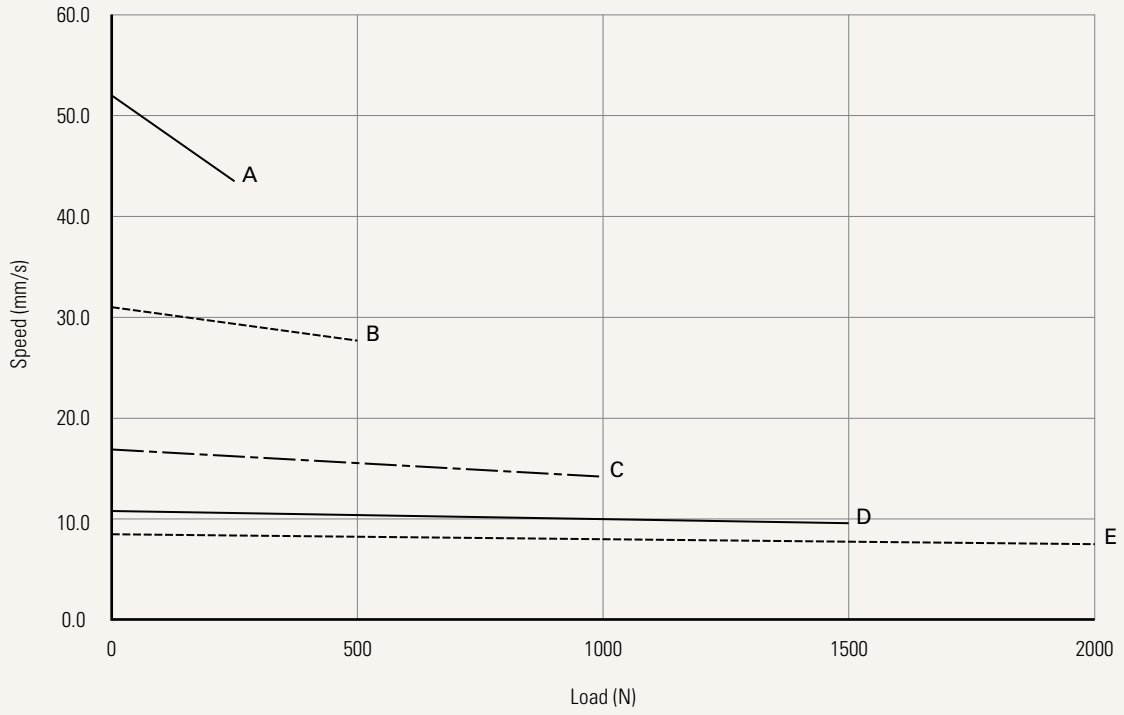
4 Standard stroke: Min. 20mm, Max. please refer to below table.

CODE	Load (N)	Max Stroke (mm)
A	≤ 250	1000
B	≤ 500	800
C	≤ 1000	600
D	≤ 1500	500
E	≤ 2000	450

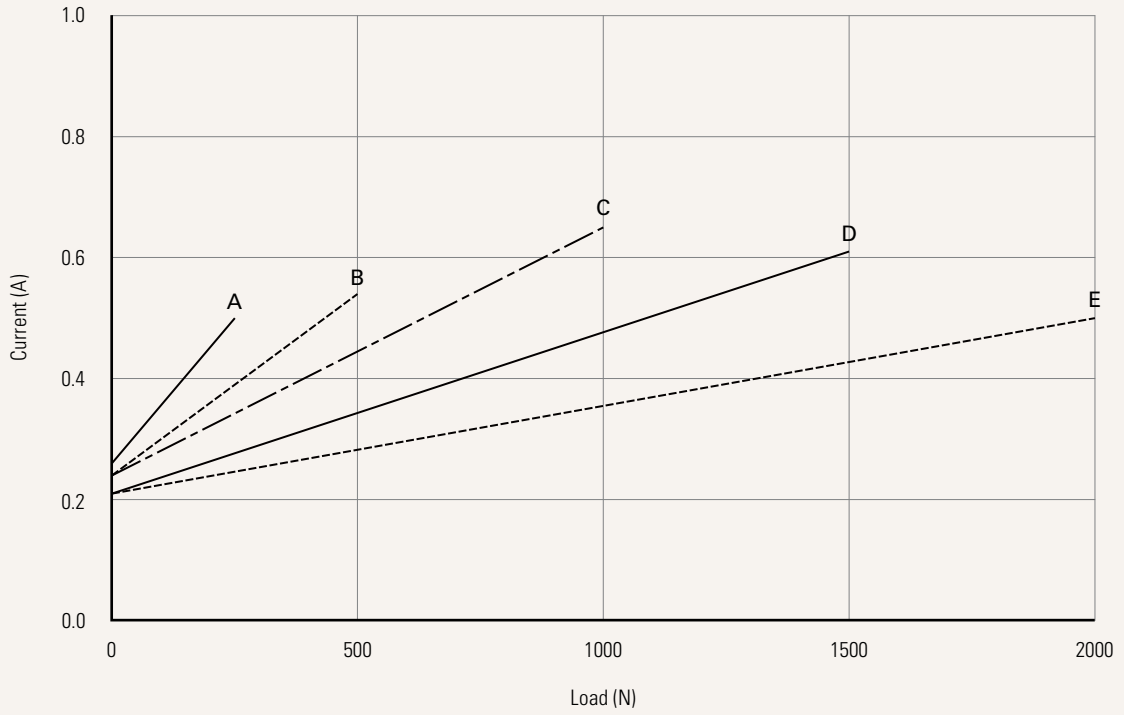
Performance Data (110V DC Motor)

Motor Speed (5200RPM)

Speed vs. Load



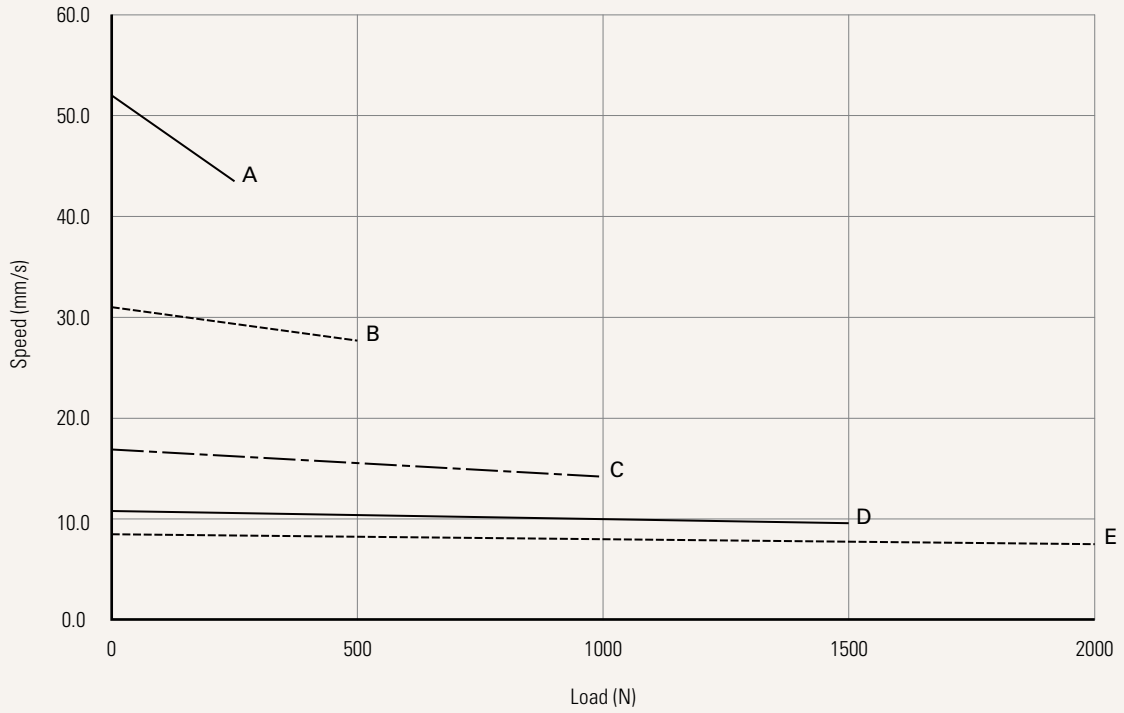
Current vs. Load



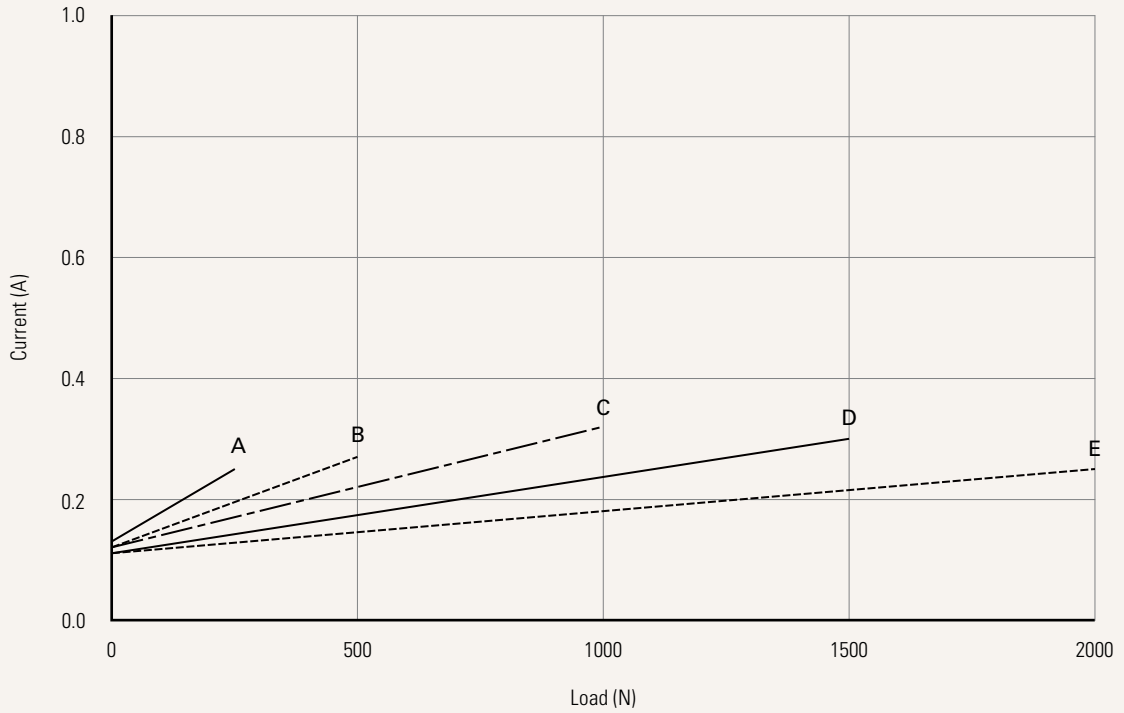
Performance Data (220V DC Motor)

Motor Speed (5200RPM)

Speed vs. Load



Current vs. Load



TA2PAC Ordering Key

TiMOTION

TA2PAC

Version: 20211230-A

	Voltage	U = 100~240VAC	
	Load and Speed	See page 2	
	Stroke (mm)	See page 2	
	Retracted Length (mm)	See page 6	
	Rear Attachment (mm) See page 7	1 = Aluminum casting, hole 6.4, one piece casting with gear box 2 = Aluminum casting, hole 8.0, one piece casting with gear box 3 = Aluminum casting, hole 10.0, one piece casting with gear box 4 = Aluminum casting, U clevis, slot 6.0, depth 10.5, hole 6.4, one piece casting with gear box 5 = Aluminum casting, U clevis, slot 6.0, depth 10.5, hole 8.0, one piece casting with gear box 6 = Aluminum casting, U clevis, slot 6.0, depth 10.5, hole 10.0, one piece casting with gear box	
	Front Attachment (mm) See page 7	1 = Aluminum casting, hole 6.4 2 = Aluminum casting, hole 8.0 3 = Aluminum CNC, U clevis, slot 6.0, depth 16.0, hole 10.0 4 = Aluminum CNC, U clevis, slot 6.0, depth 16.0, hole 6.4 5 = Aluminum CNC, U clevis, slot 6.0, depth 16.0, hole 8.0	
	Direction of Rear Attachment (Counterclockwise) See page 8	1 = 90°	2 = 0°
	Functions for Limit Switches	1 = Two switches at full retracted / extended positions to cut current	
	Output Signal See page 8	0 = Without	1 = POT
	Connector See page 8	1 = Tinned Lead	
	AC Power Cable Length (P1) (mm)	1 = 1000, standard	2 = 2000, standard
	Signal Cable Length (P2) (mm)	1 = 1000, standard	2 = 2000, standard
	Motor Cable Length (mm)	1 = 200, For TA2P	
	IP Rating	5 = IP66	6 = IP66D

Note

1 The TL is designed especially for push applications, not suitable for pull applications.

TA2PAC Ordering Key Appendix

Retracted Length (mm)

1. Calculate A+B+C = Y
2. The retracted length of actuator needs to ≥ Stroke+Y
3. For TA2PAC, the retracted length of actuator needs to ≥ the min RL value in table, in case the tube set too short.

A.		
Front Attach.	Rear Attach.	
	1, 2, 3	4, 5, 6
1, 2	+108	+112
3, 4, 5	+120	+124

B.	
Stroke (mm)	Load & Speed Type(N)
	A, B, C, D, E
25~150	-
151~200	+2
201~250	+2
251~300	+2
301~350	+12
351~400	+22
401~450	+32
451~500	+42
501~550	+52
551~600	+62
601~650	+72
651~700	+82
701~750	+92
751~800	+102
801~850	+112
851~900	+122
901~950	+132
951~1000	+142

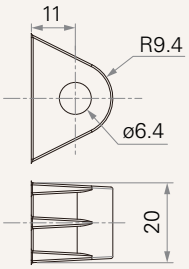
C.	
Output Signal	
0	-
1	+30

Rear Attach.	**Front Attach.**	**Signal Output**	**Min RL Value**
1, 2, 3	1, 2	0	235
1, 2, 3	1, 2	1	265
1, 2, 3	3, 4, 5	0	248
1, 2, 3	3, 4, 5	1	278
4, 5, 6	1, 2	0	239
4, 5, 6	1, 2	1	269
4, 5, 6	3, 4, 5	0	252
4, 5, 6	3, 4, 5	1	282

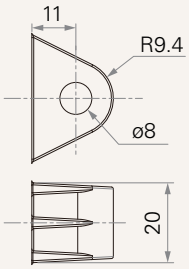
TA2PAC Ordering Key Appendix

Rear Attachment (mm)

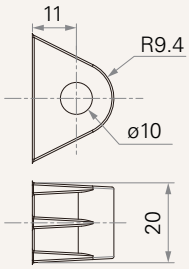
1 = Aluminum casting, hole 6.4, one piece casting with gear box



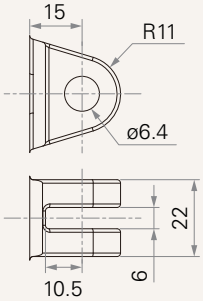
2 = Aluminum casting, hole 8.0, one piece casting with gear box



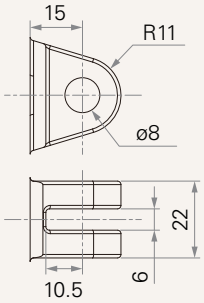
3 = Aluminum casting, hole 10.0, one piece casting with gear box



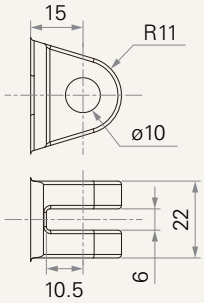
4 = Aluminum casting, U clevis, slot 6.0, depth 10.5, hole 6.4, one piece casting with gear box



5 = Aluminum casting, U clevis, slot 6.0, depth 10.5, hole 8.0, one piece casting with gear box

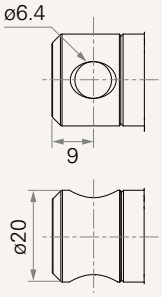


6 = Aluminum casting, U clevis, slot 6.0, depth 10.5, hole 10.0, one piece casting with gear box

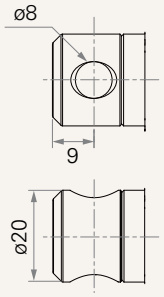


Front Attachment (mm)

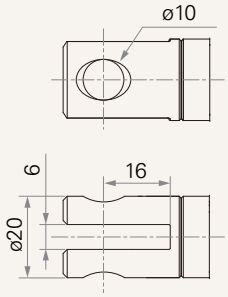
1 = Aluminum casting, hole 6.4



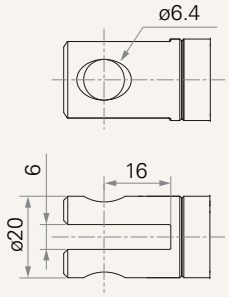
2 = Aluminum casting, hole 8.0



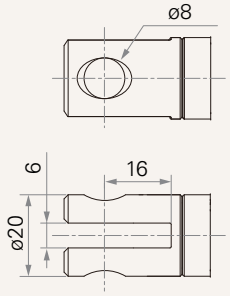
3 = Aluminum CNC, U clevis, slot 6.0, depth 16.0, hole 10.0



4 = Aluminum CNC, U clevis, slot 6.0, depth 16.0, hole 6.4



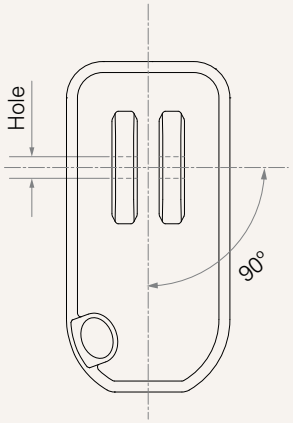
5 = Aluminum CNC, U clevis, slot 6.0, depth 16.0, hole 8.0



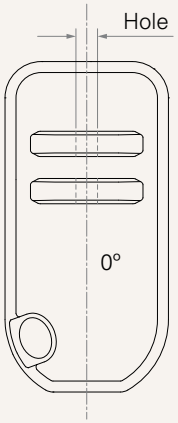
TA2PAC Ordering Key Appendix

Direction of Rear Attachment (Counterclockwise)

1 = 90°



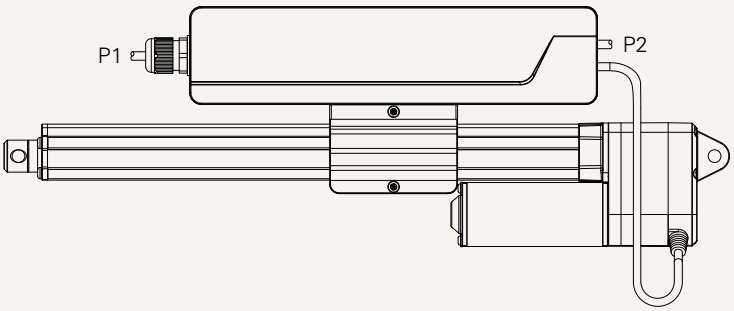
2 = 0°



Wire Definition

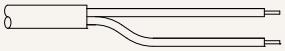
Without T-Smart

Port Number	Wire Color	Wire Gauge (AWG)	Position Feedback	
			0. Without	1. POT
P1 (Power)	Black	18	Live (EXT+)	Live (EXT+)
	White	18	Live (RET+)	Live (RET+)
	Green	18	Neutral	Neutral
P2 (Signal)	White	26	-	Signal VDC in
	Grey	26	-	POT out
	Brown	26	-	GND



Connector

1 = Tinned leads



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