JP5
series

Product Segments

- **Industrial Motion**

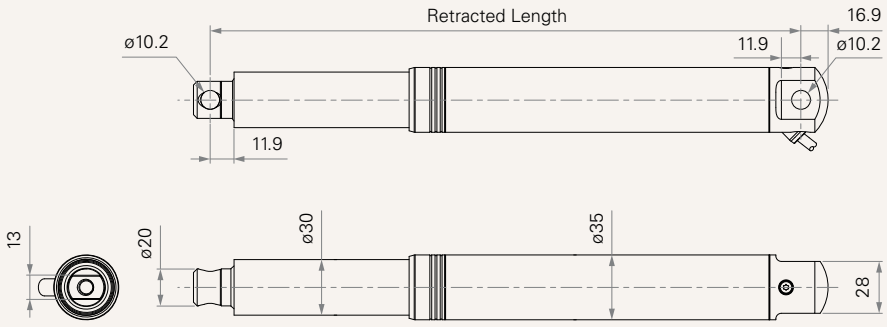
TiMOTION's JP5 is an in-line linear actuator specifically designed for use in low-load industrial applications. With a maximum load capacity of 1,500N, it is particularly suitable for products and applications that require a compact installation space. Optional Hall sensors support synchronous operation and provide position feedback. With an IP rating up to IP69K, this actuator is well suited for the harshest of environments.

General Features

Max. load	1,500N (push/pull)
Max. speed at max. load	5.2mm/s
Max. speed at no load	12.4mm/s
Retracted length	≥ Stroke + 160mm
IP rating	IP69K
Stroke	25~650mm
Output signals	Hall sensor*2 (5V input)
Voltage	12/24V DC; 12/24V DC (PTC)
Operational temperature range	-10/-30°C~+70°C (with/without overcurrent protection PCBA)
Operational temperature range at full performance	+5°C~+45°C
Storage temperature range	-40°C~+85°C

Drawing

Standard Dimensions
(mm)



Load and Speed

CODE	Load (N)		Self Locking Force (N)	Duty Cycle	24VDC				12VDC			
	Push	Pull			Typical Current (A)		Typical Speed (mm/s)		Typical Current (A)		Typical Speed (mm/s)	
					No Load	With Load	No Load	With Load	No Load	With Load	No Load	With Load
Motor Speed (8500RPM)												
C	500	500	500	10%	0.3	0.8	12.4	10.0	0.5	1.6	12.4	10.0
D	1000	1000	1000	10%	0.3	1.6	9.8	6.2	0.5	3.2	9.8	6.2
E	1500	1500	1500	10%	0.3	1.7	7.8	5.2	0.5	3.4	7.8	5.2

Note

1 Please refer to the approved drawing for the final authentic value.

2 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.

3 The current & speed in table are tested when the actuator is extending under push load.

4 The current & speed in table and diagram are tested with a stable 24V DC power supply.

5 Without load, noise level ≤ 68dBA (by TiMOTION test standard, ambient noise level ≤ 36dBA)

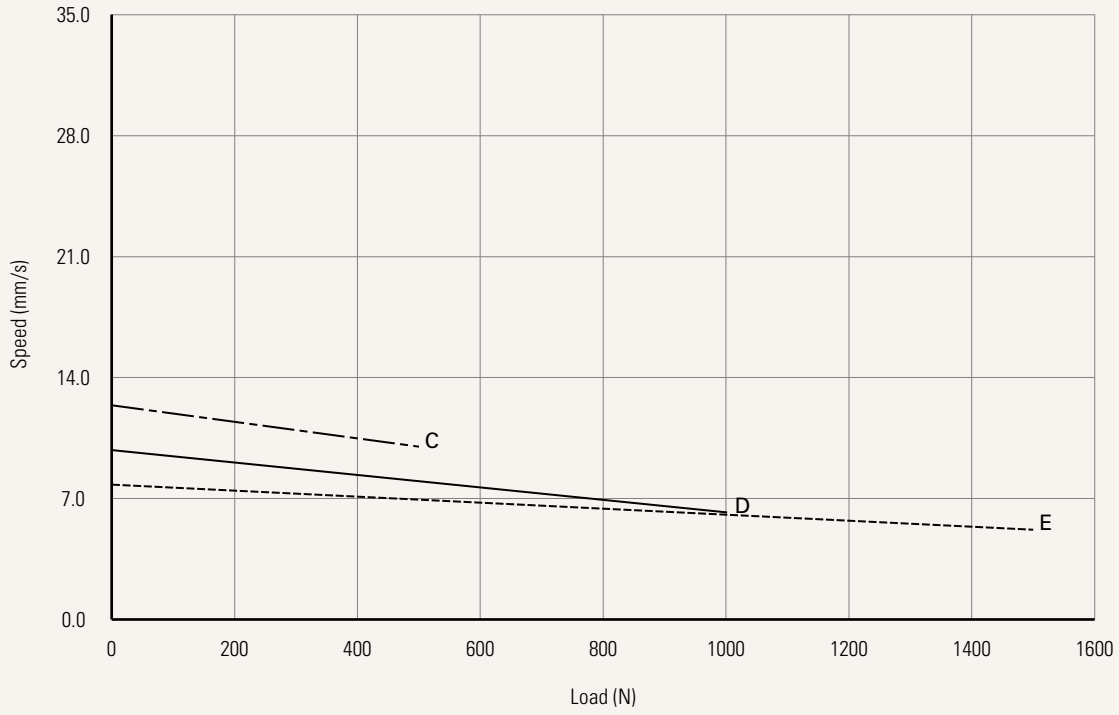
6 Standard stroke: Min. 25mm, Max. please refer to the table below.

CODE	Load (N)	Max Stroke (mm)
C	≤ 500	650
D	≤ 1000	600
E	≤ 1500	500

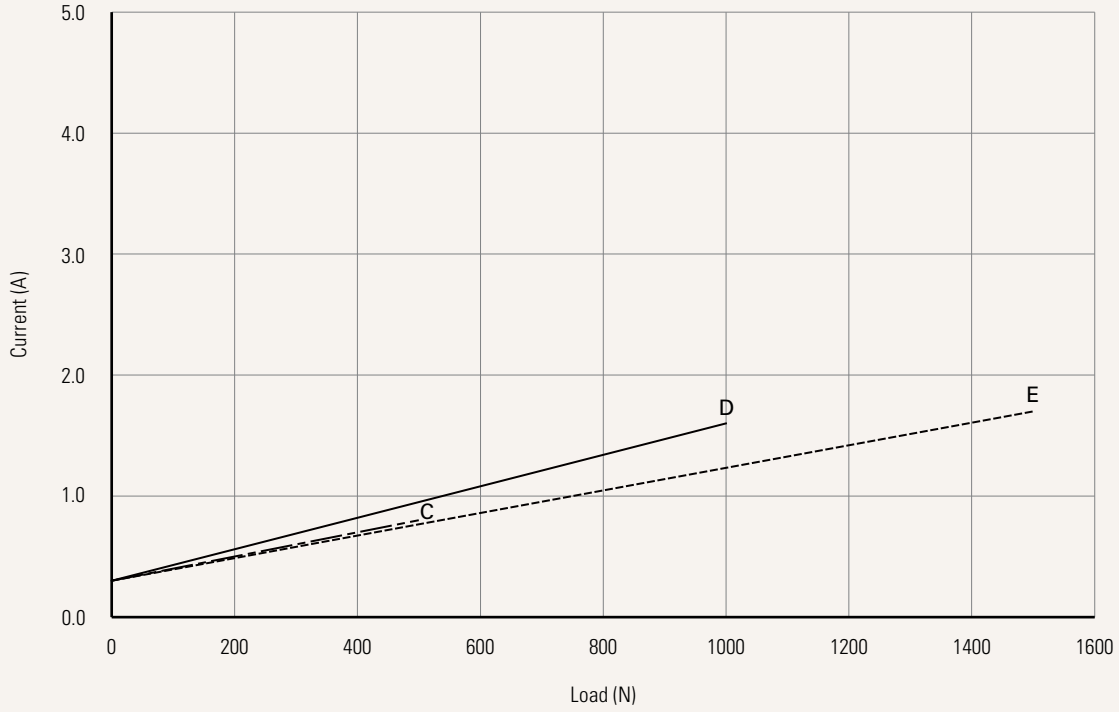
Performance Data (24V DC Motor)

Motor Speed (8500RPM)

Speed vs. Load



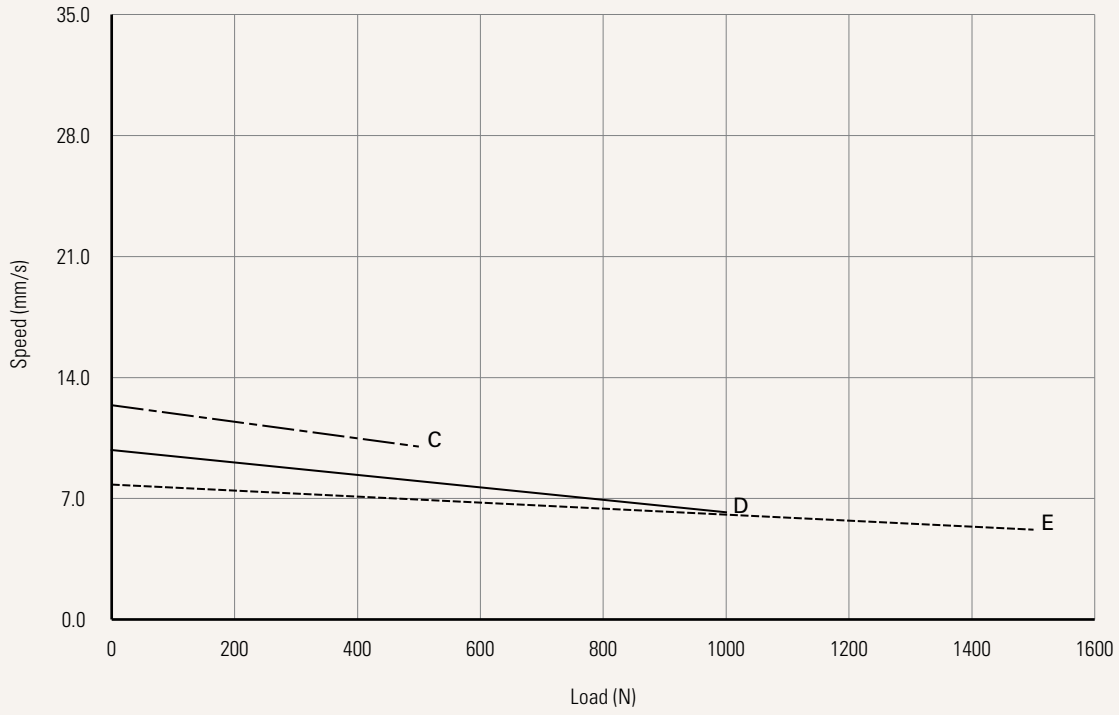
Current vs. Load



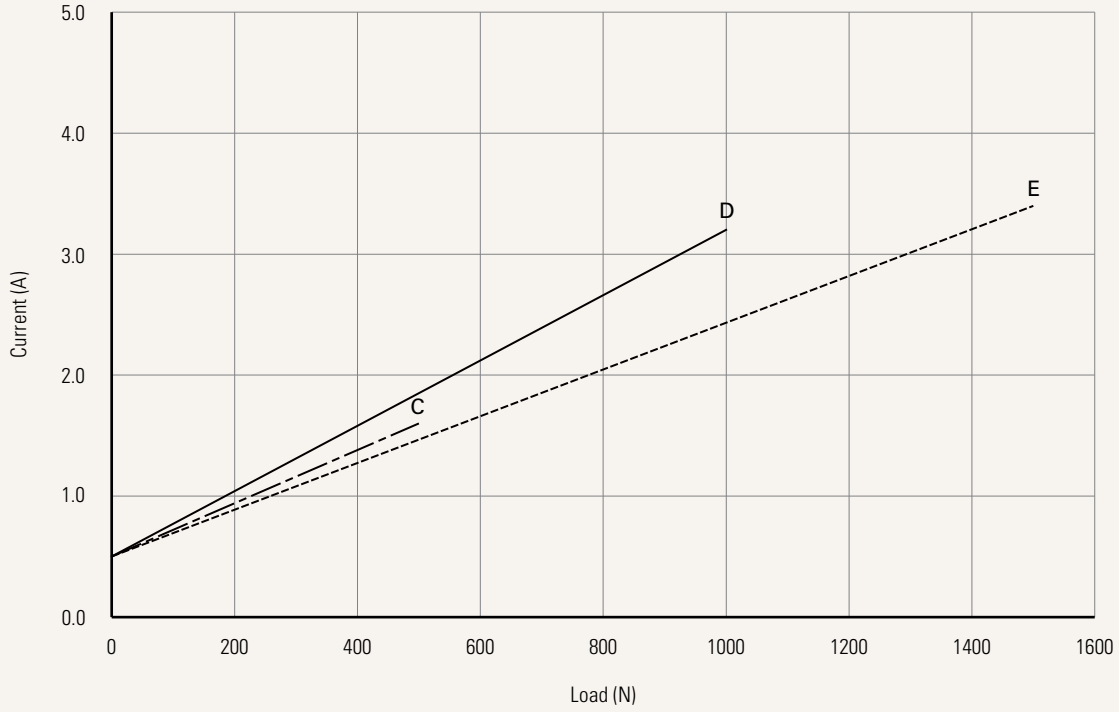
Performance Data (12V DC Motor)

Motor Speed (8500RPM)

Speed vs. Load



Current vs. Load



JP5 Ordering Key

JP5

Version: 20241204-F

Type	N = Normal			
Voltage	1 = 12V DC	2 = 24V DC	5 = 24V DC, PTC	6 = 12V DC, PTC
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, slotless, hole 8.2 2 = Aluminum, slotless, hole 10.2 3 = Aluminum, U clevis, slot 4.2, depth 12.5, hole 8.2		4 = Aluminum, U clevis, slot 4.2, depth 12.5, hole 10.2 5 = Aluminum, U clevis, slot 6.2, depth 16.0, hole 8.2 6 = Aluminum, U clevis, slot 6.2, depth 16.0, hole 10.2	
Front Attachment (mm) See page 7	1 = Aluminum, slotless, hole 8.2 2 = Aluminum, slotless, hole 10.2 3 = Aluminum, U clevis, slot 4.2, depth 12.5, hole 8.2		4 = Aluminum, U clevis, slot 4.2, depth 12.5, hole 10.2 5 = Aluminum, U clevis, slot 6.2, depth 16.0, hole 8.2 6 = Aluminum, U clevis, slot 6.2, depth 16.0, hole 10.2	
Overcurrent Protection PCBA	0 = Without PCBA	P = With PCBA		
Output Signal	0 = Without		5 = Hall sensor*2 (5V input)	
IP Rating	6 = IP66M	7 = IP68	8 = IP69K	
Load Type	T = Push	P = Pull		
Connector See page 8	01 = Tinnded leads			
Cable Length (mm)	1000 = 1000	2000 = 2000	3000 = 3000	5000 = 5000
Alternative	N = Normal			
Packaging (mm^2)	0 = Sample packaging C = Standard package, US fumigated pallet (1219*1016) 1 = Standard package, EU fumigated pallet (1200*800) E = Standard package, US plywood pallet (1219*1016) 5 = Standard package, EU plywood pallet (1200*800)			
Special Function of Spindle Subassembly	0 = Without (Standard)			

JP5 Ordering Key Appendix

Retracted Length (mm)

1. Calculate A+B = Y
2. Retracted length needs to ≥ Stroke + Y

A.

Overcurrent Protection PCBA	**#0, Without Overcurrent PCBA**						**#P, With Overcurrent PCBA**		
Output signal	**#0, Without Signal Output**			**#5 or #N, With Signal Output**			**#0 or #5 or #N, All Output Signal Opt.**		
Front Attach.	Rear Attach.								
	1, 2	3, 4	5, 6	1, 2	3, 4	5, 6	1, 2	3, 4	5, 6
1, 2	+160	+169	+173	+181	+188	+192	+246	+253	+257
3, 4	+168	+177	+183	+189	+196	+200	+254	+261	+265
5, 6	+172	+181	+185	+193	+200	+204	+258	+265	+269

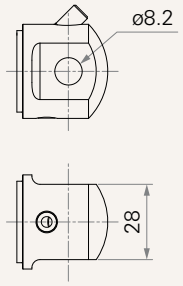
B.

Stroke (mm)	Load & Speed (N)
	C, D, E
25~150	-
151~200	-
201~250	+10
251~300	+20
301~350	+30
351~400	+40
401~450	+50
451~500	+60
501~550	+70
551~600	+80
601~650	+90
651~700	+100
701~750	+110
751~800	+120

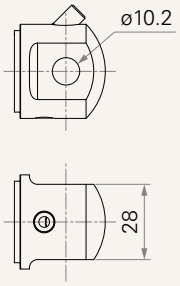
JP5 Ordering Key Appendix

Rear Attachment (mm)

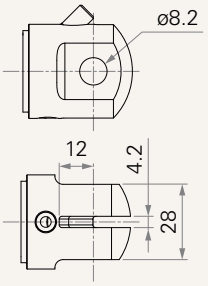
1 = Aluminum, slotless, hole 8.2



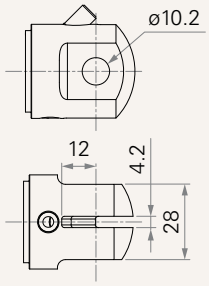
2 = Aluminum, slotless, hole 10.2



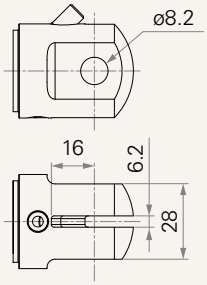
3 = Aluminum, U clevis, slot 4.2, depth 12.0, hole 8.2



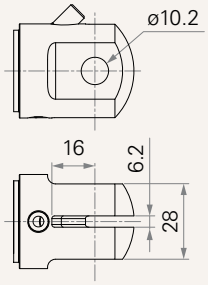
4 = Aluminum, U clevis, slot 4.2, depth 12.0, hole 10.2



5 = Aluminum, U clevis, slot 6.2, depth 16.0, hole 8.2

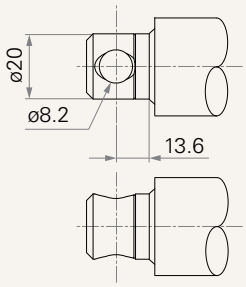


6 = Aluminum, U clevis, slot 6.2, depth 16.0, hole 10.2

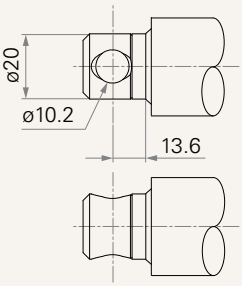


Front Attachment (mm)

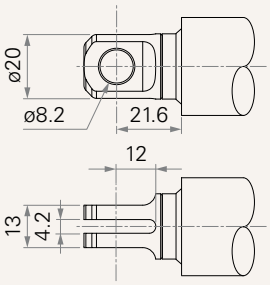
1 = Aluminum, slotless, hole 8.2



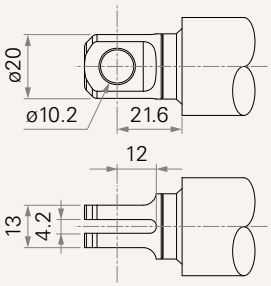
2 = Aluminum, slotless, hole 10.2



3 = Aluminum, U clevis, slot 4.2, depth 12.0, hole 8.2



4 = Aluminum, U clevis, slot 4.2, depth 12.0, hole 10.2



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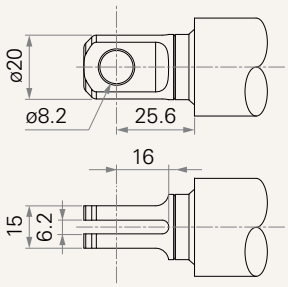

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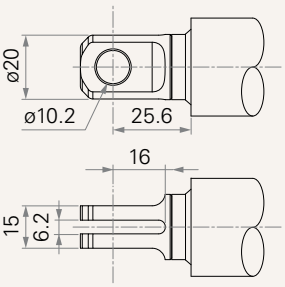
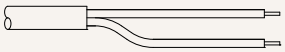


JP5 Ordering Key Appendix

Connector

01 = Tinned leads



Wire Definition

Type : Normal, #N

Port	Wire Color	Wire Gauge (AWG)	Output Signal	
			0. Without	5, N. Hall sensor*2
A1	RD	20	EXT+	EXT+
	BK	20	RET+	RET+
	RD	26	X	Vcc
	WH	26	X	S1
	BU	26	X	S2
	BK	26	X	GND

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.