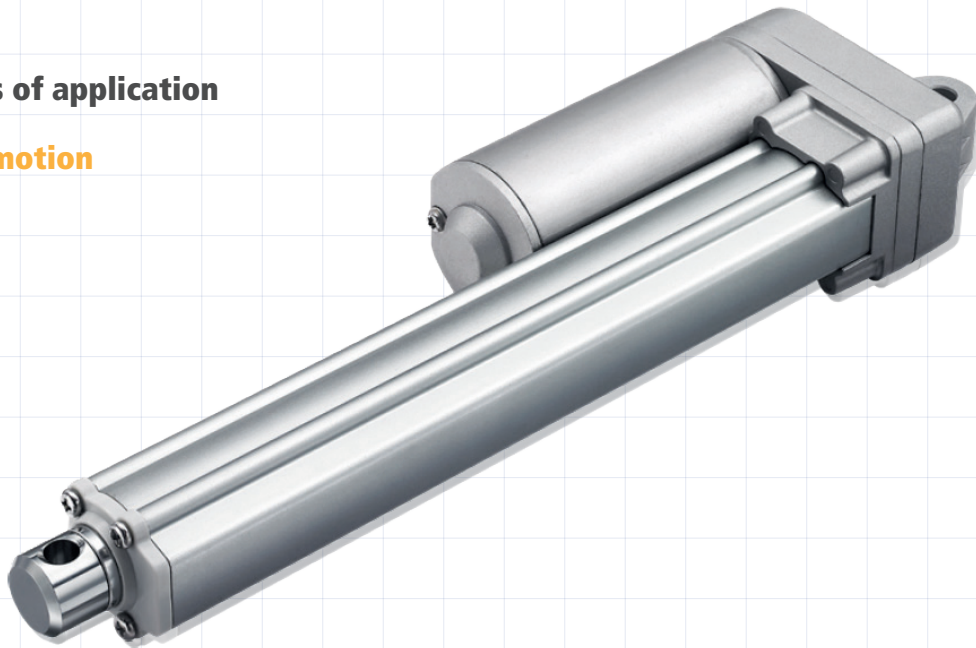


Electric actuator TA2P

Typical areas of application

- **Industrial motion**



Both the TA2 and the TA2P are compact, robust, and capable of performing well in certain outdoor environments. A more powerful motor makes the TA2P capable of handling load ratings up to 3500N (787 pounds) while retaining its compact size. In addition to the high power motor, the TA2P linear actuator is available with multiple choices for feedback sensors.

Key figures

• Voltage of motor	12, 24, 36 V DC or 12, 24 V DC (PTC)
• Max. load	3500 N in push / 2000 N in pull
• Max. speed at full load	45.0 mm/s (with 250 N in a push or pull condition)
• Stroke	20~1000 mm
• Min. installation dimension	stroke+108 mm (with Hall sensor(s) or without output signals)
• Color	silver
• IP rating	up to IP66D
• Standards, directives	IEC60601-1, ES60601-1, EN61000-6-1, EN61000-6-3, UL73
• Operational temperature range	-25 °C ~ +65 °C
• Options	POT, Optical, Hall / Reed sensor(s)

Compact size, ideal for limited space.

Load and speed

CODE	Load		Self locking force 1)	Typical current 2)		Typical speed		Noise
	push [N]	pull (N)		no load 24 VDC [A]	full load 24 VDC [A]	no load 24 VDC [mm/s]	full load 24 VDC [mm/s]	
Motor speed 5200 min⁻¹, duty cycle 25%								
A	250	250	250	1.2	2.3	43.0	36.0	≤ 72
B	500	500	500	1.1	2.3	25.8	23.0	≤ 72
C	1000	1000	1000	1.1	2.3	14.0	11.8	≤ 70
D	1500	1500	1500	1.0	2.2	9.0	8.0	≤ 70
E	2000	2000	2000	1.0	2.2	7.1	6.2	≤ 70
Motor speed 6600 min⁻¹, duty cycle 25%								
F	250	250	250	1.6	2.8	56.5	45.0	≤ 74
G	500	500	500	1.5	2.8	32.5	28.5	≤ 74
H	1000	1000	1000	1.5	2.8	16.5	14.3	≤ 72
K	1500	1500	1500	1.3	2.8	11.1	10.0	≤ 72
L	2000	2000	2000	1.3	2.8	8.8	7.7	≤ 72
Motor speed 3800 min⁻¹, duty cycle 25%								
S	3500	2000	3500	0.9	2.8	3.2	2.4	≤ 72
Motor speed 2200 min⁻¹, duty cycle 25%								
T	2000	2000	2000	0.3	1.2	3.2	2.4	≤ 68

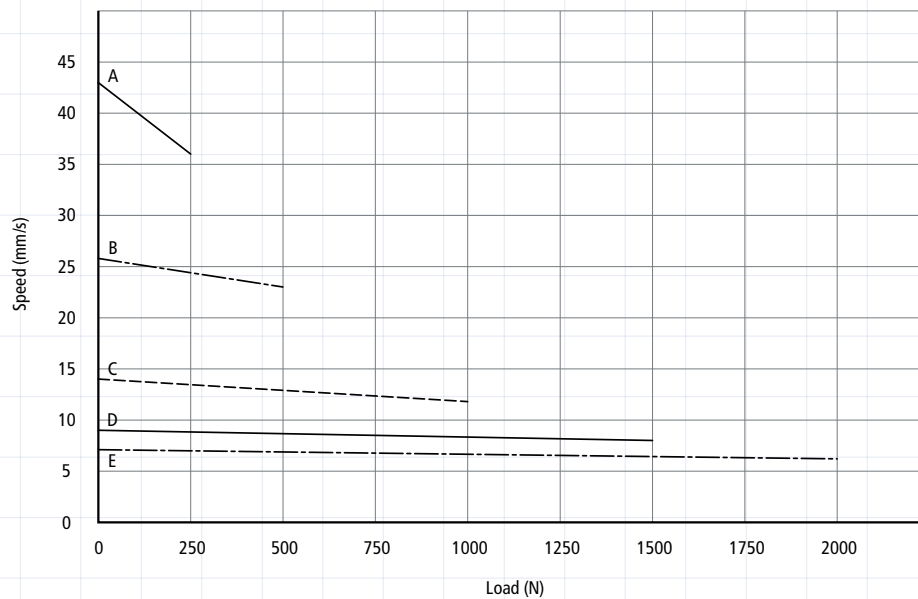
Note

- 1) This self-locking force level is reached only when a short circuit is applied on the terminals of the motor. All the control boxes have this feature built-in.
- 2) With a 12 V motor, the current is approximately twice the current measured in 24 V. With a 36 V motor, the current is approximately 66 % of the current measured in 24 V; speed will be similar for all voltages.
- 3) Current and speed: tested average value when stretching in push direction.

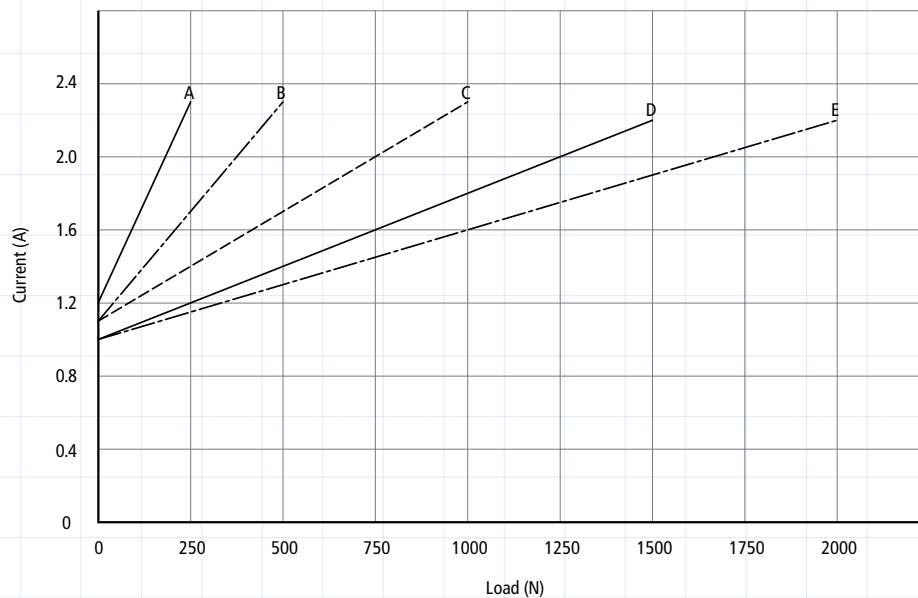
Performance data (24 VDC motor)

Motor speed 5200 min⁻¹, duty cycle 25%

Speed vs. Load



Current vs. Load



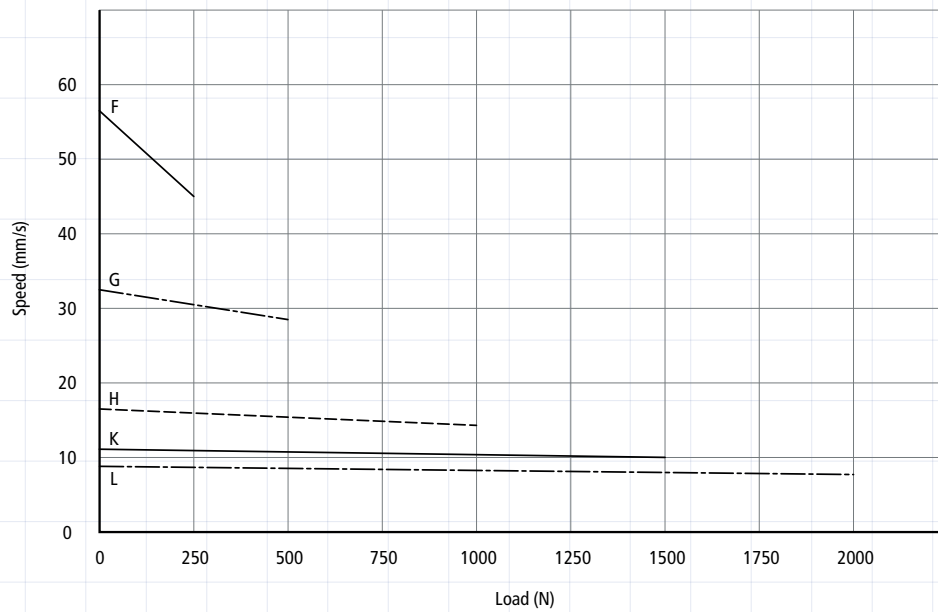
Note

- The performance data in the curve charts shows theoretical value.

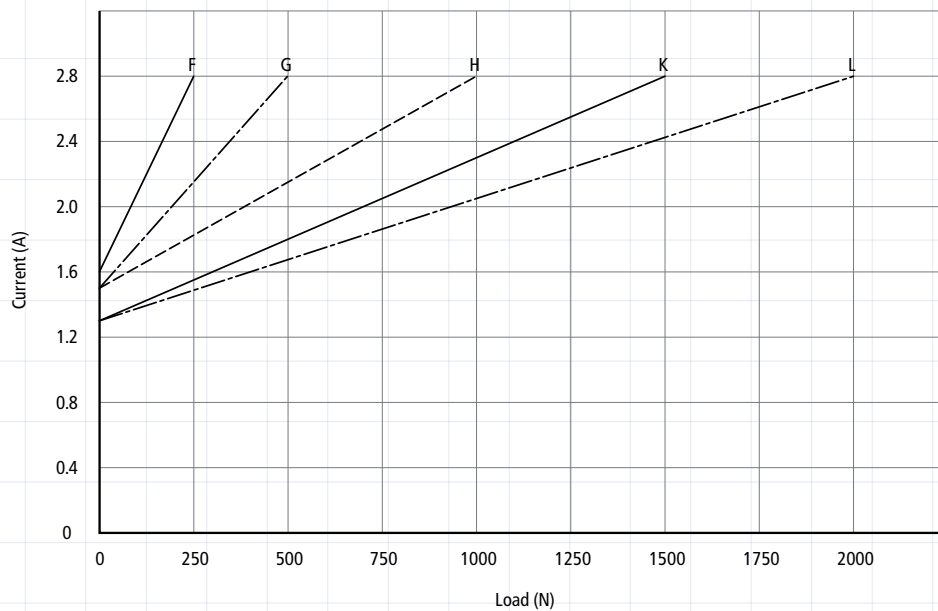
Performance data (24 VDC motor)

Motor speed 6600 min⁻¹, duty cycle 25%

Speed vs. Load



Current vs. Load



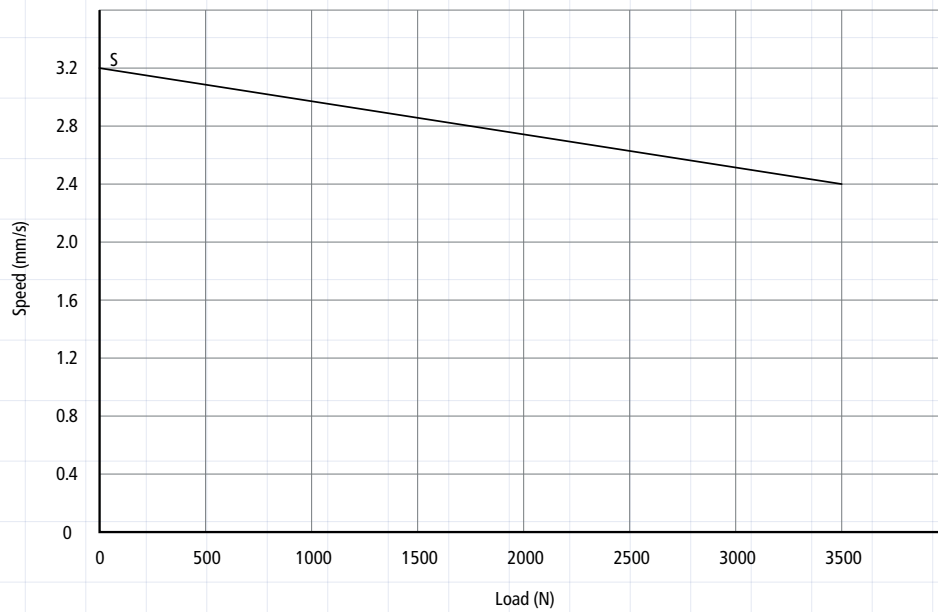
Note

- The performance data in the curve charts shows theoretical value.

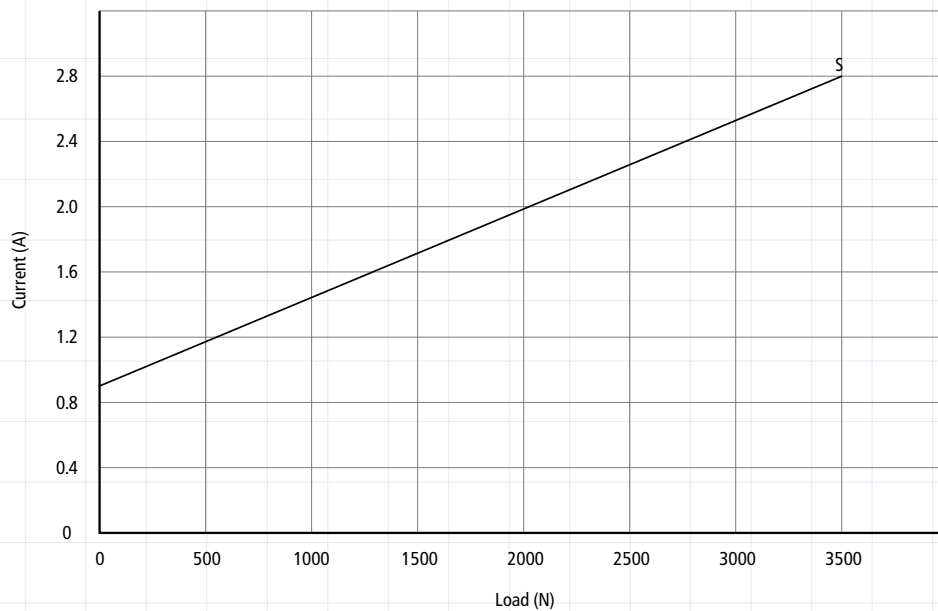
Performance data (24 VDC motor)

Motor speed 3800 min⁻¹, duty cycle 25%

Speed vs. Load



Current vs. Load



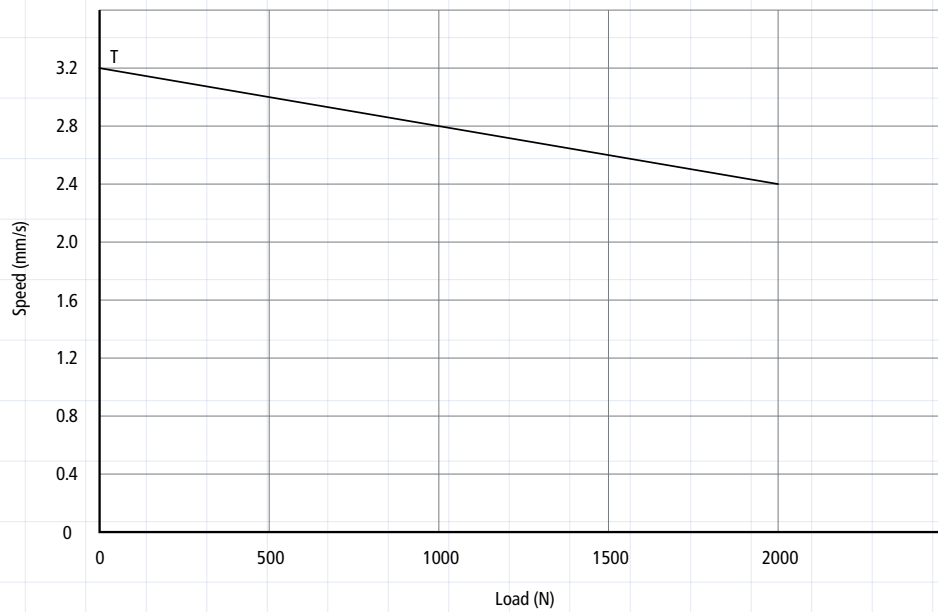
Note

- The performance data in the curve charts shows theoretical value.

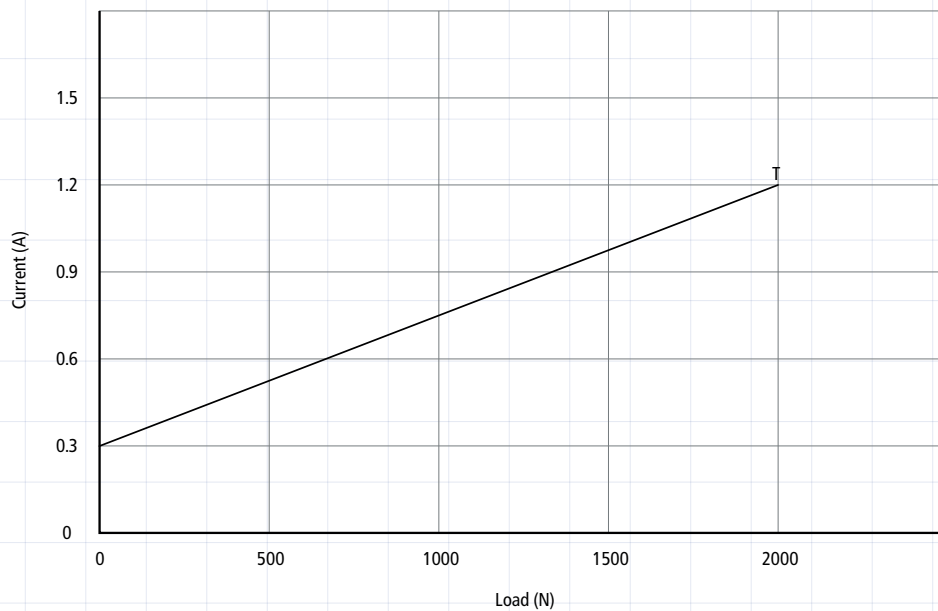
Performance data (24 VDC motor)

Motor speed 2200 min⁻¹, duty cycle 25%

Speed vs. Load



Current vs. Load

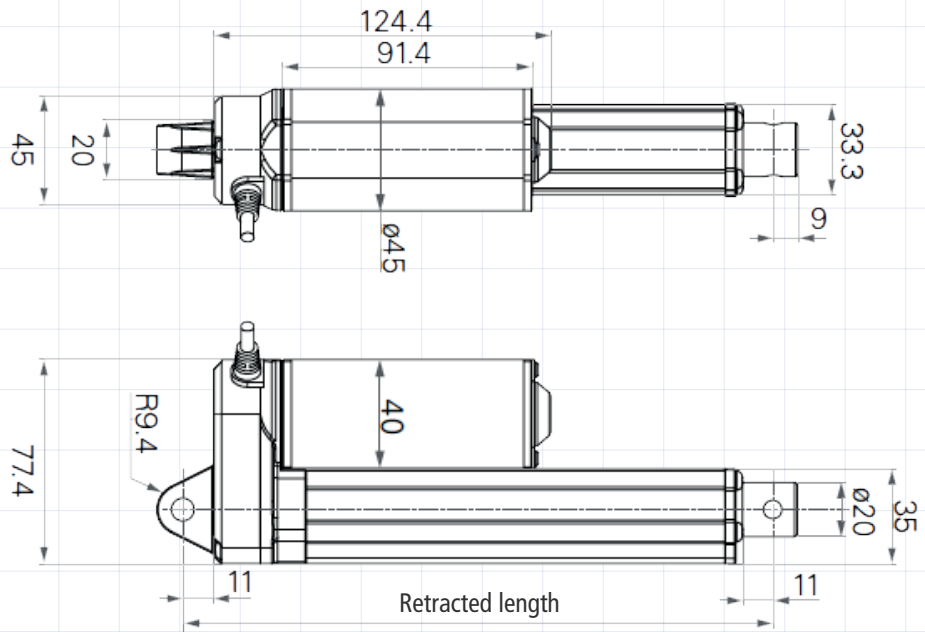


Note

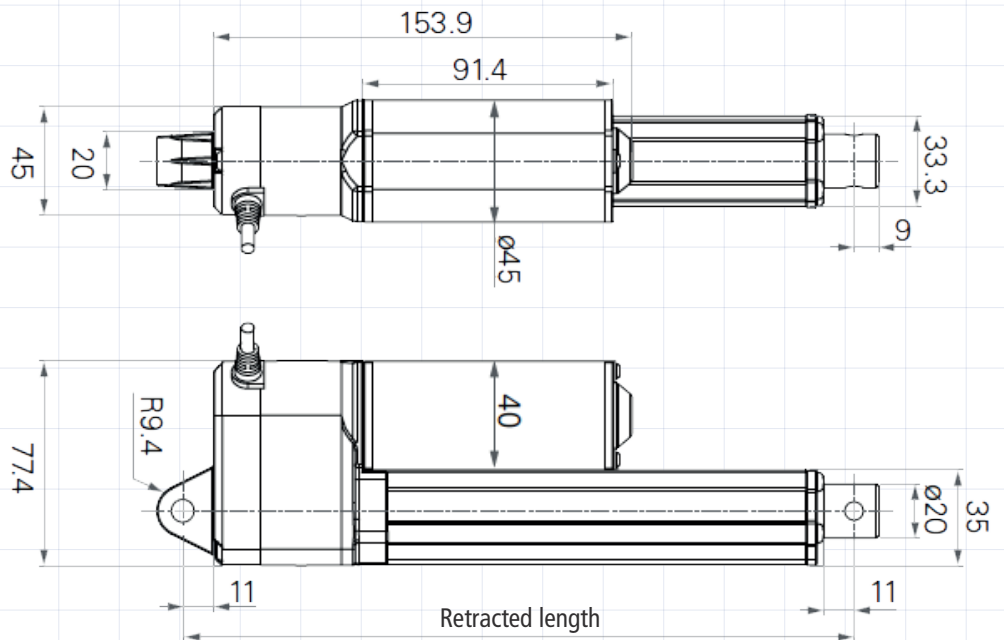
- The performance data in the curve charts shows theoretical value.

Drawing

Dimensions (mm)
without sensor or with
Hall sensor(s)



Dimensions (mm)
with POT, Optical or
Reed Sensor



Retracted length (mm)

Retracted length \geq Stroke+A+B+C

A		
Code rear attachment	Code front attachment	
	1, 2	3, 4, 5
1, 2, 3	+108 mm	+120 mm
4, 5, 6	+112 mm	+124 mm

B		
Stroke (mm)	Load (N)	
	< 3500	= 3500
0~150	–	+5 mm
151~200	+2 mm	+7 mm
201~250	+2 mm	+7 mm
251~300	+2 mm	+7 mm
301~350	+12 mm	+17 mm
351~400	+22 mm	+27 mm
401~450	+32 mm	+37 mm
451~500	+42 mm	+47 mm
501~550	+52 mm	+57 mm
551~600	+62 mm	+67 mm
601~650	+72 mm	+77 mm
651~700	+82 mm	+87 mm
701~750	+92 mm	+97 mm
751~800	+102 mm	+107 mm
801~850	+112 mm	+117 mm
851~900	+122 mm	+127 mm
901~950	+132 mm	+137 mm
951~1000	+142 mm	+147 mm

C	
Code output signals	
0, 4, 5	–
1, 2, 3	+30 mm

Stroke

Load (N)	Min. stroke (mm)	Max. stroke (mm)
≥ 250	20	1000
≥ 750	20	800
≥ 1000	20	600
≥ 1500	20	500
≥ 2000	20	450
≥ 3500	20	300

Wire definitions

CODE*	Pin 1 ● (green)	Pin 2 ● (red)	Pin 3 ● (white)	Pin 4 ● (black)	Pin 5 ● (yellow)	Pin 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

Note

* See ordering key – functions for limit switches – page 10.

Ordering key (e. g.: TA2P-1A-100208-1111-023-3)

TA2P-

<input type="checkbox"/>	Voltage	1 = 12 V DC 2 = 24 V DC	3 = 36 V DC 5 = 24 V DC, PTC	6 = 12 V DC, PTC
<input type="checkbox"/>	Load and speed	see page 2		
-				
<input type="checkbox"/>	Stroke (mm)			
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>	Retracted length (mm)	see page 8		
<input type="checkbox"/>				
-				
<input type="checkbox"/>	Rear attachment (see page 11)	1 = aluminum casting, hole 6.4 mm 2 = aluminum casting, hole 8.0 mm 3 = aluminum casting, hole 10.0 mm	4 = aluminum casting, U clevis, slot 6.0 mm, width 10.5 mm, hole 6.4 mm 5 = aluminum casting, U clevis, slot 6.0 mm, width 10.5 mm, hole 8.0 mm 6 = aluminum casting, U clevis, slot 6.0 mm, width 10.5 mm, hole 10.0 mm	
<input type="checkbox"/>	Front attachment (see page 11)	1 = aluminum casting, hole 6.4 mm 2 = aluminum casting, hole 8.0 mm 3 = aluminum, U clevis, slot 6.0 mm, depth 16.0, hole 10.0 mm	4 = aluminum, U clevis, slot 6.0 mm, depth 16.0 mm, hole 6.4 mm 5 = aluminum, U clevis, slot 6.0 mm, depth 16.0 mm, hole 8.0 mm	
<input type="checkbox"/>	Direction of rear attachment (counterclockwise) (see page 12)	1 = 90°	2 = 0°	
<input type="checkbox"/>	Functions for limit switches	1 = two switches at full retracted/extended positions to cut current 2 = two switches at full retracted/extended positions to cut current + 3rd LS 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 + 3rd LS in between to send signal		
-				
<input type="checkbox"/>	Output signals	0 = without 1 = POT	2 = optical 3 = Reed sensor	4 = one Hall sensors 5 = two Hall sensors
<input type="checkbox"/>	Connector (see page 12)	1 = DIN 6P, 90° plug		2 = tinned leads
<input type="checkbox"/>	Cable length	1 = straight, 300 mm 2 = straight, 600 mm	3 = straight, 1000 mm A = customized	
-				
<input type="checkbox"/>	IP Rating	1 = without	2 = IP54	3 = IP66 6 = IP66D

Terms of use

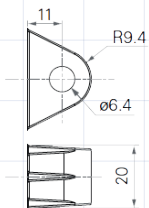
The user is responsible for determining the suitability of VARIMAX products for a specific application. VARIMAX products are subject to change without prior notice.

Ordering key appendix

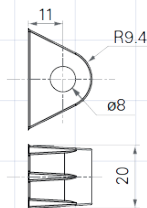
TA2P

Rear attachment (mm)

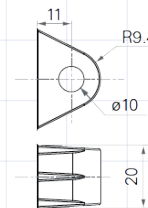
1 = Aluminum casting, hole 6.4



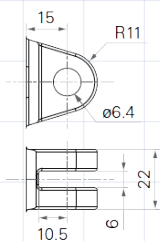
2 = aluminum casting, hole 8.0



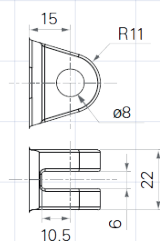
3 = aluminum casting, hole 10.0



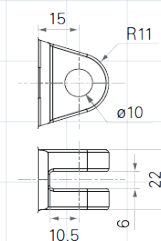
4 = aluminum casting, U clevis, slot 6.0, width 10.5, hole 6.4



5 = aluminum casting, U clevis, slot 6.0, width 10.5, hole 8.0

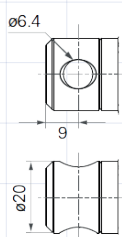


6 = aluminum casting, U clevis, slot 6.0, width 10.5, hole 10.0

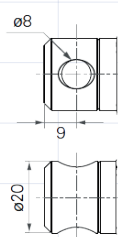


Front attachment (mm)

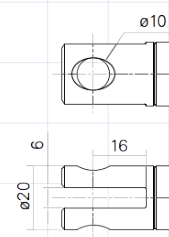
1 = aluminum casting, hole 6.4



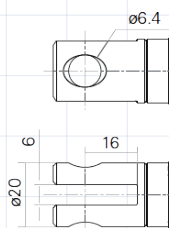
2 = aluminum casting, hole 8.0



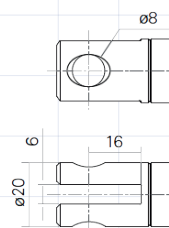
3 = aluminum, U clevis, slot 6.0, depth 16.0, hole 10.0



4 = aluminum, U clevis, slot 6.0, depth 16.0, hole 6.4



5 = aluminum, U clevis, slot 6.0, depth 16.0, hole 8.0

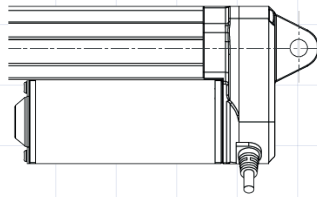


Ordering key appendix

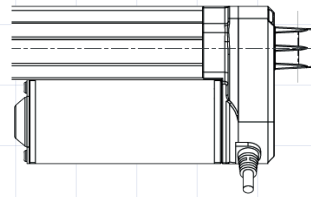
TA2P

Direction of rear attachment (counterclockwise)

1 = 90°

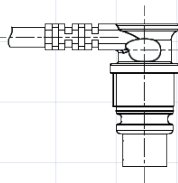


2 = 0°



Connector

1 = DIN 6P, 90° plug



2 = tinned leads

