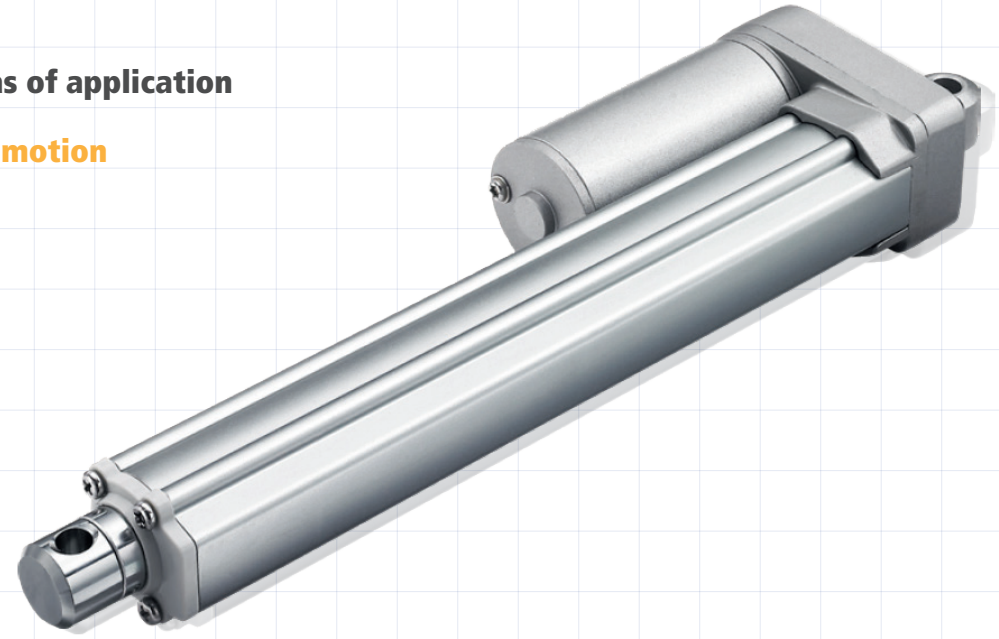
Electric actuator TA2

Typical areas of application

- **Industrial motion**



The TA2 series linear actuator is compact, robust and capable of performing well in certain outdoor environments. This linear actuator is perfect for use in small spaces where force or capability cannot be sacrificed.
Options include feedback sensors, signal sending limit switches and 90 degree clevis mounting.

Key figures

• Voltage of motor	12, 24, 36, 48 V DC or 12, 24 V DC (PTC)
• Max. load	1000 N in push / 1000 N in pull
• Max. speed at full load	51.0 mm/s (with 120 N in a push or pull condition)
• Min. installation dimension	stroke+105 mm (without output signals)
• Color	silver
• IP rating	up to IP66D
• Standards, directives	IEC60601-1, ES60601-1, EN61000-6-1 and EN61000-6-3
• Operational temperature range	+5 °C ~ +45 °C (load < 500 N) -25 °C ~ +65 °C (load ≥ 500 N)
• Options	POT, Optical, Hall / Reed sensor(s)

Compact size, ideal for limited space.

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Load and speed

CODE	Load		Self locking force 1)	Typical current 2)		Typical speed		Noise
	push [N]	pull (N)	[N]	no load 24 VDC [A]	full load 24 VDC [A]	no load 24 VDC [mm/s]	full load 24 VDC [mm/s]	(db)
Motor speed 4200 min^{-1}, duty cycle 25%								
A	120	120	120	0.8	1.2	44.0	32.0	≤ 70
B	240	240	240	0.7	1.2	22.0	16.5	≤ 70
C	500	500	500	0.6	1.0	11.0	8.5	≤ 68
D	750	750	750	0.6	1.0	7.5	6.2	≤ 68
E	1000	1000	1000	0.6	1.0	5.6	4.6	≤ 68
Motor speed 6000 min^{-1}, duty cycle 25%								
F	120	120	120	1.0	1.8	67.5	51.0	≤ 74
G	240	240	240	0.9	1.8	33.5	26.5	≤ 74
H	500	500	500	0.8	1.5	17.0	14.0	≤ 70
K	750	750	750	0.8	1.5	11.0	10.0	≤ 70
L	1000	1000	1000	0.8	1.5	9.0	7.6	≤ 70

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.

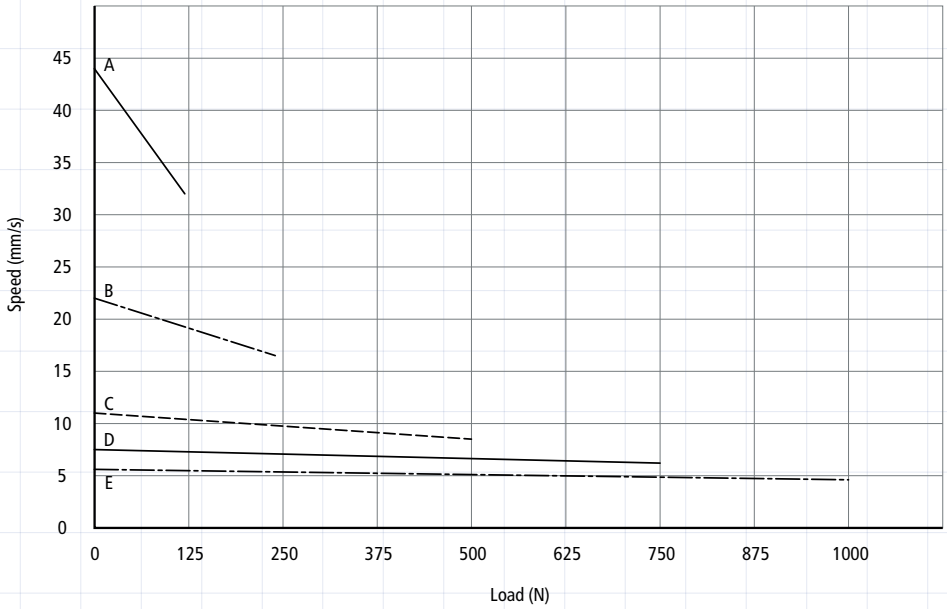
2) With a 12 V motor, the current is approximately twice the current measured in 24 V. With a 36 V motor, the current is approximately 66 % of the current measured in 24 V; with a 48 V motor, the current is approximately half the current measured in 24 V; speed will be similar for both voltages.

3) Current and speed: tested average value when stretching in push direction.

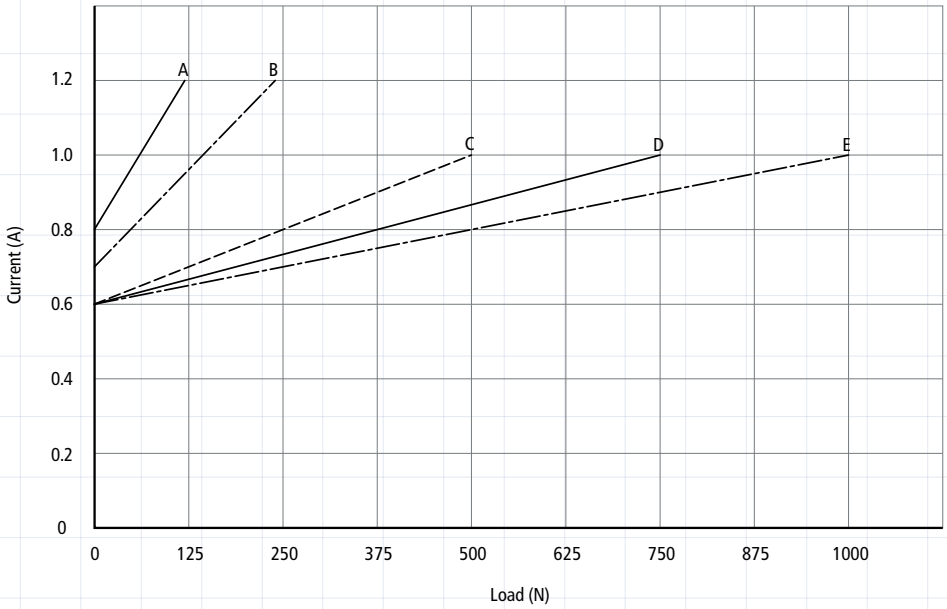
Performance data (24 VDC motor)

Motor speed 4200 min^{-1}, duty cycle 25%

Speed vs. Load



Current vs. Load



Note

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

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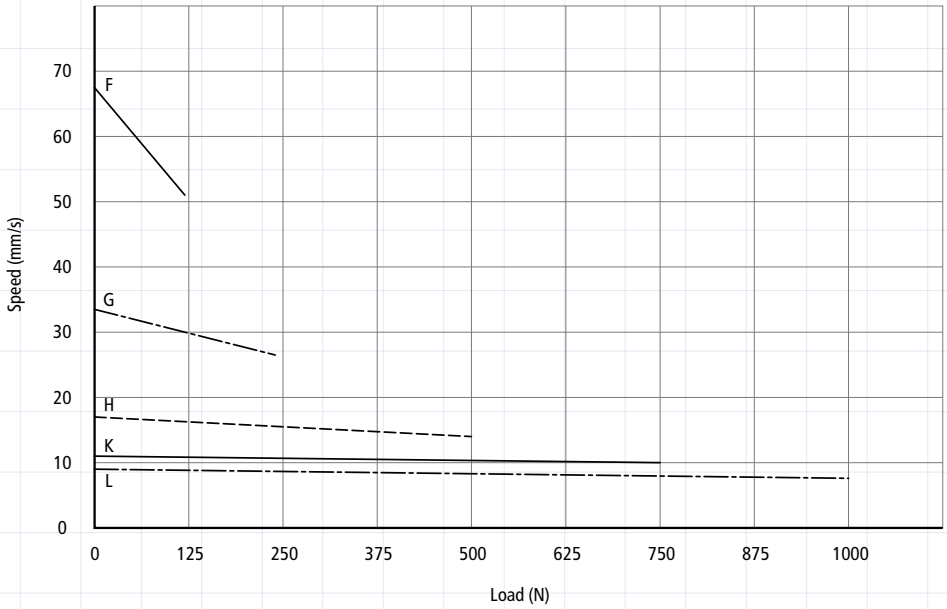
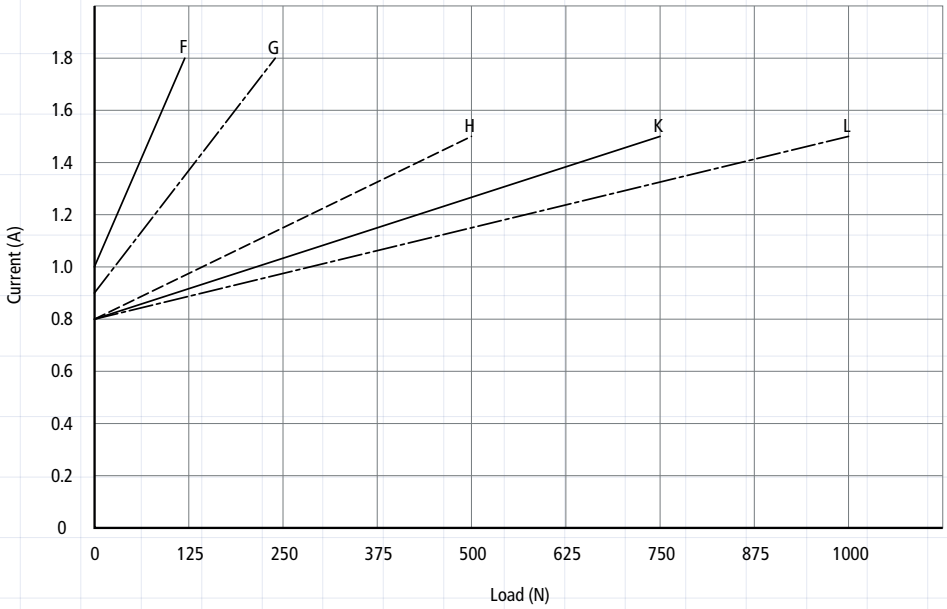
Performance data (24 VDC motor)

Motor speed 6000 min^{-1}, duty cycle 25%

Speed vs. Load



Current vs. Load



Note

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

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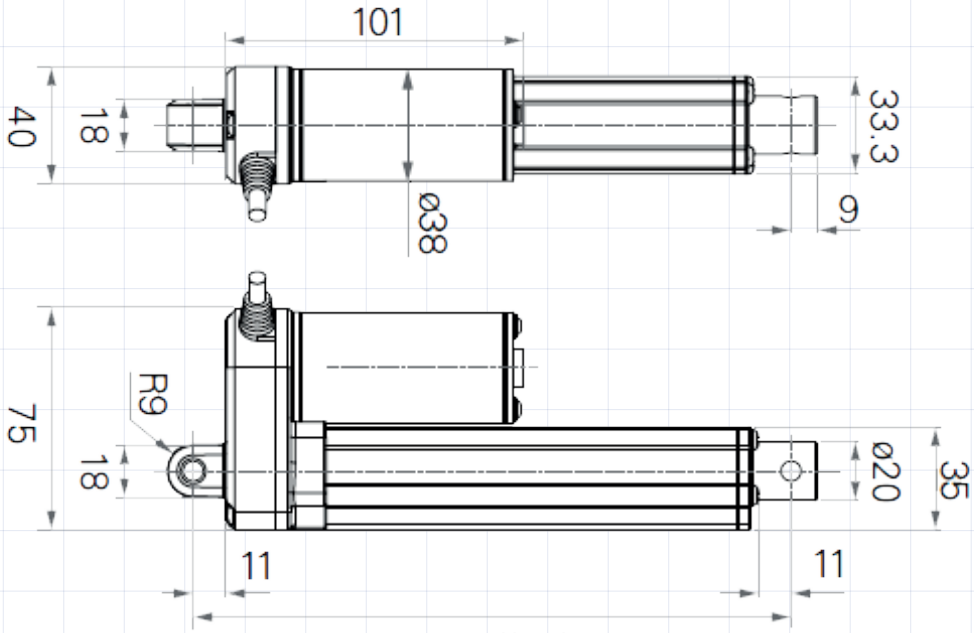
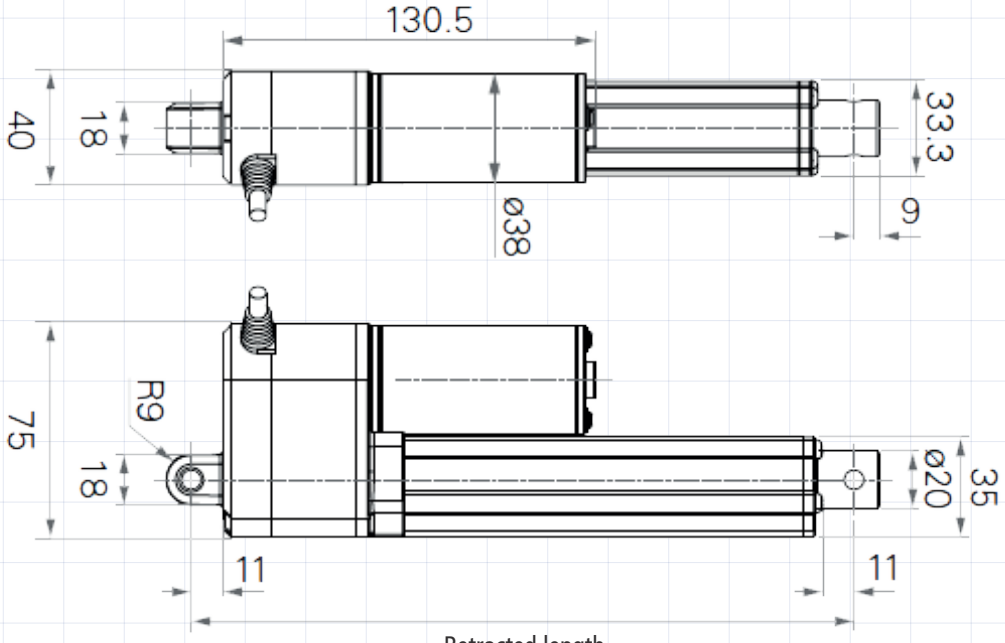
Drawing

Standard dimensions (mm)
without output signals



Standard dimensions (mm)
with output signals



Retracted length (mm)

Retracted length ≥ Stroke+A+B+C

A Code rear attachment	Code front attachment 1, 2	3, 4, 5
1, 2, 3	+105 mm	+115 mm
4, 5, 6	+109 mm	+119 mm

B Stroke (mm)	
20~150	–
151~200	+2 mm
201~250	+ 2 mm
251~300	+2 mm
301~350	+12 mm
351~400	+22 mm
401~450	+32 mm
451~500	+42 mm
501~550	+52 mm
551~600	+62 mm
601~650	+72 mm
651~700	+82 mm
701~750	+92 mm
751~800	+102 mm
801~850	+112 mm
851~900	+122 mm
901~950	+132 mm
951~1000	+142 mm

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

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Stroke

Load (N)	Min. stroke (mm)	Max. stroke (mm)
≥ **250**	20	1000
≥ **750**	20	800
≥ **1000**	20	600

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 8.

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Ordering key (e. g.: TA2-2B-100105-1101-011-2)

TA2-

☐	**Voltage**	1 = 12 V DC 2 = 24 V DC	3 = 36 V DC 4 = 48 V DC	5 = 24 V DC, PTC 6 = 12 V DC, PTC	
☐	**Load and speed**	see page 2			
-					
☐	**Stroke (mm)**				
☐					
☐					
☐	**Retracted length (mm)**	see page 6			
☐					
☐					
-					
☐	**Rear attachment (see page 9)**	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	
☐	**Front attachment (see page 9)**	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 6 = aluminum casting, hole 10.0 mm	
☐	**Direction of rear attachment (counterclockwise) (see page 10)**		1 = 90°	2 = 0°	
☐	**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			
-					
☐	**Output signals**	0 = without 1 = POT	2 = optical 3 = Reed sensor	4 = one Hall sensors 5 = two Hall sensors	
☐	**Connector (see page 10)**	1 = DIN 6P, 90° plug		2 = tinned leads	
☐	**Cable length**	1 = straight, 300 mm 2 = straight, 600 mm		3 = straight, 1000 mm A = customized	
-					
☐	**IP Rating**	1 = without	2 = IP54	3 = IP66	6 = IP66D

Terms of use

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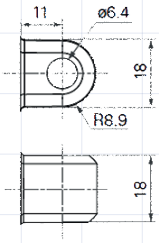
Ordering key appendix

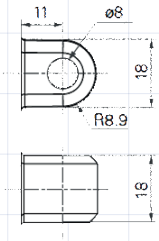
TA2

Rear attachment (mm)

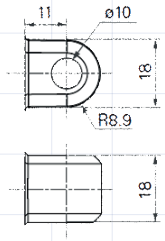
1= Aluminum casting, hole 6.4



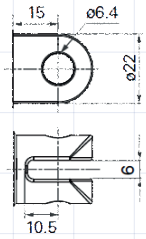
2 = aluminum casting, hole 8.0



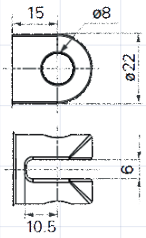
3 = aluminum casting, hole 10.0



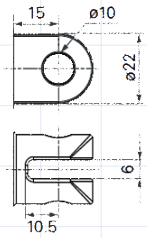
4 = aluminum casting, U clevis, slot 6.0, width 10.5, hole 6.4



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

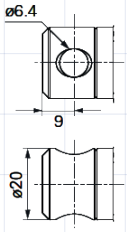


6 = aluminum casting, U clevis, slot 6.0, width 10.5, hole 10.0

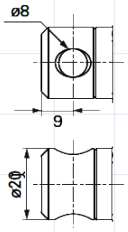


Front attachment (mm)

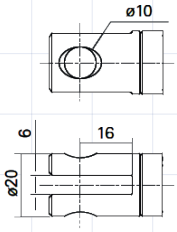
1 = aluminum casting, hole 6.4



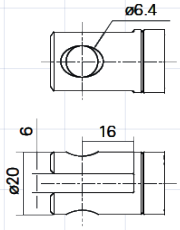
2 = aluminum casting, hole 8.0



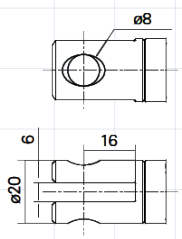
3 = aluminum, U clevis, slot 6.0, depth 16.0, hole 10.0



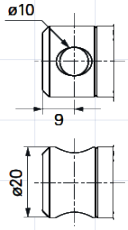
4 = aluminum, U clevis, slot 6.0, depth 16.0, hole 6.4



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



6 = aluminum casting, hole 10.0

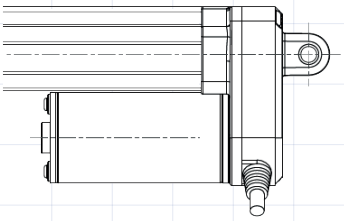


Ordering key appendix

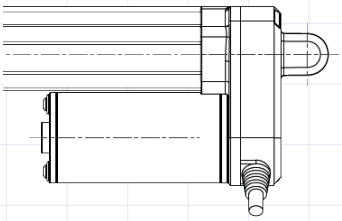
TA2

Direction of rear attachment (counterclockwise)

1 = 90°

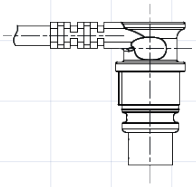


2 = 0°

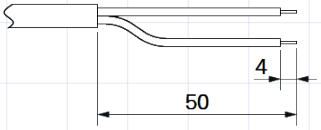


Connector

1 = DIN 6P, 90° plug



2 = tinned leads



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