

Linear Actuator LA28 Compact Data Sheet



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Introduction



The LA28 Compact is a small and powerful actuator designed for use in system solutions for healthcare equipment or industrial applications. Ideal applications are for example wheelchairs, treatment chairs, patient lifts or beds.

Some benefits of the LA28 compact are:

- Compact design and small installation dimensions
- Metal back fixture makes the actuator capable of withstanding high static pull force and ensures high safety
- Quiet operation
- 3500N in push (with strong motor) and 2000N in pull
- Options such as spline and safety nut to ensure safe operation at all times.

Features and options

- 12V / 24V DC permanent magnet motor
- Load up to 3500 N (with strong motor)
- Dynamic push and pull: Actuators are designed for push or pull applications. If a combination is required, please contact your local LINAK salesperson.
- Stainless steel piston rod
- Elegant and compact design with small installation dimensions
- Colour: black
- Noise level unloaded is ≤ 45 dB(A) for standard motor and ≤ 54 dB(A) for S-motor
- Available with extra powerful motor (strong motor), increases speed and strength
- Brake - increase self-locking ability for LA28C actuators with 4, 6, 9 or 12mm pitch with or without strong motor
- Reed-switch (LA28C = 8 pulses/spindle rev. and LA28C with strong motor = 6 pulses/Spindle rev.)
- Splines function (the actuator can only push)
- Safety nut in push direction only 0.2 m and 0.4 m coiled cable
- Motor and terminal cover
- Metal back fixture
- Protection Class IPX6

Usage

- Duty cycle: Max 10 % or max. 2 min. continuous use followed by 18 min. not in use.
- Ambient temperatures: +5° to +40°C
- Compatibility: Compatible with LINAK control boxes. Please contact LINAK.
- See sales backup Chapter 3 - Compatibility.
- Approvals: IEC 60601-1, ANSI/AAMI ES60601-1 and CAN/CSA-22.2 No 60601-1



Technical specifications

LA28 Compact with standard motor

Order number	Push max. (N)	Pull max. (N) Plastic/Alu	*Self-lock max. (N) Push	*Self-lock max. (N) Pull Plastic/Alu	Pitch (mm/spindle rev.)	Typical speed (mm/s) Load		Standard stroke lengths (mm) In steps of 50mm	Typical amp.	
						no	full		12V	24V
286xxx-xxxxx0xx	2500	0/2000	2500	0/2000	2	4.2	3.0	100-400	-	1.5
285xxx-xxxxx0xx	2000	0/2000	2000	0/2000	2.5	5.3	4.0	100-400	-	1.6
281xxx-xxxxx0xx	2000	0/2000	2000	0/2000	3	7.0	4.8	100-400	-	1.5
284xxx-xxxxx0xx	1500	0/1500	1500	0/1500	4	9.5	6.7	100-400	-	1.6
284xxx-4xxxx0xx	1500	0/1500	1500	0/1500	4	9.5	6.7	100-400	-	1.6
282xxx-xxxxx0xx	1000	0/1000	500	0/500	6	14.3	9.6	100-400	-	1.5
282xxx-4xxxx0xx	1000	0/1000	1000	0/1000	6	12.7	9.6	100-400	-	1.5
283xxx-xxxxx0xx	800	0/800	200	0/200	9	21.1	14.5	100-600	-	1.5
283xxx-4xxxx0xx	800	0/800	800	0/800	9	20.9	10.7	100-600	-	2.4
287xxx-xxxxx0xx	800	0/800	0	0/0	12	25.8	17.1	100-600	-	1.9
287xxx-4xxxx0xx	800	0/800	300	0/300	12	24.8	15.1	100-600	-	1.9

LA28 Compact with "S" motor

Order number	Push max. (N)	Pull max. (N) Plastic/Alu	*Self-lock max. (N) Push	*Self-lock max. (N) Pull Plastic/Alu	Pitch (mm/spindle rev.)	Typical speed (mm/s) Load		Standard stroke lengths (mm) In steps of 50mm	Typical amp.	
						no	full		12V	24V
286xxx-xxxxx1xx	3500	0/2000	3500	0/2000	2	6.7	4.7	100-400	-	3.9
285xxx-xxxxx1xx	3000	0/2000	3000	0/2000	2.5	8.6	6.1	100-400	-	3.6
281xxx-xxxxx1xx	2000	0/2000	2000	0/2000	3	10.8	8.4	100-400	-	2.9
284xxx-xxxxx1xx	2000	0/2000	1200	0/1200	4	14.6	10.3	100-400	-	3.6
284xxx-4xxxx1xx	2000	0/2000	2000	0/2000	4	14.3	10.3	100-400	-	3.4
282xxx-xxxxx1xx	2000	0/2000	500	0/500	6	22.0	13.8	100-400	-	4.1
282xxx-4xxxx1xx	2000	0/2000	2000	0/2000	6	22.0	12.7	100-400	-	4.6
283xxx-xxxxx1xx	1500	0/1500	500	0/500	9	34.2	16.5	100-600	-	4.9
283xxx-4xxxx1xx	1500	0/1500	1500	0/1500	9	33.0	10.9	100-600	-	5.5
287xxx-xxxxx1xx	800	0/800	0	0/0	12	46.0	33.5	100-600	-	3.1
287xxx-4xxxx1xx	800	0/800	800	0/800	12	45.9	33.5	100-600	-	3.1



LA28 Compact with 12V motor

Order number	Push max. (N)	Pull max. (N) Plastic/Alu	*Self-lock max. (N) Push	*Self-lock max. (N) Pull Plastic/Alu	Pitch (mm/spindle rev.)	Typical speed (mm/s) Load		Standard stroke lengths (mm) In steps of 50mm	Typical amp.	
						no	full		12V	24V
285xxx-xxxxx2xx	3000	0/2000	3000	0/2000	2.5	8.6	3.6	100-400	6.6	-
281xxx-xxxxx2xx	2000	0/2000	2000	0/2000	3	10.2	6.2	100-400	6.9	-
282xxx-xxxxx2xx	2000	0/2000	500	0/500	6	19.9	8.2	100-400	7.7	-
282xxx-4xxxx2xx	2000	0/2000	2000	0/2000	6	19.8	7.0	100-400	8.5	-
283xxx-xxxxx2xx	1500	0/1500	0	0/0	9	28.9	11.7	100-600	7.9	-
283xxx-4xxxx2xx	1500	0/1500	1500	0/1500	9	26.5	2.8	100-600	7.9	-
287xxx-xxxxx2xx	800	0/800	0	0/0	12	25.8	17.1	100-600	5.9	-
287xxx-4xxxx2xx	800	0/800	800	0/800	12	25.8	17.1	100-600	5.9	-

Above data

The measurements are made with the actuators connected to a stable power supply.



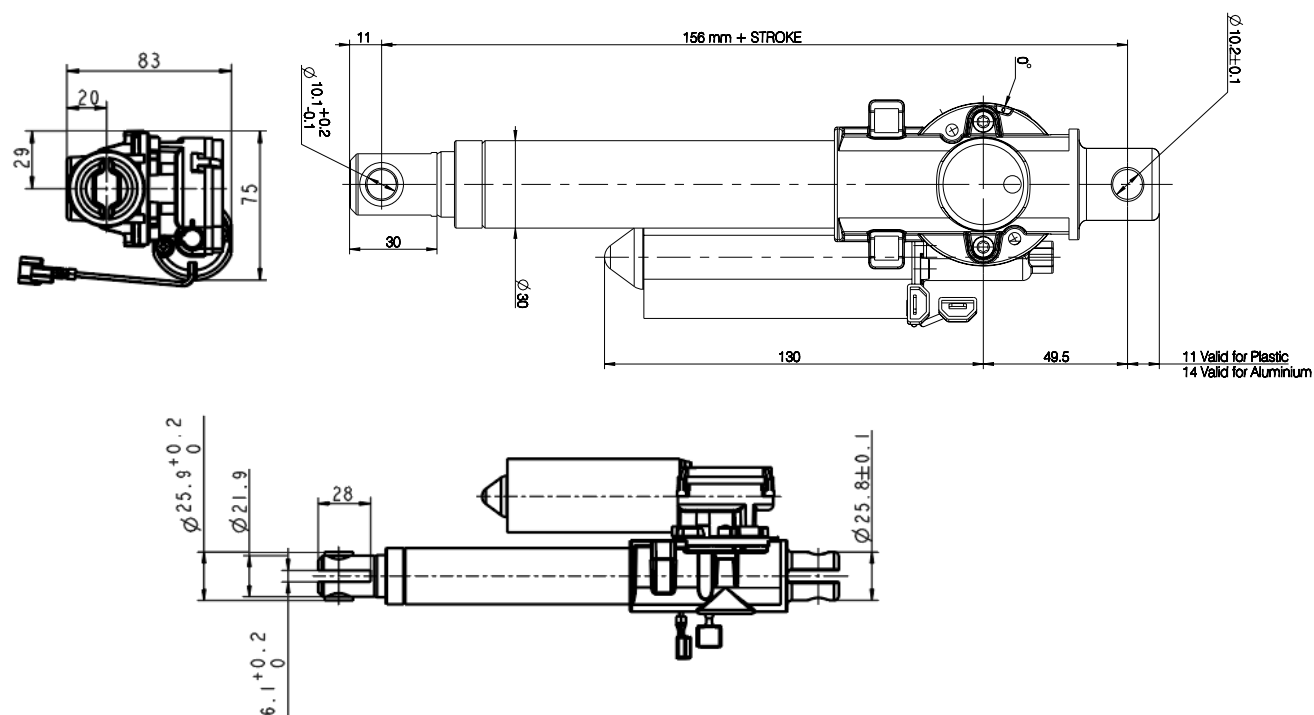
Ordering example

28	1	1	0	A	-	1	0	250	0	3	0	
												Cables:
												Jack cables
												0 = Straight 2.3 m
												1 = Straight 1.05 m
												2 = Coiled 0.4 m
												3 = Coiled 0.2 m
												4 = Cable without plug 1.5 m
												5 = Cable without plug 1.0 m
												6 = 7cm leads with spade connectors only available without reed.
												X = Other cable/Length
												IP-Degree:
												2 = IPX6
												3 = IPXX (without cover)
												4 = IP20 (with cover)
												Motor type:
												0 = 24V
												1 = 24V S-motor
												2 = 12V S-motor
												Stroke length:
												XXX = mm
												Max. with 2, 2.5, 3, 4 and 6 mm pitch: 400 mm
												Max. with 9 and 12 mm pitch: 600 mm
												Inst. Dim.:
												0 = Standard (S + 156 mm)
												X = Other inst. dimension
												Option:
												1 = Safety nut RECOMMENDED
												0 = None
												2 = Steel Splines
												3 = Steel Splines with safety nut
												4 = Brake
												5 = Brake with safety nut
												Colour:
												- = black
												Option:
												(Motor position)
												A = 0°
												B = 30°
												C = 60°
												D = 90°
												E = 120°
												F = 150°
												G = 180°
												H = 210°
												I = 240°
												J = 270°
												K = 300°
												L = 330°
												Pos.:
												0 = None
												R = reed switch
												Back fixture:
												1 = Standard (Plastic) "01" (see dimension drawing re. orientation)
												2 = Turned 90 degrees (Plastic) "02" (see dim. drawing re. orientation)
												3 = Metal "01" (Aluminium) article number: 028707* (without slot)
												4 = Metal "02" (Aluminium) article number: 028708* (without slot)
												Spindle type:
												1 = 3 mm (1 threaded)
												2 = 6 mm (2 threaded)
												3 = 9 mm (3 threaded)
												4 = 4 mm (2 threaded)
												5 = 2,5 mm (1 threaded)
												6 = 2 mm (1 threaded)
												7 = 12 mm (4 threaded)
												Actuator type:
												28 = LA28C

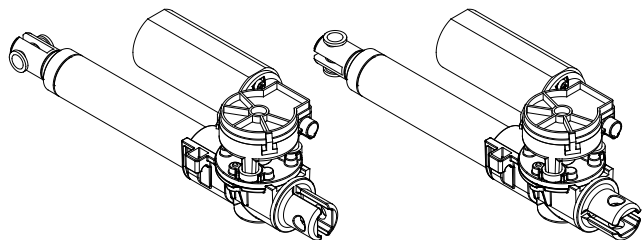


Dimensions

LA28 Compact without cover



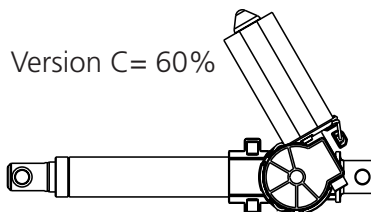
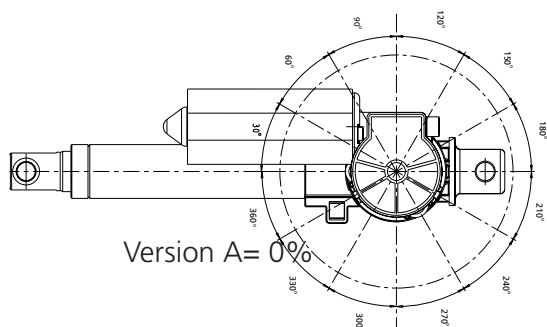
Drawing no.: 028638



Back fixture 01

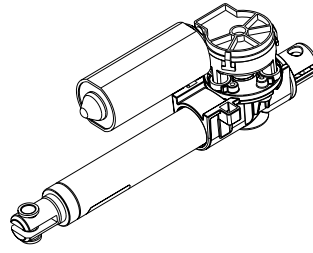
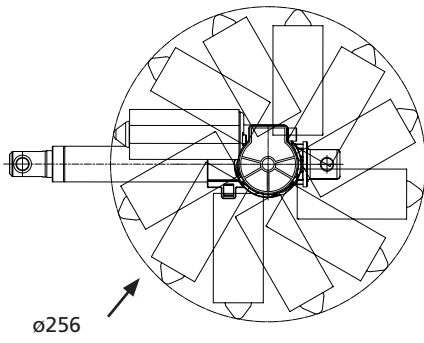
Back fixture 02

Drawing no.: 028744



Drawing no.: 028647

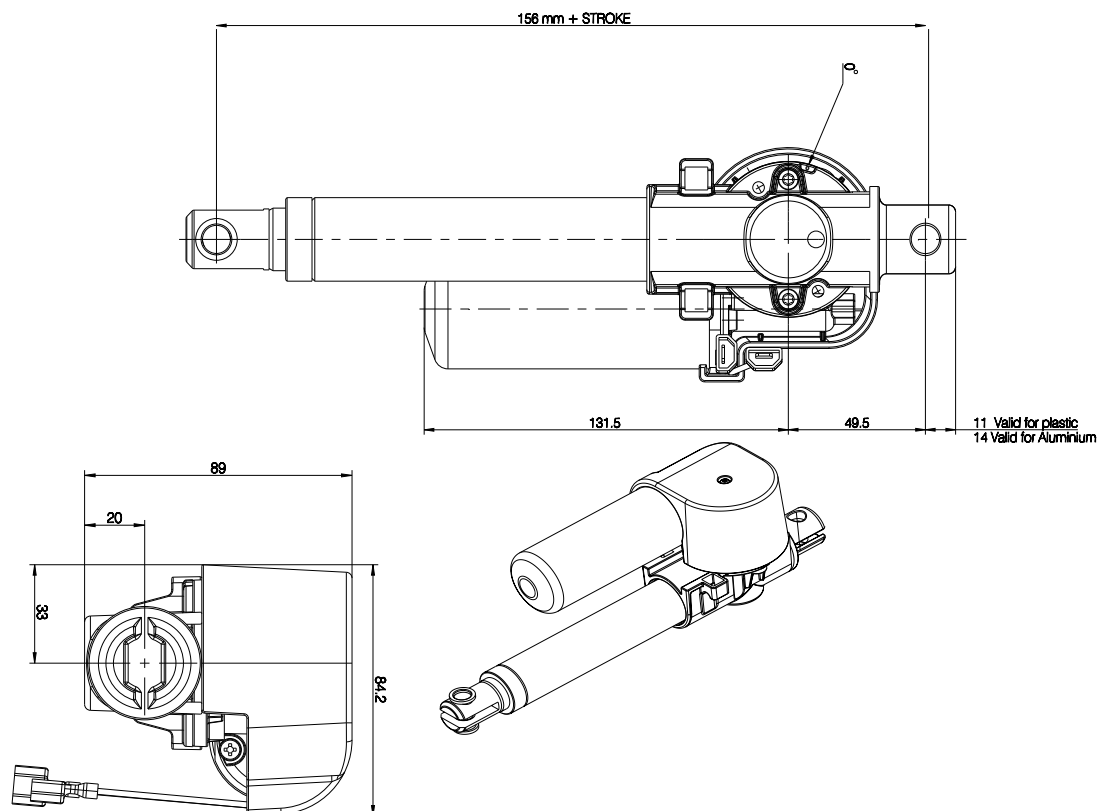




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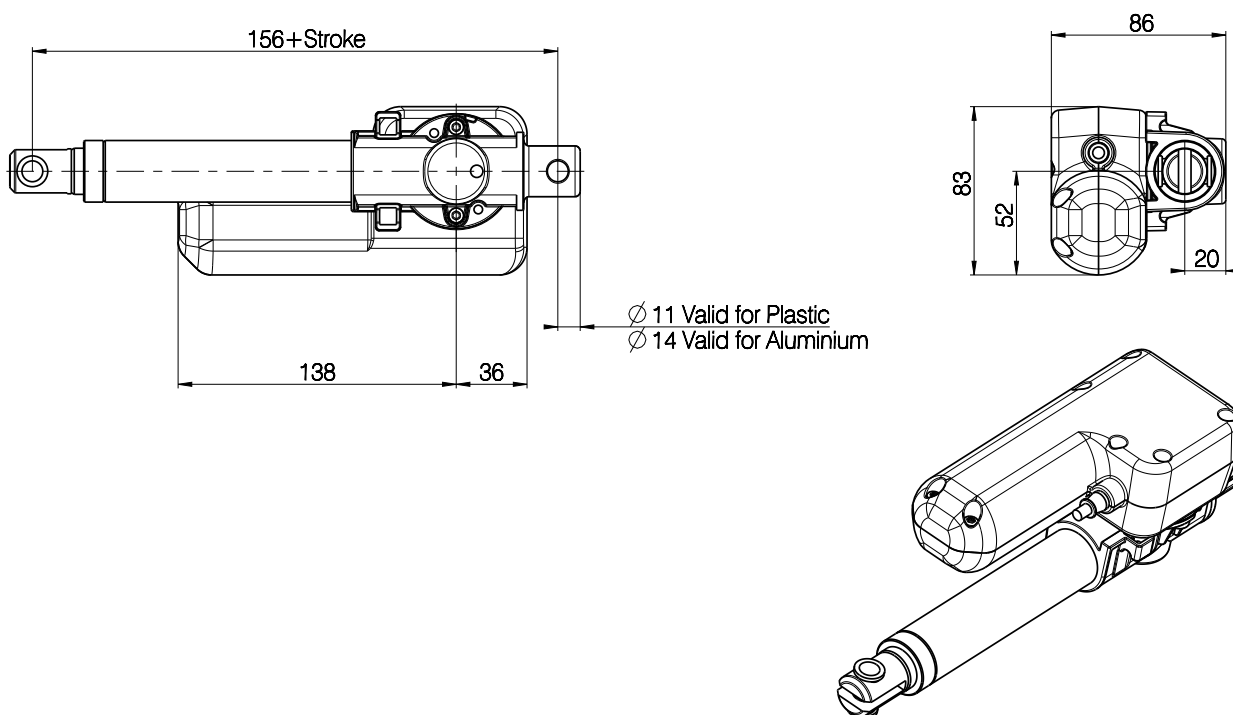


LA28 Compact with cover



Drawing no.: 028639

LA28 Compact with IPX6 housing



Drawing no.: 028730

Installation dimensions

S + 156: LA28 Compact (with or without safety nut), minimum inst. dim. 256mm.

S + 167: LA28 Compact with splines, minimum inst. dim. 267mm.

S + 181: LA28 Compact with safety nut and splines, minimum inst. dim. 281mm.

S + 188: LA28 Compact with brake, minimum inst. dim. 288mm.



Information

The above data is with a stroke length of 100mm.

In certain circumstances a stroke length of less than 100mm is possible - please contact LINAK A/S.

Compatible control boxes

	CB8	CB12	CB14	CBJ
LA28 with standard motor	X			X
LA28 with strong motor	X	X	X	X



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