# Actuator LA28

# **Data Sheet**

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## Introduction

LA28 is primarily a system actuator. The actuator is very quiet and powerful, designed for use in the CARELINE®, MEDLINE® and TECHLINE® areas of business.

## Features and options

- Load up to 3500 N in push (with S-motor)
- Dynamic push and pull: Actuators are designed for push or pull applications. If a combination is required, please contact your local LINAK salesperson.
- Protection class IP 51
- Storage temperature -40 °C to 70 °C
- Available with extra powerful motor(strong motor), increases speed and strength
- Brake - increases self-locking ability for LA28 actuators with 6 or 9 mm pitch with or without strong motor
- Protection class: IPX5 or IPX6
- Noise level unloaded is ≤ 45 dB(A) for standard motor and ≤ 54 dB(A) for S-motor
- Reed-switch (LA28 = 8 pulses/spindle rev. and LA28 with strong motor = 6 pulses/spindle rev.)
- Splines function (the actuator can only push)
- Mounting bracket for CB8-T/A control boxes (order number 914078 (grey) and 914054 (black))
- Safety nut for LA28 with 3, 6 or 9 mm pitch 0.2 m and 0.4 m coiled cable
- Built-in CS print ensures electronic overload protection, see chapter 10.3 (not to be used in connection with LINAK control boxes).

## Usage

- Duty cycle: Max. 10 % or 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.
- Approvals: IEC 60601-1, ANSI/AAMI ES60601-1and CAN/CSA-22.2 No 60601-1

# Technical specifications

## LA28 with standard motor

| Order number | Push max. (N) | Pull max. (N) | *Self-lock max. (N) Push | *Self-lock max. (N) Pull | 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 | 2000 | 2000 | 2000 | 2 | 4.2 | 3.0 | 100-400 | - | 1.5 |
| 285xxx-xxxxx0xx | 2000 | 2000 | 2000 | 2000 | 2.5 | 5.3 | 4.0 | 100-400 | - | 1.6 |
| 281xxx-xxxxx0xx | 2000 | 2000 | 2000 | 2000 | 3 | 7.0 | 4.8 | 100-400 | - | 1.5 |
| 284xxx-xxxxx0xx | 1500 | 1500 | 1500 | 1500 | 4 | 9.5 | 6.7 | 100-400 | - | 1.6 |
| 284xxx-4xxxx0xx | 1500 | 1500 | 1500 | 1500 | 4 | 9.5 | 6.7 | 100-400 | - | 1.6 |
| 282xxx-xxxxx0xx | 1000 | 1000 | 500 | 500 | 6 | 14.3 | 9.6 | 100-400 | - | 1.5 |
| 282xxx-4xxxx0xx | 1000 | 1000 | 1000 | 1000 | 6 | 12.7 | 9.6 | 100-400 | - | 1.5 |
| 283xxx-xxxxx0xx | 800 | 800 | 200 | 200 | 9 | 21.1 | 14.5 | 100-600 | - | 1.5 |
| 283xxx-4xxxx0xx | 800 | 800 | 800 | 800 | 9 | 20.9 | 10.7 | 100-600 | - | 2.4 |
| 287xxx-xxxxx0xx | 600 | 600 | 0 | 0 | 12 | 25.8 | 17.1 | 100-600 | - | 1.9 |
| 287xxx-4xxxx0xx | 600 | 600 | 300 | 300 | 12 | 24.8 | 15.1 | 100-600 | - | 1.9 |

## LA28 with “S” motor

| Order number | Push max. (N) | Pull max. (N) | *Self-lock max. (N) Push | *Self-lock max. (N) Pull | 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 | 2000 | 3500 | 2000 | 2 | 6.7 | 4.7 | 100-400 | - | 3.9 |
| 285xxx-xxxxx1xx | 3000 | 2000 | 3000 | 2000 | 2.5 | 8.6 | 6.1 | 100-400 | - | 3.6 |
| 281xxx-xxxxx1xx | 2000 | 2000 | 2000 | 2000 | 3 | 10.8 | 8.4 | 100-400 | - | 2.9 |
| 284xxx-xxxxx1xx | 2000 | 2000 | 1200 | 1200 | 4 | 14.6 | 10.3 | 100-400 | - | 3.6 |
| 284xxx-4xxxx1xx | 2000 | 2000 | 2000 | 2000 | 4 | 14.3 | 10.3 | 100-400 | - | 3.4 |
| 282xxx-xxxxx1xx | 2000 | 2000 | 500 | 500 | 6 | 22.0 | 13.8 | 100-400 | - | 4.1 |
| 282xxx-4xxxx1xx | 2000 | 2000 | 2000 | 2000 | 6 | 22.0 | 12.7 | 100-400 | - | 4.6 |
| 283xxx-xxxxx1xx | 1500 | 1500 | 500 | 500 | 9 | 34.2 | 16.5 | 100-600 | - | 4.9 |
| 283xxx-4xxxx1xx | 1500 | 1500 | 1500 | 1500 | 9 | 33.0 | 10.9 | 100-600 | - | 5.5 |
| 287xxx-xxxxx1xx | 800 | 800 | 0 | 0 | 12 | 46.0 | 33.5 | 100-600 | - | 3.1 |
| 287xxx-4xxxx1xx | 800 | 800 | 800 | 800 | 12 | 45.9 | 33.5 | 100-600 | - | 3.1 |

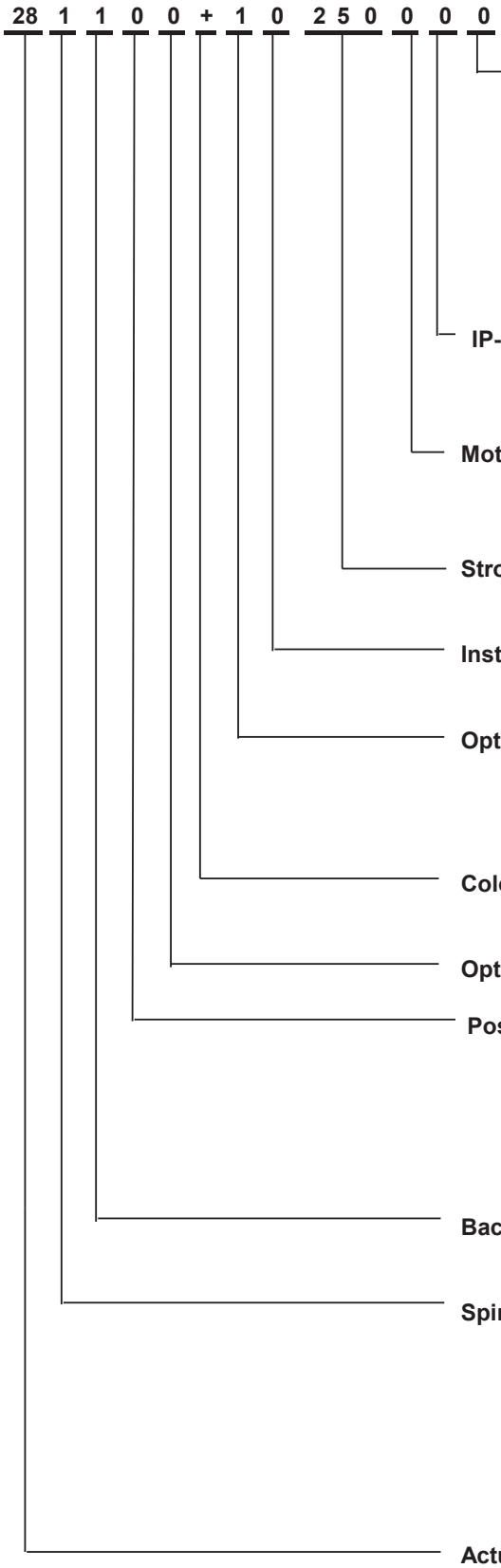
## LA28 with 12V motor

| Order number | Push max. (N) | Pull max. (N) | *Self-lock max. (N) Push | *Self-lock max. (N) Pull | Pitch (mm/ spindle rev.) | Typical speed (mm/s) Load | | Standard stroke lengths (mm) In steps of 50mm. | Typical amp. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | no | full | | 12V | 24V |
| 286xxx-xxxxx2xx | 3000 | 2000 | 2000 | 2000 | 2 | 7.0 | 3.2 | 100-400 | 6.9 | - |
| 286xxx-4xxxx2xx | 3000 | 2000 | 3000 | 2000 | 2 | 7.0 | 3.2 | 100-400 | 6.9 | - |
| 285xxx-xxxxx2xx | 3000 | 2000 | 2000 | 2000 | 2.5 | 8.6 | 3.6 | 100-400 | 6.6 | - |
| 285xxx-4xxxx2xx | 3000 | 2000 | 3000 | 2000 | 2.5 | 8.6 | 3.6 | 100-400 | 6.6 | - |
| 281xxx-xxxxx2xx | 2000 | 2000 | 2000 | 2000 | 3 | 10.2 | 6.2 | 100-400 | 6.9 | - |
| 284xxx-xxxxx2xx | 2000 | 2000 | 1500 | 1500 | 4 | 13.5 | 6.8 | 100-400 | 6.5 | - |
| 284xxx-4xxxx2xx | 2000 | 2000 | 2000 | 2000 | 4 | 13.3 | 7.5 | 100-400 | 6.5 | - |
| 282xxx-xxxxx2xx | 2000 | 2000 | 500 | 500 | 6 | 19.9 | 7.5 | 100-400 | 7.7 | - |
| 282xxx-4xxxx2xx | 2000 | 2000 | 2000 | 2000 | 6 | 19.8 | 7.0 | 100-400 | 8.5 | - |
| 283xxx-xxxxx2xx | 1500 | 1500 | 0 | 0 | 9 | 28.9 | 11.7 | 100-600 | 7.9 | - |
| 283xxx-4xxxx2xx | 1500 | 1500 | 1500 | 1500 | 9 | 28.9 | 11.7 | 100-600 | 7.9 | - |
| 287xxx-xxxxx2xx | 800 | 800 | 0 | 0 | 12 | 32.0 | 16.0 | 100-600 | 5.9 | - |
| 287xxx-4xxxx2xx | 800 | 800 | 800 | 800 | 12 | 32.0 | 16.0 | 100-600 | 5.9 | - |

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

A reed-switch has no influence on above mentioned data.

# Ordering example




**Cables:** **Jack cables**

**0 = Straight 2.38m**
0 = Straight 2.4m with reed
1 = Straight 1.13 m
1 = Straight 1.09m with reed
2 = Coiled 0.4
3 = Coiled 0.2
4 = Cable without plug 1.5m
5 = Cable without plug 1.0m
X = Other cable/ Length

**General cable tolerance ± 0.080m**

**IP-Degree:**
0 = IPX1
1 = IPX5
2 = IPX6

**Motor type:**
**0 = 24V**
1 = 24V S-motor
2 = 12V S-motor (Cable without plug L=1.5m)

**Stroke length**
XXX = mm Max 500mm (for 600mm kontakt LINAK A/S)
Min 100mm

**Inst. Dim.:**
**0 = Standard**
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:**
**+ = grey**
- = black

**Option:**
**0 = None**

**Pos./CS:**
**0 = None**
R = Reed switch
Y = CS 28A mount. (without plug 1.0m)(not IP65/66)
Z = CS 28B mount. (Without plug 1.0m
Handset cable only in black)
C = CS 28C mount. (Without plug 1.0m 5-core
Cable only in black)

**Back fixture:**
**1 = Standard**
2 = Turned 90 degrees

**Spindle type:**

| | | |
|---|---|---|
| **1 = 3 mm** | **( 1 threaded )** | **( 3mm pitch )** |
| **2 = 6 mm** | **( 2 threaded )** | **( 6mm pitch )** |
| **3 = 9 mm** | **( 3 threaded )** | **( 9mm pitch )** |
| **4 = 4 mm** | **( 2 threaded )** | **( 4mm pitch )** |
| **5 = 2,5 mm** | **( 1 threaded )** | **( 2.5mm pitch )** |
| **6 = 2 mm** | **( 1 threaded )** | **( 2mm pitch )** |
| **7 = 12 mm** | **( 4 threaded )** | **( 12mm pitch )** |

**Actuator type**
**28 = LA28**

## Approvals and certifications

For approval documentation, LINAK recommends specifying the product type instead of individual item numbers to ensure broader approval coverage and simplify future product changes.

Listed LINAK item for application approval: LA28

If this is not possible, we advise being as non-specific as possible when specifying LINAK products in your approval application:

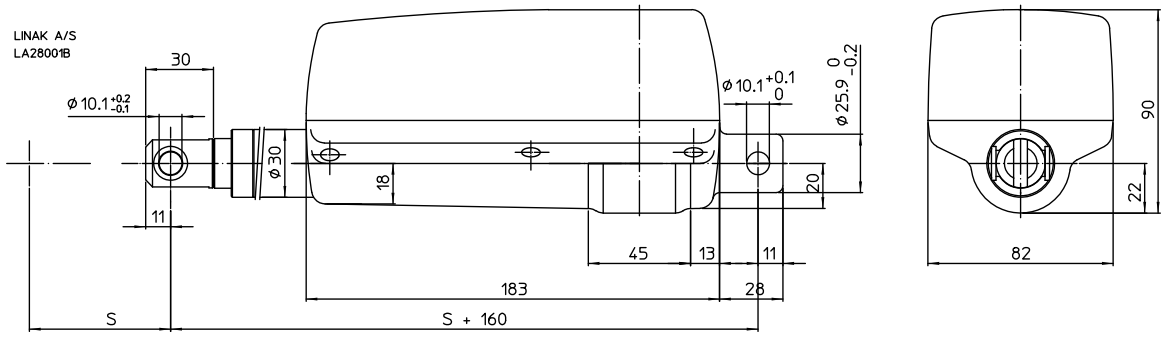
Listed LINAK item for application approval: LA28*****S****SS*

" * " is not safety critical and we recommend including a non-specific signifier such as an asterisk.

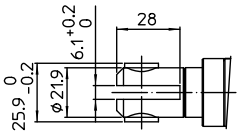
" S " is safety critical and represents a listed critical component in the product and cannot be left out.

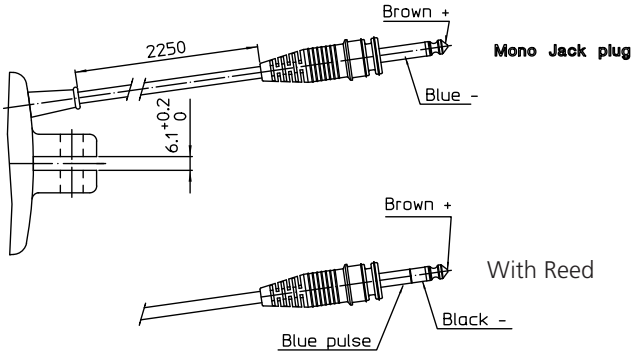
For more information, please refer to "Approvals and certifications" in LINAK Application Design Recommendations found under User Manual for any given product on LINAK.com

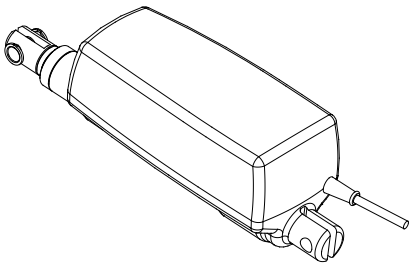
# Dimensions



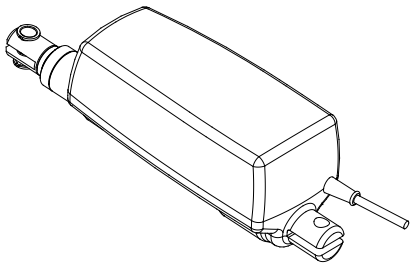

S+160 LA28 (with or without safety nut)
S+171 splines
S+185 safety nut and splines
S+192 brake



Back fixture 01



Back fixture 02

Drawing no. 028745

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