Actuator LA28 Compact
Data sheet
LA28 Compact

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
- Thrust up to 3500 N (with strong motor)
- Stainless steel piston rod
- Elegant and compact design with small installation dimensions
- Colour: black
- Low noise level
- Available with extra powerful motor (strong motor), increases speed and strength
- Brake - increase self-locking ability for LA28C actuators with 4, 6, 9 or 12 mm 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.
- Approvals: IEC 60601-1, ANSI/AAMI ES60601-1 and CAN/CSA-22.2 No 60601-1
### Technical specifications:

#### LA28 Compact with standard motor

<table>
<thead>
<tr>
<th>Order number</th>
<th>Push Max. (N)</th>
<th>Pull Max. (N) Plastic / Alu</th>
<th>*Self-lock max. (N) Push Plastic/Alu</th>
<th>Pitch (mm/spindle rev.)</th>
<th>Typical speed (mm/s) Load</th>
<th>Standard stroke lengths (mm) In steps of 50 mm</th>
<th>Typical amp.</th>
<th>12 V</th>
<th>24 V</th>
</tr>
</thead>
<tbody>
<tr>
<td>286xxx-xxxx0xx</td>
<td>2500</td>
<td>0/2000</td>
<td>2500</td>
<td>0/2000</td>
<td>2</td>
<td>4.2</td>
<td>3.0</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>285xxx-xxxx0xx</td>
<td>2000</td>
<td>0/2000</td>
<td>2000</td>
<td>0/2000</td>
<td>2.5</td>
<td>5.3</td>
<td>4.0</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>281xxx-xxxx0xx</td>
<td>2000</td>
<td>0/2000</td>
<td>2000</td>
<td>0/2000</td>
<td>3</td>
<td>7.0</td>
<td>4.8</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>284xxx-xxxx0xx</td>
<td>1500</td>
<td>0/1500</td>
<td>1500</td>
<td>0/1500</td>
<td>4</td>
<td>9.5</td>
<td>6.7</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>284xxx-4xxxx0xx</td>
<td>1500</td>
<td>0/1500</td>
<td>1500</td>
<td>0/1500</td>
<td>4</td>
<td>9.5</td>
<td>6.7</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>282xxx-xxxx0xx</td>
<td>1000</td>
<td>0/1000</td>
<td>500</td>
<td>0/500</td>
<td>6</td>
<td>14.3</td>
<td>9.6</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>282xxx-xxxx0xx</td>
<td>1000</td>
<td>0/1000</td>
<td>1000</td>
<td>0/1000</td>
<td>6</td>
<td>12.7</td>
<td>9.6</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>283xxx-xxxx0xx</td>
<td>800</td>
<td>0/800</td>
<td>200</td>
<td>0/200</td>
<td>9</td>
<td>21.1</td>
<td>14.5</td>
<td>100 – 600</td>
<td>-</td>
</tr>
<tr>
<td>283xxx-xxxx0xx</td>
<td>800</td>
<td>0/800</td>
<td>800</td>
<td>0/800</td>
<td>9</td>
<td>20.9</td>
<td>10.7</td>
<td>100 – 600</td>
<td>-</td>
</tr>
<tr>
<td>287xxx-xxxx0xx</td>
<td>800</td>
<td>0/800</td>
<td>300</td>
<td>0/300</td>
<td>12</td>
<td>24.8</td>
<td>15.1</td>
<td>100 – 600</td>
<td>-</td>
</tr>
</tbody>
</table>

#### LA28 Compact with “S” motor

<table>
<thead>
<tr>
<th>Order number</th>
<th>Push Max. (N)</th>
<th>Pull Max. (N) Plastic / Alu</th>
<th>*Self-lock max. (N) Push Plastic/Alu</th>
<th>Pitch (mm/spindle rev.)</th>
<th>Typical speed (mm/s) Load</th>
<th>Standard stroke lengths (mm) In steps of 50 mm</th>
<th>Typical amp.</th>
<th>12 V</th>
<th>24 V</th>
</tr>
</thead>
<tbody>
<tr>
<td>286xxx-xxxx1xx</td>
<td>3500</td>
<td>0/2000</td>
<td>3500</td>
<td>0/2000</td>
<td>2</td>
<td>6.7</td>
<td>4.7</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>285xxx-xxxx1xx</td>
<td>3000</td>
<td>0/2000</td>
<td>3000</td>
<td>0/2000</td>
<td>2.5</td>
<td>8.6</td>
<td>6.1</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>281xxx-xxxx1xx</td>
<td>2000</td>
<td>0/2000</td>
<td>2000</td>
<td>0/2000</td>
<td>3</td>
<td>10.8</td>
<td>8.4</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>284xxx-xxxx1xx</td>
<td>2000</td>
<td>0/2000</td>
<td>1200</td>
<td>0/1200</td>
<td>4</td>
<td>14.6</td>
<td>10.3</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>284xxx-xxxx1xx</td>
<td>2000</td>
<td>0/2000</td>
<td>2000</td>
<td>0/2000</td>
<td>4</td>
<td>14.3</td>
<td>10.3</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>282xxx-xxxx1xx</td>
<td>2000</td>
<td>0/2000</td>
<td>500</td>
<td>0/500</td>
<td>6</td>
<td>22.0</td>
<td>13.8</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>282xxx-xxxx1xx</td>
<td>2000</td>
<td>0/2000</td>
<td>2000</td>
<td>0/2000</td>
<td>6</td>
<td>22.0</td>
<td>12.7</td>
<td>100 – 400</td>
<td>-</td>
</tr>
<tr>
<td>283xxx-xxxx1xx</td>
<td>1500</td>
<td>0/1500</td>
<td>500</td>
<td>0/500</td>
<td>9</td>
<td>34.2</td>
<td>16.5</td>
<td>100 – 600</td>
<td>-</td>
</tr>
<tr>
<td>283xxx-xxxx1xx</td>
<td>1500</td>
<td>0/1500</td>
<td>1500</td>
<td>0/1500</td>
<td>9</td>
<td>33.0</td>
<td>10.9</td>
<td>100 – 600</td>
<td>-</td>
</tr>
<tr>
<td>287xxx-xxxx1xx</td>
<td>800</td>
<td>0/800</td>
<td>0</td>
<td>0/0</td>
<td>12</td>
<td>46.0</td>
<td>33.5</td>
<td>100 – 600</td>
<td>-</td>
</tr>
<tr>
<td>287xxx-xxxx1xx</td>
<td>800</td>
<td>0/800</td>
<td>800</td>
<td>0/800</td>
<td>12</td>
<td>45.9</td>
<td>33.5</td>
<td>100 – 600</td>
<td>-</td>
</tr>
</tbody>
</table>

Above data: the measurements are made with the actuators connected to a stable power supply. A reed-switch has no influence on above mentioned data.
### LA28 Compact Ordering example:

#### 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** = 7 cm leads with spade connectors only

#### 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 (5 + 156 mm)
- **X** = Other inst. dimension

#### Option:
- **1** = Safety nut RECOMMENDED
- **0** = None
- **4** = Brake
- **2** = Steel Splines
- **5** = Brake with safety nut

#### Colour:
- **-** = black
- **0** = None

#### Option:
- **A** = 0°
- **E** = 120°
- **I** = 240°
- **B** = 30°
- **F** = 150°
- **J** = 270°
- **C** = 60°
- **G** = 180°
- **K** = 300°
- **D** = 90°
- **H** = 210°
- **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)

#### Spindel 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

Drawing no.: 028647
Version C = 60%

Drawing no.: 028638
Back fixture 02

Drawing no.: 028744
Version A = 0%
LA28 Compact with cover

LA28 Compact with IPX6 housing

Drawing no. 028639

Drawing no. 028730
**Installation dimensions:**
S + 156: LA28 Compact (with or without safety nut), minimum inst. dim. 256 mm.
S + 167: LA28 Compact with splines, minimum inst. dim. 267 mm.
S + 181: LA28 Compact with safety nut and splines, minimum inst. dim. 281 mm.
S + 188: LA28 Compact with brake, minimum inst. dim. 288 mm.

**Note:**
The above data is with at stroke length of 100 mm.
In certain circumstances a stroke length of less than 100 mm is possible - please contact LINAK A/S.

---

**Compatible control boxes:**

<table>
<thead>
<tr>
<th></th>
<th>CB8</th>
<th>CB12</th>
<th>CB14</th>
<th>CBJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA28 with standard motor</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>LA28 with strong motor</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Terms of use
The user is responsible for determining the suitability of LINAK products for specific application. LINAK takes great care in providing
accurate and up-to-date information on its products. However, due to continuous development in order to improve its products, LINAK products are subject to frequent modifications and changes, without prior notice. Therefore, LINAK cannot guarantee the correct and actual status of said information on its products.
LINAK uses its best efforts to fulfill orders, but LINAK cannot, for the same reasons as mentioned above, guarantee the availability of any particular product. Therefore, LINAK reserves the right to discontinue the sale of any product displayed on its website or listed
in its catalogues or other written material drawn up by LINAK.
All sales are subject to the Standard Terms of Sale and Delivery for LINAK. For a copy hereof, please contact LINAK.

For mounting instructions and guidance in usage, please see the relevant user manual.