## ACTUATOR

LA23

## Features and options:

- Load in push: 2500N, 1800N, 1500N, 1200 N or 900 N
- Load in pull: 2500N, 1800N, 1500N, 1200N or 900N
- Housing colour: Grey or black
- Protection class: IPX4 or IPX6
- Motor: 12 V DC, 24 V DC
- Stroke length: 20-300 mm
- Built-in dimensions: 110-146 mm + stroke length
- Positioning options: Potential free end stop signals Hall potentiometer or Hall PWM position Single Hall, Dual Hall
- Nut: Guided

- Back fixture material: Plastic or steel
- Safety nut: In push or pull (2500N and 1800N version only safety nut in push)
- Mechanical spline: Yes
- Built-in electrical end-stop: Yes
- Exchangeable cable: Yes
- Static safety factor: 2.5
- Noise level: Max. 58.5 dB(A) (At nominal voltage and with no load, according to EN ISO 3743-1)
- Mechanical end stop: Yes


## Usage:

- Duty cycle: 10\%, 2 minutes continuous use followed by 18 minutes not in use
- Usage temperature:
$-30^{\circ} \mathrm{C}$ to $+55^{\circ} \mathrm{C}$ (according to ISO 7176-9)
- Storage temperature:
$-45^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$ (according to ISO 7176-9)
- Compatibility:

CB20, CB16, CB6S, CBJ1/2, CBJC, CBJH, CBD4, 5 \& 6*

* SLS must be ignored Up + Down in the CBD4, 5 or 6 when configured for LA23.
* Only the 3, 6 \& 12 mm versions can be configured in the CBD4, 5 or 6.
* Only tested for single use.
- Approvals:

IEC60601-1:2005 $3^{\text {rd }}$ ed., ANSI / AAMI ES60601-
1:2005, 3 ${ }^{\text {rd }}$ edition
LA23 in combination with CBD4, 5 \& 6 has no approvals.

- Fire catagory: Enclosure UL94-V0


LA23
Ordering example:


## Dimensions:



Back fixture orientation Option 0


Drawing number:0234024

Tolerances:
For built-in dimensions and stroke $\pm 2 \mathrm{~mm}$.

The built-in dimension depends upon the chosen safety option and stroke length. Please see the table below to decide upon the built-in dimension.

| Safety option | Stroke length | Spindle pitch | Min. built-in Dimensions |
| :---: | :---: | :---: | :---: |
| $0=$ No safety option | 20-49 | 6,9 or 12 | 160 |
| 0 = No safety option | 20-49 | 3, 5 | 168 |
| 1 = Safety nut for push | 20-49 | 6,9 or 12 | 160 |
| 1 = Safety nut for push | 20-49 | 3, 5 | 168 |
| 2 = safety nut for pull | 20-49 | 6,9 or 12 | 172 |
| 3 = Mechanical Spline for push | 20-49 | 6,9 or 12 | 180 |
| 3 = Mechanical Spline for push | 20-49 | 3, 5 | 196 |
| 4 = Mechanical Spline \& safety nut for push | 20-49 | 6,9 or 12 | 180 |
| 4 = Mechanical Spline \& safety nut for push | 20-49 | 3, 5 | 196 |
| $0=$ No safety option | 50-200 | 6,9 or 12 | 110 + stroke |
| 0 = No safety option | 50-200 | 3, 5 | 118 + stroke |
| 1 = Safety nut for push | 50-200 | 6,9 or 12 | 110 + stroke |
| 1 = Safety nut for push | 50-200 | 3, 5 | 118 + stroke |
| 2 = Safety nut for pull | 50-200 | 6,9 or 12 | 122 + stroke |
| 3 = Mechanical Spline for push | 50-200 | 6,9 or 12 | 130 + stroke |
| 3 = Mechanical Spline for push | 50-200 | 3, 5 | 146 + stroke |
| 4 = Mechanical Spline \& safety nut for push | 50-200 | 6,9 or 12 | 130 + stroke |
| 4 = Mechanical Spline \& safety nut for push | 50-200 | 3, 5 | 146 + stroke |
| 0 = No safety option | 201-300 | 6,9 or 12 | 130 + stroke |
| 0 = No safety option | 201-300 | 3, 5 | 138 + stroke |
| 1 = Safety nut for push | 201-300 | 6,9 or 12 | 130 + stroke |
| 1 = Safety nut for push | 201-300 | 3, 5 | 138 + stroke |
| 2 = Safety nut for pull | 201-300 | 6,9 or 12 | 142 + stroke |
| 3 = Mechanical Spline for push | 201-300 | 6,9 or 12 | 150 + stroke |
| 3 = Mechanical Spline for push | 201-300 | 3, 5 | 166 + stroke |
| 4 = Mechanical Spline \& safety nut for push | 201-300 | 6,9 or 12 | 150 + stroke |
| 4 = Mechanical Spline \& safety nut for push | 201-300 | 3, 5 | 166 + stroke |

It is possible to order LA23 with extended built-in dimensions if the following requirements are fulfilled

|  | $\begin{gathered} \text { Spindle pitch }= \\ 6,9,12 \end{gathered}$ | $\begin{gathered} \text { Spindle pitch = } \\ 3,5 \end{gathered}$ | Spindle pitch $=$ $6,9,12$ | Spindle pitch $=$ $6,9,12$ | $\begin{gathered} \text { Spindle pitch = } \\ 3,5 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Safety option 0 : No safety option |  | Safety option 2 : safety nut pull | Safety option 3 : <br> Spline without safety nut |  |
|  | Safety option 1 : safety nut push |  |  | Safety option 4 : <br> Spline + safety nut push |  |
| Max. built-in dimensions | $\leq 730$ - stroke | $\leq 738$ - stroke | $\leq 742$ - stroke | $\leq 750$ - stroke | $\leq 766$ - stroke |

Example:
A) 6 mm pitch no safety option, stroke 200, BID can be max. $(730-200)=530$
B) 3 mm pitch no safety option, stroke 20, BID can be max. $(738-20)=718$

Technical specifications:

| Power supply | Spindle pitch (mm) | Load max. Push or Pull (N) | Motor type | *Typical speed at 0/full load ( $\mathrm{mm} / \mathrm{sec}$.) | *Typical current at $0 /$ full load (Amp.) | Inrush current (Amp) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 12VDC | 3 | 2500/2500 | A: 12 V | $3.1 / 2.5$ | $0.8 / 3.6$ | 13.4 |
| CBJ1/2, CBJH and CBJC | 3 | 2500 / 2500 | B: 24 V | $3.2 / 2.6$ | $0.4 / 1.9$ | 8.7 |
| OpenBus ${ }^{\text {TM }}$ | 3 | $2500 / 2500$ | $\mathrm{G}: 24 \mathrm{~V}$ | 3.3 / 2.7 | 0.3 / 1.4 | 6.2 |
| 12VDC | 5 | 1800 / 1800 | A: 12 V | $5.4 / 4.2$ | $0.8 / 3.9$ | 13.4 |
| CBJ 1/2, CBJH and CBJC | 5 | 1800 / 1800 | B: 24 V | $5.4 / 4.5$ | $0.4 / 1.9$ | 8.7 |
| OpenBus ${ }^{\text {TM }}$ | 5 | 1800 / 1800 | $\mathrm{G}: 24 \mathrm{~V}$ | $5.6 / 4.6$ | $0.3 / 1.4$ | 6.2 |
| 12VDC | 6 | 1500 / 1500 | A: 12 V | $6.6 / 5.2$ | $0.8 / 3.6$ | 13.4 |
| CBJ 1/2, CBJH and CBJC | 6 | 1500 / 1500 | B: 24 V | $6.4 / 5.5$ | $0.4 / 1.7$ | 8.7 |
| OpenBus ${ }^{\text {TM }}$ | 6 | 1500 / 1500 | G: 24 V | $6.7 / 5.5$ | $0.3 / 1.3$ | 6.2 |
| 12VDC | 9 | 1200 / 1200 | A: 12 V | $9.9 / 7.5$ | $0.9 / 4.0$ | 13.4 |
| CBJ1/2, CBJH and CBJC | 9 | 1200 / 1200 | B: 24 V | 9.5 / 8.1 | $0.4 / 1.9$ | 8.7 |
| OpenBus ${ }^{\text {TM }}$ | 9 | 1200 / 1200 | $\mathrm{G}: 24 \mathrm{~V}$ | 9.9 / 8.1 | $0.3 / 1.3$ | 6.2 |
| 12VDC | 12 | $900 / 900$ | A: 12 V | 13/9.6 | $0.9 / 3.8$ | 13.4 |
| CBJ 1/2, CBJH and CBJC | 12 | 900 / 900 | B: 24 V | $12.6 / 10.4$ | $0.4 / 1.9$ | 8.7 |
| OpenBus ${ }^{\text {TM }}$ | 12 | $900 / 900$ | G: 24 V | 13.3 / 10.7 | $0.3 / 1.4$ | 6.2 |

Safety nut and steel back fixture overview

| Pitch <br> $(\mathrm{mm})$ | Load <br> (N) | Safety nut | Steel back fixture | Plastic back fixture |
| :---: | :---: | :---: | :---: | :---: |
| 12 | 900 N | Optional in push or pull | Required in pull | Only in push |
| 9 | 1200 N | Optional in push or pull | Required in pull | Only in push |
| 6 | 1500 N | Optional in push or pull | Required in pull | Only in push |
| 5 | 1800 N | Optional in push <br> (Safety nut 2500N not available in pull) | Always required | Not available |
| 3 | 2500 N | Optional in push <br> (Safety nut 2500 N not available in pull) | Always required | Not available |

Self-locking specifications

| Maximum self-lock (N) | Without short circuit | With short circuit |
| :---: | :---: | :---: |
| 12 mm pitch | 750 | 900 |
| 9 mm pitch | 750 | 1200 |
| 6 mm pitch | 1200 | 1500 |
| 5 mm pitch | 1600 | 1800 |
| 3 mm pitch | 2500 | 2500 |

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