

# Linear actuator

## CAHB-10 series

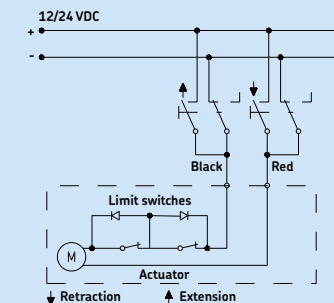
### Benefits

- Compact design
- Designed for harsh environment
- Robust and reliable
- Integrated limit switches
- Quiet operation
- Thermal protection
- Optional potentiometer and 2-Hall encoder available
- Electromagnetic compatibility (EMC) compliant

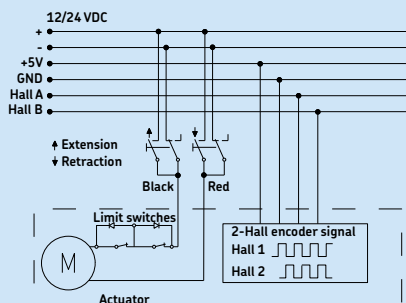


**Connecting diagram**

**Basic configuration**

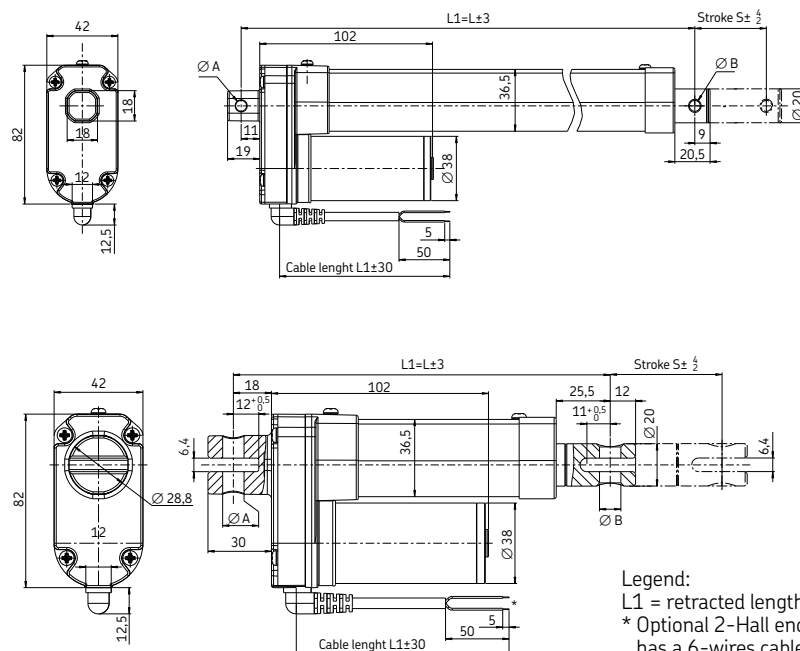


**2-Hall encoder**



**Dimensional drawing**

**Basic configuration and optional 2-Hall encoder**



Legend:  
 L1 = retracted length  
 \* Optional 2-Hall encoder has a 6-wires cable

| Stroke (mm)                     | 50  | 100 | 150 | 200 | 250 | 300 |
|---------------------------------|-----|-----|-----|-----|-----|-----|
| Retracted length (L1)           | 158 | 209 | 260 | 311 | 362 | 413 |
| Retracted length with fork head | 179 | 230 | 281 | 332 | 383 | 434 |

**Encoder resolution**

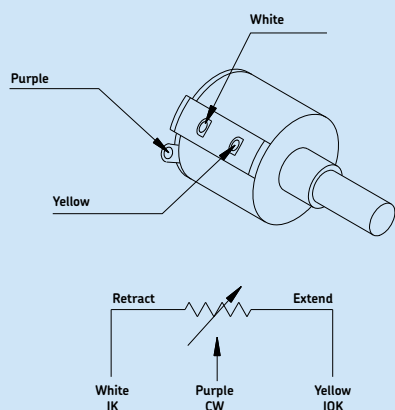
| Gear ratio | 5:1 | 10:1 | 20:1  | 30:1 | 40:1  |
|------------|-----|------|-------|------|-------|
| Mm/pulse   | 0,3 | 0,15 | 0,075 | 0,05 | 0,038 |

**Technical data**

|                              | Unit    | CAHB-10... 1 | CAHB-10... 2 | CAHB-10... 3 | CAHB-10... 4 | CAHB-10... 5 |
|------------------------------|---------|--------------|--------------|--------------|--------------|--------------|
| Push load                    | N       | 120          | 240          | 500          | 750          | 1 000        |
| Pull load                    | N       | 120          | 240          | 500          | 750          | 1 000        |
| Speed (full load to no load) | mm/s    | 45 to 56     | 24 to 30     | 13 to 16     | 8 to 10      | 6 to 8       |
| Stroke                       | mm      | 50 to 300    | 50 to 300    | 50 to 300    | 50 to 300    | 50 to 300    |
| Retracted length             | mm      | _*           | _*           | _*           | _*           | _*           |
| Voltage                      | V DC    | 12 or 24     | 12 or 24     | 12 or 24     | 12 or 24     | 12 or 24     |
| Power consumption            | W       | N/A          | N/A          | N/A          | N/A          | N/A          |
| Current consumption          | 12 V DC | A            | 4            | 3,5          | 3,2          | 3            |
|                              | 24 V DC | A            | 2,2          | 2,0          | 1,8          | 1,6          |
| Duty cycle                   | %       | 25           | 25           | 25           | 25           | 25           |
| Ambient temperature          | °C      | -40 to +85   | -40 to +85   | -40 to +85   | -40 to +85   | -40 to +85   |
| Type of protection           | IP      | 66s          | 66s          | 66s          | 66s          | 66s          |
| Weight (at 300 mm stroke)    | kg      | 1,5          | 1,5          | 1,5          | 1,5          | 1,5          |
| Color                        | -       | Silver       | Silver       | Silver       | Silver       | Silver       |
| Limit switches               | -       | Yes          | Yes          | Yes          | Yes          | Yes          |
| Thermal protection           | -       | Yes          | Yes          | Yes          | Yes          | Yes          |

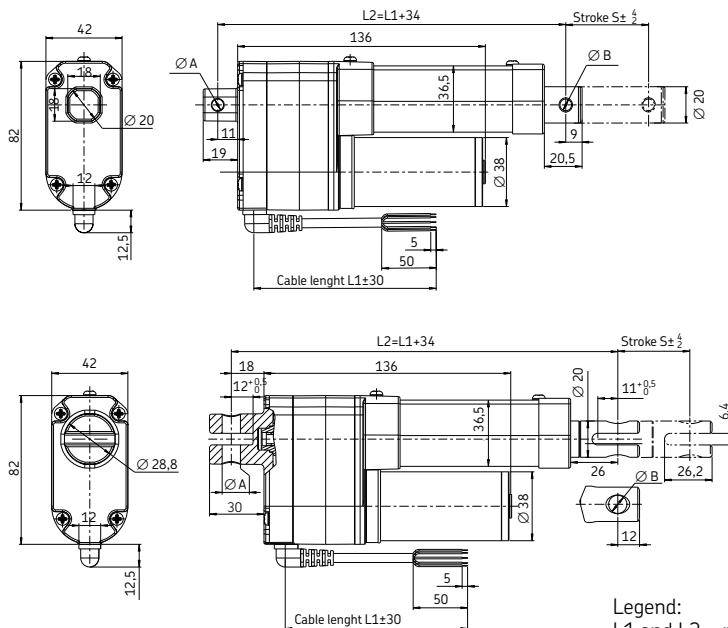
\* See above table

Potentiometer



Dimensional drawing

Optional potentiometer



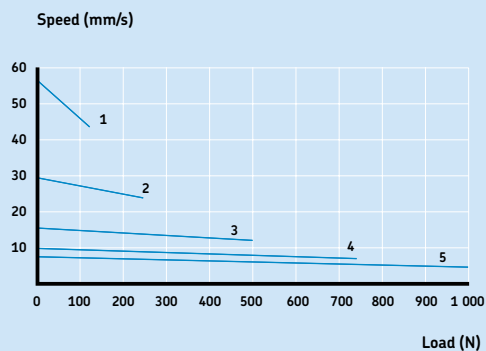
Legend:  
 L1 and L2 = retracted length

| Stroke (mm)                     | 50  | 100 | 150 | 200 | 250 | 300 |
|---------------------------------|-----|-----|-----|-----|-----|-----|
| Retracted length (L2)           | 192 | 243 | 294 | 345 | 396 | 447 |
| Retracted length with fork head | 213 | 264 | 315 | 366 | 417 | 468 |

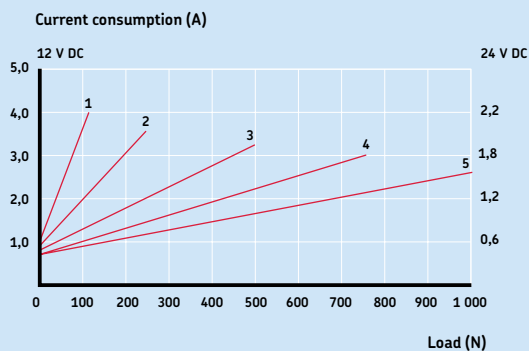
Potentiometer resolution

| Stroke (mm)                               | 50~80      | 80~160     | 160~300    |
|---|------------|------------|------------|
| Minimum resistance value of potentiometer | 700~1300 Ω | 700~1300 Ω | 700~1300 Ω |
| Potentiometer resolution                  | 100 Ω/mm   | 50 Ω/mm    | 16,6 Ω/mm  |

Performance diagrams



Speed-load diagram



Current-load diagram

**Ordering key**

| Ordering key                  | Type   | Voltage:           | Load:                 | Screw: | Stroke:                                | Retracted length:*   | IP: | Front attachment: | Rear attachment: | Hole direction of the attachments: | Option 1:   | Cable length:                   | Auxiliary code (Standard products are "00") |
|-------------------------------|--------|--------------------|-----------------------|--------|--|--|-----|-------------------|------------------|------------------------------------|-------------|---------------------------------|---|
| CAHB-10-<br>A-<br>-A<br>0-000 | A<br>B | 12 V DC<br>24 V DC | 1<br>2<br>3<br>4<br>5 | A<br>X | 050<br>100<br>150<br>200<br>250<br>300 | Stroke without potentiometer:**<br>50 mm: 158 mm (A(B)+A(B)), 165 mm (A(B)+C), 172 mm (C+A(B)), 179 mm (C+C)<br>100 mm: 209 mm (A(B)+A(B)), 216 mm (A(B)+C), 223 mm (C+A(B)), 230 mm (C+C)<br>150 mm: 260 mm (A(B)+A(B)), 267 mm (A(B)+C), 274 mm (C+A(B)), 281 mm (C+C)<br>200 mm: 311 mm (A(B)+A(B)), 318 mm (A(B)+C), 325 mm (C+A(B)), 332 mm (C+C)<br>250 mm: 362 mm (A(B)+A(B)), 369 mm (A(B)+C), 376 mm (C+A(B)), 383 mm (C+C)<br>300 mm: 413 mm (A(B)+A(B)), 420 mm (A(B)+C), 427 mm (C+A(B)), 434 mm (C+C) | A   | A<br>B<br>C<br>X  | A<br>B<br>C<br>X | A<br>B                             | O<br>P<br>H | A<br>B<br>C<br>D<br>E<br>F<br>X |   |

\* Retracted length will be englanded 34 mm with Potentiometer option  
 \*\* Front attachment + Rear attachment; A, B, C mean the attachment types

