

# CAHB-10

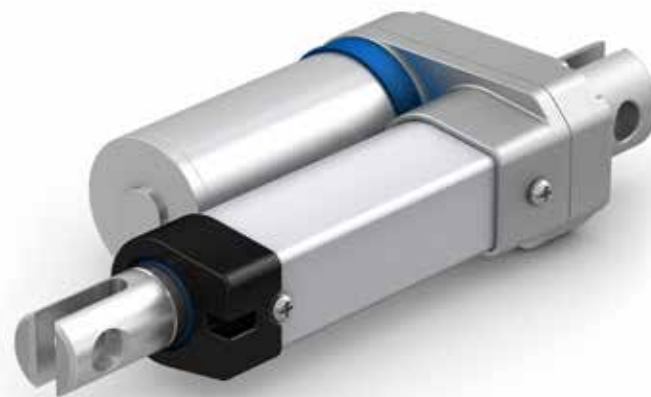
## Linear actuator

### Benefits

- Designed and tested under demanding conditions
- Reliable and cost-effective
- Reduced overall set time
- Virtually maintenance-free

### Features

- Compact and robust design, IP66S/69K, wide temperature range and corrosion resistant
- Integrated limit switches, optional absolute or incremental positioning feedback
- Integrated thermal protection

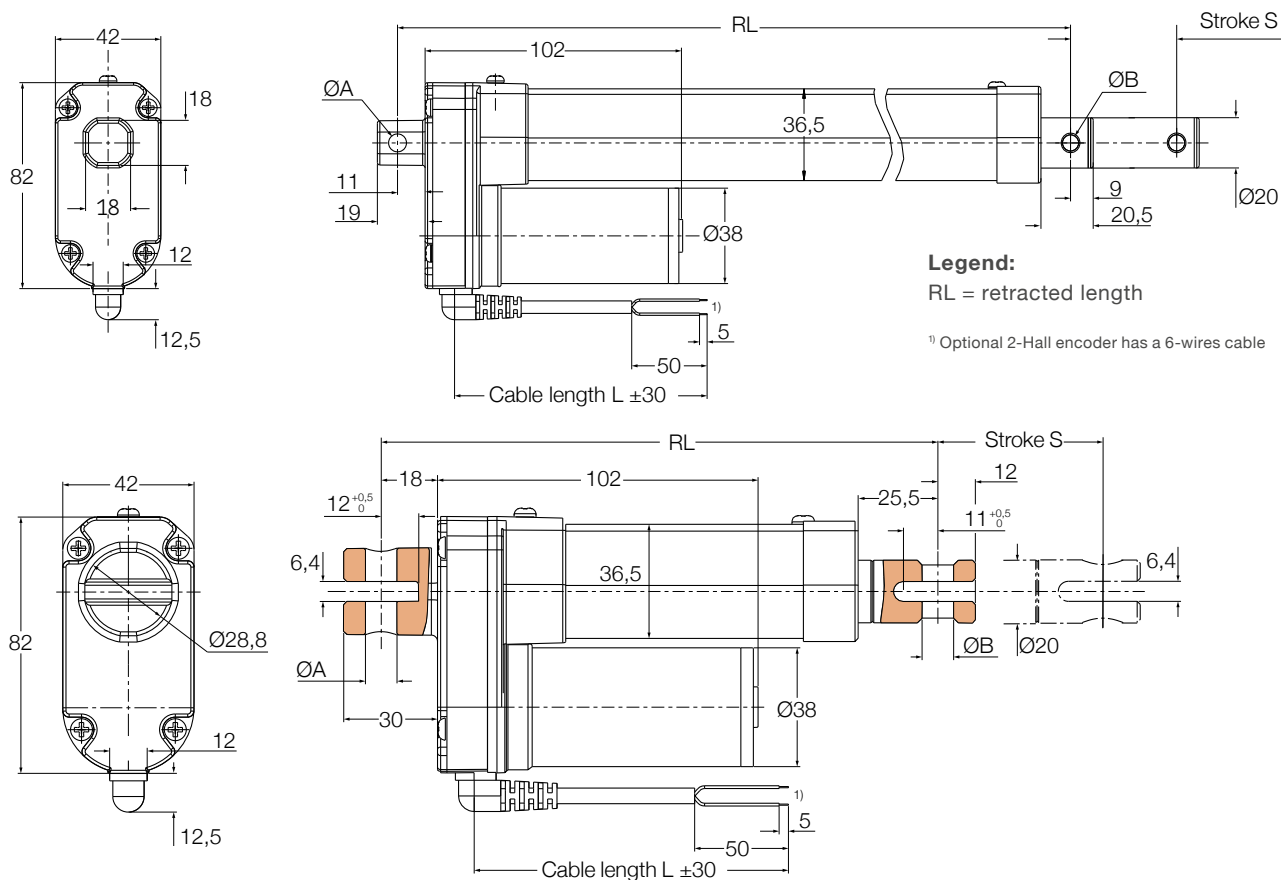


### Technical data

Designation	Unit	CAHB-10... 1	CAHB-10... 2	CAHB-10... 3	CAHB-10... 4	CAHB-10... 5	CAHB-10... 6
Push load	N	120	240	500	750	1 000	1 500
Pull load	N	120	240	500	750	1 000	1 500
Speed (full load to no load)	mm/s	45 to 56	24 to 30	13 to 16	8 to 10	6 to 8	5 to 8
Stroke	mm	50 to 300	50 to 300	50 to 300	50 to 300	50 to 300	50 to 300
Voltage	V DC	12 or 24	12 or 24	12 or 24	12 or 24	12 or 24	12 or 24
Nominal current 12 V DC	A	4	3,5	3,2	3	2,8	4,4
24V DC	A	2,2	2	1,8	1,8	1,6	2,8
Duty cycle	%	25	25	25	25	25	20
Ambient temperature	°C	-40 to +85	-40 to +85	-40 to +85	-40 to +85	-40 to +85	-40 to +85
Type of protection	IP	66s/69k	66s/69k	66s/69k	66s/69k	66s/69k	66s/69k
Weight (at 300 mm stroke)	kg	1,5	1,5	1,5	1,5	1,5	1,5
Color	-	Silver	Silver	Silver	Silver	Silver	Silver
Limit switches	-	Yes	Yes	Yes	Yes	Yes	Yes
Thermal protection	-	Yes	Yes	Yes	Yes	Yes	Yes

## Dimensional drawing

### Basic configuration and optional 2-Hall encoder



Front / Rear attachment	Ø A	Ø B
Option A	6,4 (0, +0,1)	6,4 (0, +0,1)
Option B	8,0 (0, +0,1)	8,0 (0, +0,1)
Option C	10,1 (0, +0,1)	10,1 (0, +0,1)

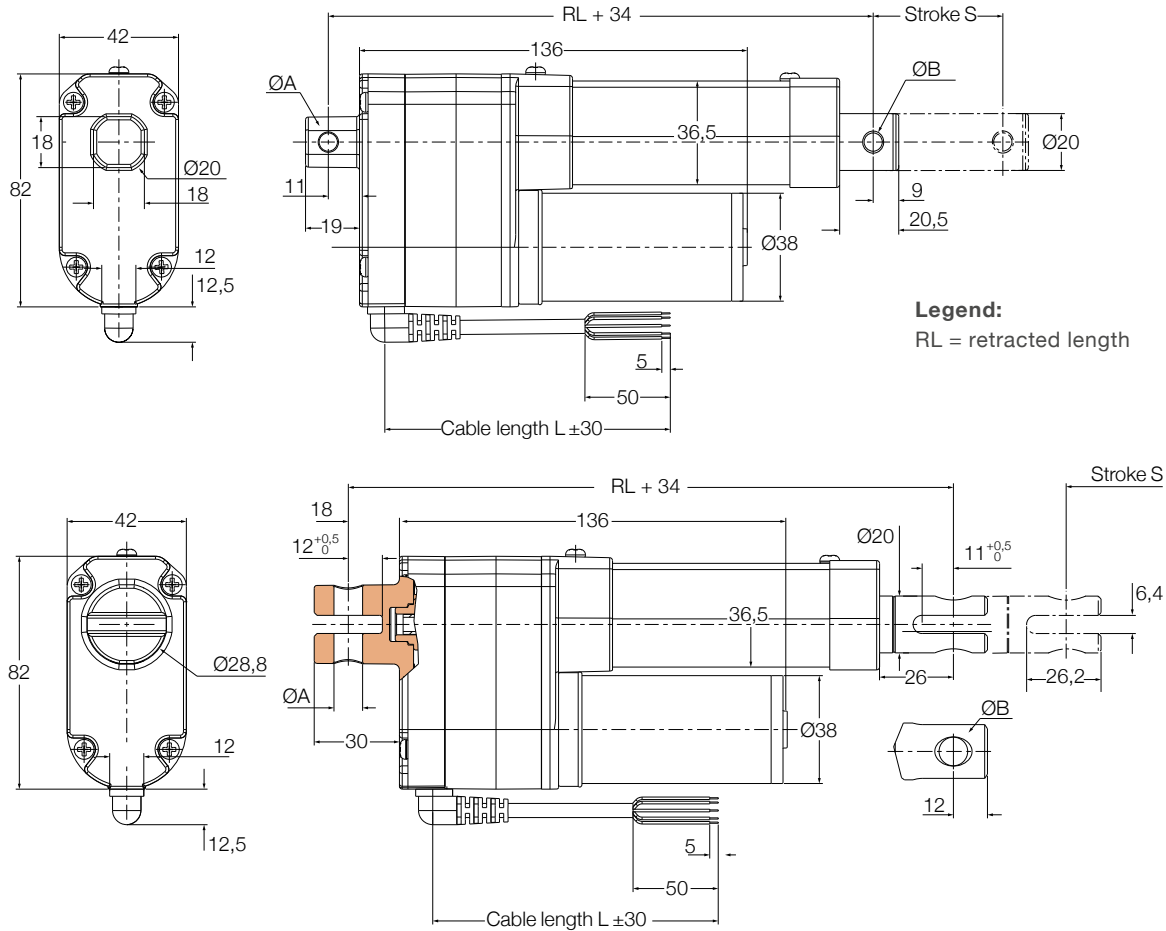
	RL tolerance	S tolerance
CAHB10...1 and 2	(-5, +1)	(-1, +5)
CAHB10...3 and 4	(-3, +3)	(-3, +3)
CAHB10...3 and 4	(-2, +4)	(-4, +2)

### Retracted length calculation (RL)

Stroke [mm]	50	100	150	200	250	300
Retracted length (RL) with Rod end (Front) + Rod end (Rear)	158	209	260	311	362	413
Retracted length (RL) with Rod end (Front) + Fork head (Rear)	165	216	267	318	369	420
Retracted length (RL) with Fork head (Front) + Rod end (Rear)	172	223	274	325	376	427
Retracted length (RL) with Fork head (Front) + Fork head (Rear)	179	230	281	332	383	434

## Dimensional drawing

### Optional potentiometer and absolut analogue



Front / Rear attachment	Ø A	Ø B
Option A	6,4 (0, +0,1)	6,4 (0, +0,1)
Option B	8,0 (0, +0,1)	8,0 (0, +0,1)
Option C	10,1 (0, +0,1)	10,1 (0, +0,1)

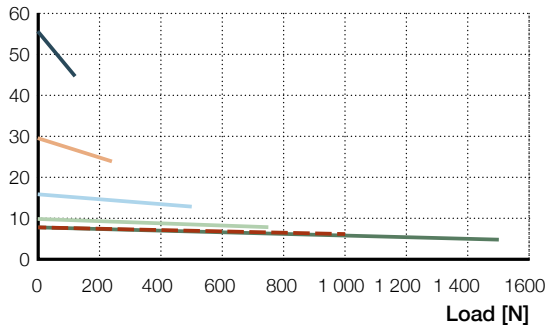
	RL tolerance	S tolerance
CAHB10...1 and 2	(-5, +1)	(-1, +5)
CAHB10...3 and 4	(-3, +3)	(-3, +3)
CAHB10...3 and 4	(-2, +4)	(-4, +2)

### Retracted length calculation (RL)

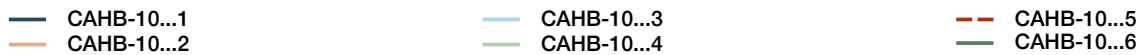
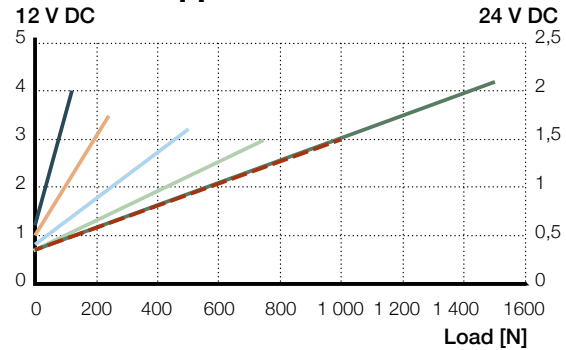
Stroke [mm]	50	100	150	200	250	300
Retracted length (RL) with Rod end (Front) + Rod end (Rear)	192	243	294	345	396	447
Retracted length (RL) with Rod end (Front) + Fork head (Rear)	199	250	301	352	403	454
Retracted length (RL) with Fork head (Front) + Rod end (Rear)	206	257	308	359	410	461
Retracted length (RL) with Fork head (Front) + Fork head (Rear)	213	264	315	366	417	468

## Performance diagrams

Speed-load diagram  
Speed [mm/s]



Current-load diagram  
Nominal current [A]



## Encoder resolution

Type	CAHB-10...1	CAHB-10...2	CAHB-10...3	v CAHB-10...4	CAHB-10...5/6
mm/pulse	0,3	0,15	0,075	0,05	0,0375

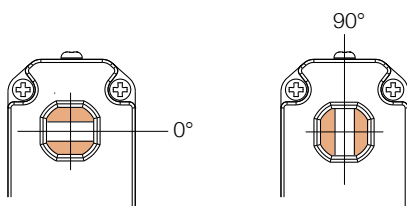
## Potentiometer resolution

Stroke [mm]	50~80	80~160	160~300
Minimum resistance value of potentiometer	700~1 300 Ω	700~1 300 Ω	700~1 300 Ω
Potentiometer resolution	100 Ω/mm	50 Ω/mm	16,6 Ω/mm

## Absolute analog output

Stroke [mm]	50~80	80~160	160~300
Initial value VS RL position (V)	0,5	0,5	0,5
Resolution (mm)	0,024	0,049	0,146
Position feedback change (V/mm)	0,05	0,025	0,0083

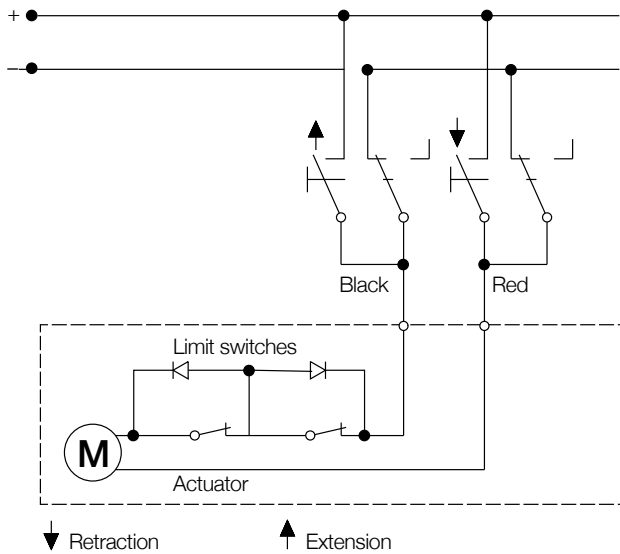
## Attachment orientation (refer to ordering key Attachment orientation)



## Connecting diagram

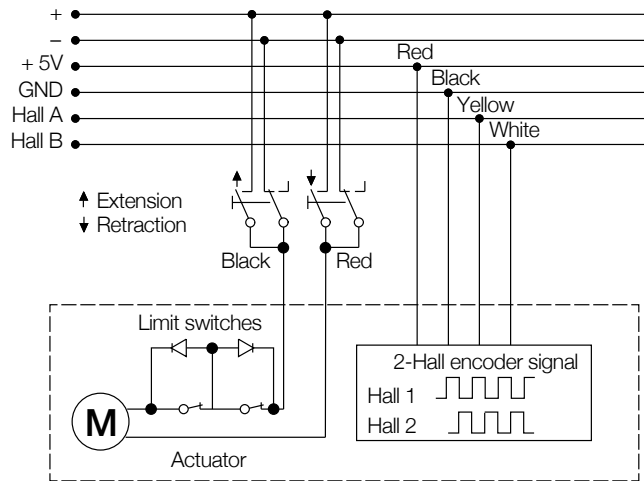
### Basic configuration

12/24 V DC



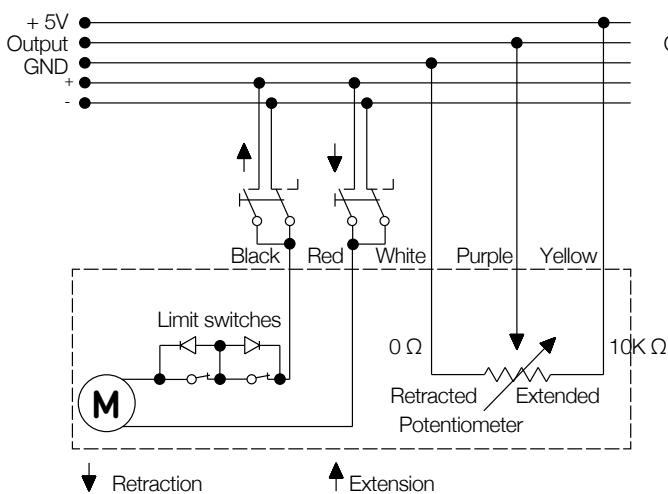
### 2-Hall encoder

12/24 V DC



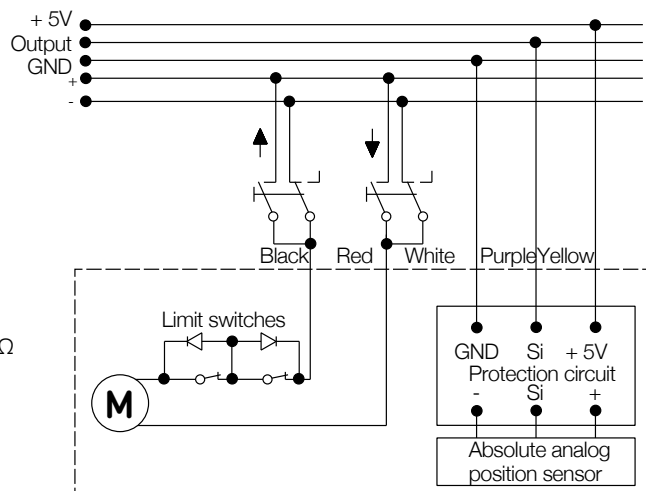
### Potentiometer

12/24 V DC



### Absolute analog output

12/24 V DC



## Ordering key

C A H B - 1 0 - - - - - A - - - - - 0 0 0

### Type

### Voltage

- A 12 V DC
- B 24 V DC

### Load

- 1 120 N
- 2 240 N
- 3 500 N
- 4 750 N
- 5 1 000 N
- 6 1 500 N

### Screw

- A TR12 screw
- X Customized

### Stroke

- 050 50 mm
- 100 100 mm
- 150 150 mm
- 200 200 mm
- 250 250 mm
- 300 300 mm

### Retracted length <sup>1)</sup>

Please refer to the table "Retracted length calculation" on **page 7 and 8**

### IP

- A Standard (IP 66s/69k)

### Front attachment

- A Rod with hole Ø6,4 (0, +0,1) mm
- B Rod with hole Ø8 (0, +0,1) mm
- C Fork head with hole Ø10,1 (0, +0,1) mm
- X Customized

### Rear attachment

- A Rod with hole Ø6,4 (0, +0,1) mm
- B Rod with hole Ø8 (0, +0,1) mm
- C Fork head with hole Ø10,1 (0, +0,1) mm
- X Customized

### Hole direction of the attachments

- A 0°
- B 90°

### Option 1: Position output

- 0 None
- A Absolute analog output
- P Potentiometer
- H 2-Hall encoder

### Cable length

- A 600 mm without connector
- B 1 000 mm without connector
- C 1 500 mm without connector
- D 2 000 mm without connector
- E 2 500 mm without connector
- F 3 000 mm without connector

### Customized

- X