

Linear actuator Junior 0E



*Our smallest model
with high
performance*



Linear actuator Junior 0E



Description

With the Junior 0E linear actuator, elero offers an electromechanical push rod drive that provides considerably increased compactness and flexibility compared to its previous models. No other drive in its class has a comparable power density.

Maximum functionality ...

The Junior 0E is fitted with an intelligent electronic system that makes it possible to control the drive using a programmable logic controller. Thus, additional switching devices such as relays or contactors are not necessary for operation. Up to 4 positions can be programmed easily using the optional programming box that allows for precise correction of the positions. These positions can also be used as customer-specific end positions. The assignment of inputs and outputs as well as the stroke speed can be adapted in the factory by software modifications.

The Junior 0E is available in 6 different versions that are intended for various combinations of load, stroke speed and rating.

... in minimum space

Small and powerful - The combination of these two features is the real strength of the Junior 0E. Thanks to its compact design, it can be used especially for applications with reduced space for the drive.

The closed metal housing ensures the necessary robustness and a well-designed surface. Thus, the Junior 0E fits perfectly into applications in exposed positions.

Further advantages of the Junior 0E at a glance

- Constantly controlled speed
- Absolute self-locking
- Plug connections instead of mounted cables ensure easy handling
- Extensive overload protection
- Speed variations are possible on request
- Serial interface available on request



Applications · Technical data

The Junior OE is designed for interior applications and can be used especially for mechanical engineering, toolbuilding and automation technology.

The Junior OE is suited for

- Adjustment of valves and metering units
- Closing and locking
- Centering and positioning

The facts

	Junior OE
Load (N)	150–550
Stroke speed (mm/s)	1.6–30
Stroke lengths (mm)	40, 50, 100, 150 and 200
Fixing on piston end	articulated lug (stainless steel 1.4301)
Fixing on housing end	articulated lug (galvanised)
Electronic limit switches	adjustable throughout the whole stroke
Operating voltage	24 V DC
Voltage of the digital inputs and outputs	24 V DC
Housing	aluminium, optionally stainless steel 1.4301
Protection type	IP 54
Temperature range (°C)	-20 to +50
Connections	plug connections
Programmable positions	4
Overvoltage protection	yes
Overcurrent protection	yes

Load (N) and stroke speeds (mm/s)

Version	Rating: S3/15%				Rating: S3/40%				Rating: S1/100 %			
	Load (N)	Stroke speed (mm/s)	Nominal current (A)	Power (W)	Load (N)	Stroke speed (mm/s)	Nominal current (A)	Power (W)	Load (N)	Stroke speed (mm/s)	Nominal current (A)	Power (W)
A*	200	30	1.8	44	200	30	1.8	44	150	30	1.6	39
B*	500	20	2	48	500	20	1.8	44	400	20	1.6	39
C	500	15	2	48	450	15	1.8	44	400	15	1.6	39
D									550	10	1.6	39
E									550	5	1.2	29
F									550	1.6	0.8	20

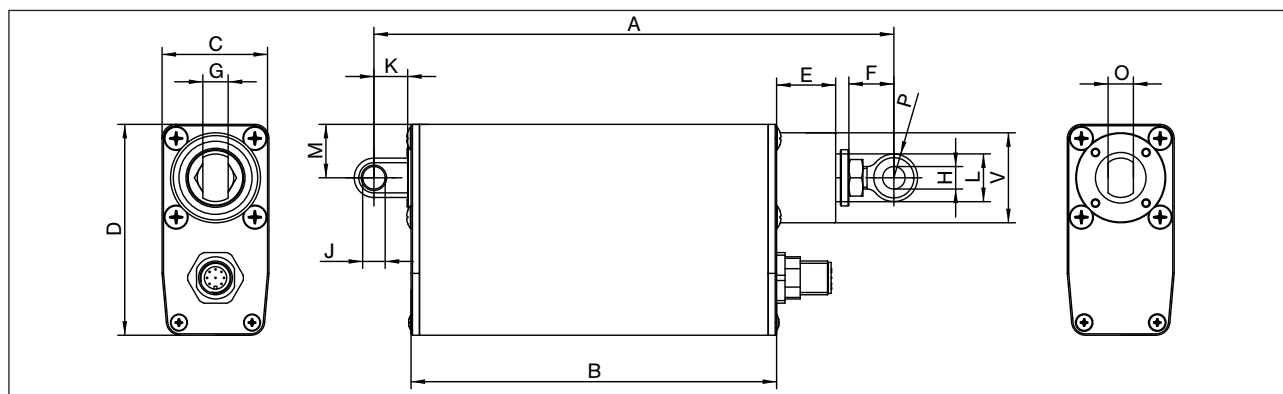
* Attention! Versions A and B are not available with the stroke length of 40 mm.

Linear actuator Junior 0E

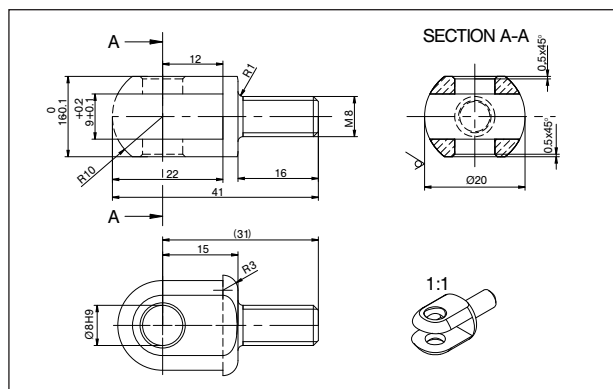


Technical data · Dimensions

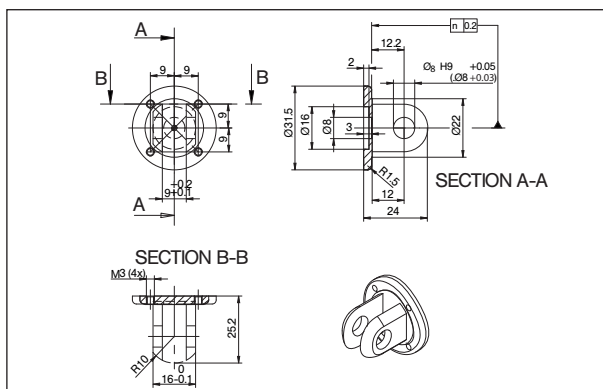
Dimensions



Clevis end (on piston end)



End cover with clevis end (on housing end)



Stroke length (mm)	A min.	A max.	B	C	D	E	F ±2	G	H ØH9	J ØH9	K	L SW	M	N	O	P R	V Ø
40	154	194	120	38	75	-	20.7	9	8	8	12	17	19	9	10	8	-
50	185	235	130	38	75	21	16	9	8	8	12	17	19	9	9	8	32
100	235	335	130	38	75	71	16	9	8	8	12	17	19	9	9	8	32
150	285	435	130	38	75	121	16	9	8	8	12	17	19	9	9	8	32
200	335	535	130	38	75	171	16	9	8	8	12	17	19	9	9	8	32



Operating modes

Note: The following information about the operating modes does only refer to the control procedure using the optional programming box. The drive can be controlled by connecting 24 V DC to the digital inputs. The button is pressed means = H level, or the programming switch is in the Programming position = H level. When the supply voltage is connected, the drive is ready for operation after approx. 0.5 s.

H level = 24 V; Low level = 0 V.

Programming mode

Programming mode

In this operating mode, 4 positions can be programmed.

Inching mode

In the inching mode, the drive can be operated freely between the end positions with reduced speed.

Correction of positions

A fine adjustment of programmed positions can be made using the directional buttons (one button press corresponds to 0.2 mm).

Positioning mode (operation)

In the positioning mode, the drive is operated to the programmed positions. The speed is reduced shortly before the positions are reached.

Reference travel

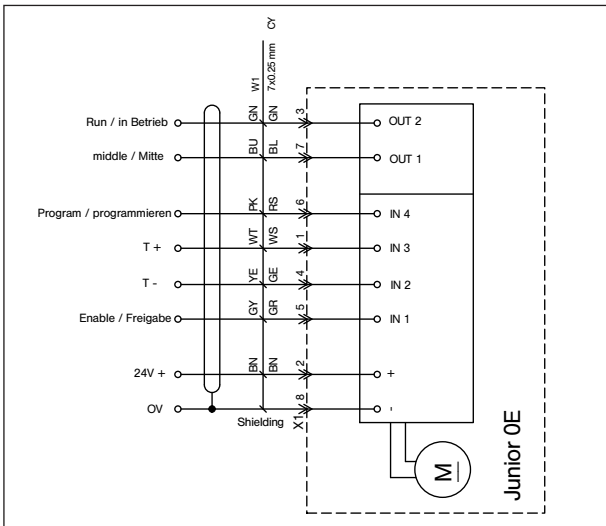
A reference travel is not necessary.

Linear actuator Junior 0E

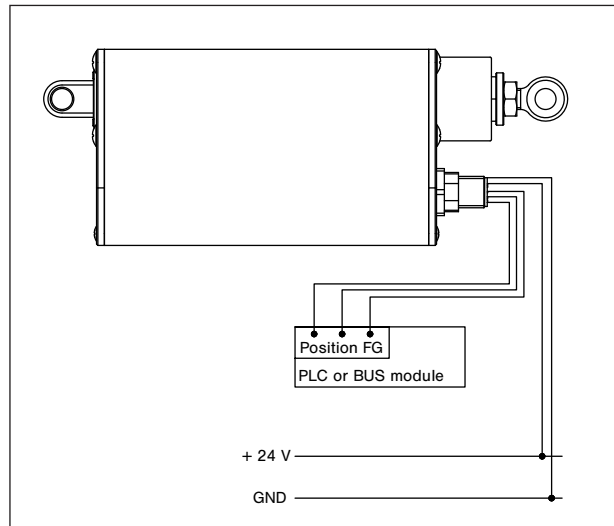


Wiring diagrams

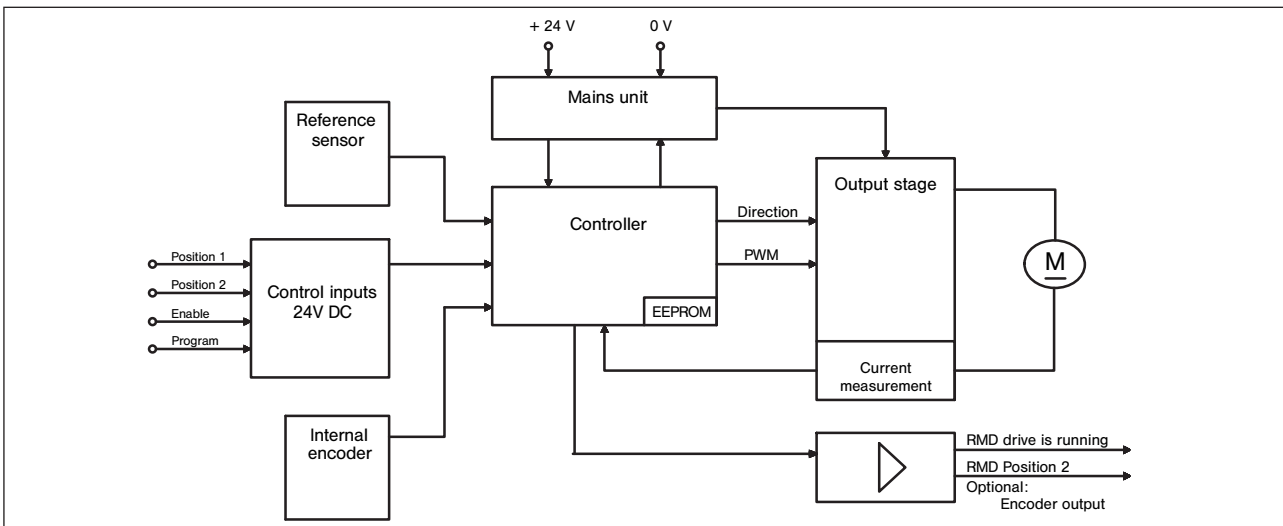
Standard wiring diagram GS 9501



Recommended connection of the Junior 0E to a PLC



Schematic diagram





Options · Technical data

Options

Connecting cable 2 m with cable box straight
Item nr: 753362001

Connecting cable 5 m with cable box straight
Item nr: 753362101

Connecting cable 2 m with cable box angular
Item nr: 752966201

Connecting cable 5 m with cable box angular
Item nr: 753362201

Programming box Junior OE
Item nr: 753492801

Protective systems

Internal limit switches

The internal limit switches ensure that the piston rod moves between two adjustable end positions.

Undervoltage protection

The linear actuator is switched off if the supply voltage drops below 20 V.

Overcurrent protection

The linear actuator is protected against overload, especially when the temperatures are high. When the linear actuator has been switched off due to the overcurrent protection, the Enable signal has to be switched off in order to restart the linear actuator.

Functions of the digital inputs and outputs

Description	Wire colour	Function	at the control box
IN 1	Grey	Enable	EN
IN 2	Yellow	Direction -	-
IN 3	White	Direction +	+
IN 4	Pink	Programming	Switch
OUT 1	Blue	Middle position	-
OUT 2	Green	Running message	-

Note: All digital inputs and outputs are active high.
The digital outputs are open collector outputs (p; 10 mA).

elero linear actuators



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solutions for everyone!*

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We look forward to helping you – for at elero there is something for everyone!

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