

AA1121 | Linear actuator 800 N (F_{\max}), 100 mm/s (v_{\max})



i Product status: Product announcement

The linear actuator sets new standards for the electronic control of valves and linear adjusting units. With a lifting height of 10 mm and a peak force of 800 N, new goals are attained in relation to the power density of linear actuators. The complete adjustable axis has dimensions of just 49 x 49 x 92 mm.

The linear actuator is equipped with integrated power electronics, which are controlled via EtherCAT. Commissioning is simple to do using the familiar Drive Manager. A continuous force of 270 N can be generated with the actuator. Accelerations of 7 m/s^2 and linear speeds of 100 mm/s also allow short control cycles. Mounting is done via a B5 flange and is possible without special tools in the tightest of mounting spaces. The shaft is equipped as standard with an M8 x 1.25 external thread in order to be able to accept commercially available adapters such as ball heads or clamping hooks from the pneumatic/hydraulic range.

The connection in the protective low voltage range $< 48 \text{ V DC}$ is made with a robust M12 plug. The fieldbus is connected via M8 connectors for EtherCAT IN and EtherCAT OUT and can be looped from one actuator to the next by daisy chaining. An absolute measuring system is integrated, allowing an accuracy of 0.01 mm to be achieved. The previously necessary limit switches can thus be omitted. In comparison with conventional pneumatics, a considerably higher positioning accuracy is achieved with the linear actuator. This results in higher process reliability, which has an advantageous effect especially with distributed systems. To supplement the actuators, Beckhoff supplies the necessary ready-to-connect cables and the software.

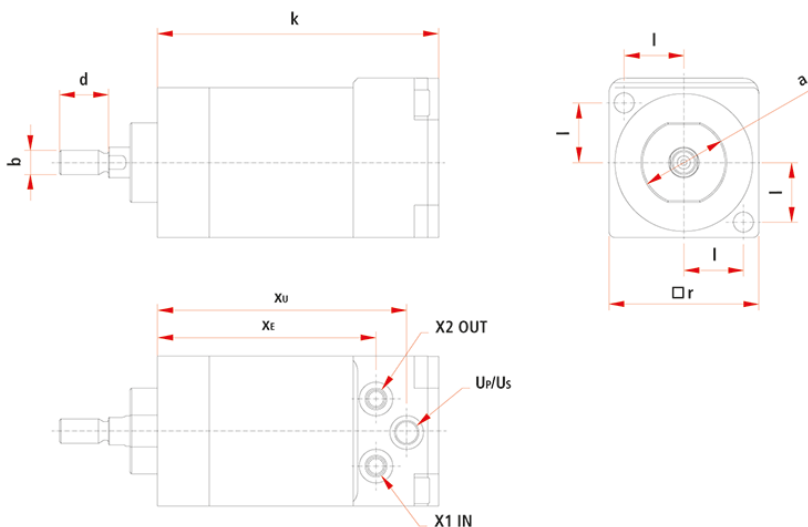
Product information

Technical data

Technical data	AA1121-0000-0016
Motor type	linear actuator with integrated servo drive

Rated supply voltage	24...48 V DC
Peak force	800 N
Continuous force	270 N
Peak current	10 A
Continuous current	3.05 A
Max. speed	100 mm/s
Max. acceleration	7 m/s ²
Max. travel distance	10 mm
Motor feedback	integrated absolute encoder (resolution 0.01 mm)
Connection method	M8, Daisy Chain connection + M12
Ambient temperature (operation)	+5...+40 °C
Approvals/markings	CE

Housing data	AA1121-0000-0016
Protection rating	IP54
Design form	flange-mounted according to IM B5, IM V1, IM V3
Material	aluminum
Coating/surface	dark gray powder coating, similar to RAL7016



Dimensions	AA1121
a	∅28 h 6
b	M8
d	16 mm
x _ε	71.5 mm
x _u	81.5 mm

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l	19.5 mm
r	49 mm
k	92 mm