

Full-rotation actuator for operating air control dampers and shutters in ventilation and air-conditioning systems for building services installations

- For air control dampers up to approx. 0.6 m<sup>2</sup>
- · Torque 3 Nm
- Nominal voltage AC 100 ... 240 V
- · Control: Open-close or 3-point
- Spindle driver: Form-fit 12 mm or 8 mm (with insert)



Power consumption   In operation   At rest   1 W   At 5 VA	Technical data		
Nominal voltage range Power consumption In operation At rest 1 W For wire sizing 4.5 VA Connection Cable 1 m, 3 x 0.75 mm² Cable 1 m, 3 x 0.75 mm² Torque Min. 3 Nm @ nominal voltage Direction of rotation Manual override Power level Angle of rotation Reversible with switch 0 r or 1 r Gearing latch disengaged with pushbutton, self-resetting Angle of rotation Running time 150 s / 360° ≺ Sound power level Spindle driver Protection class If Totally insulated □ Degree of protection EMC CE according to 73/23/EFC Mode of operation Pated impulse voltage At kV (EN 60730-1) Rated impulse voltage Ambient temperature range Angle of notation Min. 3 Nm @ nominal voltage Gearing latch disengaged with pushbutton, self-resetting Household disengaged with pushbutton, self-resetting From-fig latch disengaged with pushbutton, self-resetting With angle of rotation limiter ZDB-LU) Running time 150 s / 360° ≺ Form-fig 12 mm or 8 mm (with insert)  If Totally insulated □ Degree of protection IP54 in any mounting position EMC CE according to 73/23/EEC CE according to 73/23/EEC Mode of operation Type 1 (EN 60730-1) Rated impulse voltage 4 kV (EN 60730-1) Ambient temperature range -30 +50° C Non-operating temperature -40 +80° C Ambient humidity range Maintenance Maintenance-free  Dimensions / Weight	Electrical data	Nominal voltage	AC 100 240 V. 50/60 Hz
Power consumption In operation At rest 1 W   For wire sizing 4.5 VA   Connection Cable 1 m, 3 x 0.75 mm²  Functional data Torque Min. 3 Nm @ nominal voltage Direction of rotation Reversible with switch 0 ✓ or 1 ✓ Gearing latch disengaged with pushbutton, self-resetting Angle of rotation Endless (adjustable 0 330° ⊲ with angle of rotation limiter ZDB-LU)  Running time 150 s / 360° ⊲ Sound power level max. 35 dB (A) Spindle driver Form-fit 12 mm or 8 mm (with insert)  Safety Protection class II Totally insulated □ Degree of protection P54 in any mounting position EMC CE according to 73/23/EEC CE according to 73/23/EEC CE according to 73/23/EEC Mode of operation Type 1 (EN 60730-1) Rated impulse voltage 4 kV (EN 60730-1) Ambient temperature range -30 +50°C Non-operating temperature -40 +80°C Ambient humidity range Maintenance Maintenance Free			·
At rest For wire sizing 4.5 VA  Connection Cable 1 m, 3 x 0.75 mm²  Torque Min. 3 Nm @ nominal voltage  Direction of rotation Reversible with switch 0 ror1 rolation self-resetting  Angle of rotation Encless (adjustable 0 330 rolation limiter ZDB-LU)  Running time 150 s / 360 rolation limiter ZDB-LU)  Running time 150 s / 360 rolation limiter ZDB-LU)  Sound power level max. 35 dB (A)  Spindle driver Form-fit 12 mm or 8 mm (with insert)  Safety Protection class II Totally insulated □  Degree of protection IP54 in any mounting position  EMC CE according to 89/336/EEC  Low voltage directive CE according to 73/23/EEC  Mode of operation Type 1 (EN 60730-1)  Rated impulse voltage 4 kV (EN 60730-1)  Ambient temperature range -30 +50 °C  Non-operating temperature -40 +80 °C  Ambient humidity range 95% r.H., non-condensating (EN 60730-1)  Maintenance Maintenance-free  Dimensions / Weight  Dimensions See «Dimensions» on page 2		•	2 W @ nominal torque
Functional data  Torque Direction of rotation Manual override Endless (adjustable 0 330 ° ≺ With angle of rotation limiter ZDB-LU)  Running time Sound power level Spindle driver Protection class Degree of protection EMC Low voltage directive Low voltage directive CE according to 89/336/EEC Low voltage directive Mode of operation Rated impulse voltage Angle of rotation  Cable 1 m, 3 x 0.75 mm² Min. 3 N m @ nominal voltage Bearing latch disengaged with pushbutton, self-resetting Self-resetting Bearing latch disengaged with pushbutton, self-resetting with angle of rotation limiter ZDB-LU)  Running time 150 s / 360 ° ≺ Sound power level max. 35 dB (A) Spindle driver Form-fit 12 mm or 8 mm (with insert)  IT otally insulated □ Degree of protection IP54 in any mounting position EMC CE according to 89/336/EEC CE according to 73/23/EEC Mode of operation Type 1 (EN 60730-1) Rated impulse voltage 4 kV (EN 60730-1) Ambient temperature prange Non-operating temperature -40 +80 ° C Ambient humidity range 95% r.H., non-condensating (EN 60730-1) Maintenance  Dimensions / Weight Dimensions See «Dimensions» on page 2		·	
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Direction of rotation  Manual override  Manual override  Gearing latch disengaged with pushbutton, self-resetting  Angle of rotation  Endless (adjustable 0 330° ≺ with angle of rotation limiter ZDB-LU)  Running time  Sound power level  Sound power level  Spindle driver  Form-fit 12 mm or 8 mm (with insert)  Form-fit 12 mm or 8 mm		Connection	Cable 1 m, 3 x 0.75 mm <sup>2</sup>
Manual override       Gearing latch disengaged with pushbutton, self-resetting         Angle of rotation       Endless (adjustable 0 330 ° ≺ with angle of rotation limiter ZDB-LU)         Running time       150 s / 360 ° ≺         Sound power level       max. 35 dB (A)         Spindle driver       Form-fit 12 mm or 8 mm (with insert)         Safety       Protection class       II Totally insulated □         Degree of protection       IP54 in any mounting position         EMC       CE according to 89/336/EEC         Low voltage directive       CE according to 73/23/EEC         Mode of operation       Type 1 (EN 60730-1)         Rated impulse voltage       4 kV (EN 60730-1)         Control Pollution Degree       3 (EN 60730-1)         Ambient temperature range       -30 +50 °C         Non-operating temperature       -40 +80 °C         Ambient humidity range       95% r.H., non-condensating (EN 60730-1)         Maintenance       Maintenance-free         Dimensions / Weight       Dimensions       See «Dimensions» on page 2	Functional data	Torque	Min. 3 Nm @ nominal voltage
Self-resetting  Angle of rotation  Endless (adjustable 0 330° ≺ with angle of rotation limiter ZDB-LU)  Running time  Sound power level  Form-fit 12 mm or 8 mm (with insert)  Protection class  Degree of protection  EMC  Low voltage directive  Mode of operation  Rated impulse voltage  Control Pollution Degree  Anbient temperature range  Angle of rotation  Endless (adjustable 0 330° ≺ with angle of rotation limiter ZDB-LU)  Rate (Blook)  Form-fit 12 mm or 8 mm (with insert)  II Totally insulated □  CE according to 73/23/EEC  Mode of operation  Type 1 (EN 60730-1)  Rated impulse voltage  4 kV (EN 60730-1)  Control Pollution Degree  3 (EN 60730-1)  Ambient temperature range  -30 +50° C  Non-operating temperature  -40 +80° C  Ambient humidity range  Maintenance-free  Dimensions / Weight  Dimensions  See «Dimensions» on page 2		Direction of rotation	Reversible with switch 0 🗸 or 1 🤼
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Spindle driver  Form-fit 12 mm or 8 mm (with insert)  Protection class  Degree of protection  EMC  Low voltage directive  Mode of operation  Rated impulse voltage  Control Pollution Degree  Ambient temperature range  Non-operating temperature  Ambient humidity range  Maintenance  Dimensions / Weight  Protection class  II Totally insulated  Degree 8 mm (with insert)  II Totally insulated  Degree 9 mensions 8 mm (with insert)  II Totally insulated  Degree 9 mm or 8 mm (with insert)  II Totally insulated  Degree 9 mensions 8 mm (with insert)  II Totally insulated  Degree 9 mensions 8 mm (with insert)  II Totally insulated Degree 9 mensions 8 mm (with insert)  II Totally insulated Degree 9 mensions 8 mm (with insert)  II Totally insulated Degree 9 mensions  II Totally insulated Degree 9 mensions		Running time	150 s / 360°⊄
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Degree of protection  EMC  CE according to 89/336/EEC  Low voltage directive  Mode of operation  Rated impulse voltage  Control Pollution Degree  Ambient temperature range  Non-operating temperature  Ambient humidity range  Maintenance  Dimensions / Weight  Dimensions  IP54 in any mounting position  CE according to 89/336/EEC  CE according to 73/23/EEC  Type 1 (EN 60730-1)  Type 1 (EN 60730-1)  4 kV (EN 60730-1)  Gentrol Pollution Degree  3 (EN 60730-1)  -30 +50 °C  Ambient humidity range  95% r.H., non-condensating (EN 60730-1)  Maintenance  Maintenance-free  Dimensions  See «Dimensions» on page 2		Spindle driver	Form-fit 12 mm or 8 mm (with insert)
EMC Low voltage directive CE according to 73/23/EEC Mode of operation Type 1 (EN 60730-1) Rated impulse voltage 4 kV (EN 60730-1) Control Pollution Degree 3 (EN 60730-1) Ambient temperature range -30 +50 °C Non-operating temperature -40 +80 °C Ambient humidity range 95% r.H., non-condensating (EN 60730-1) Maintenance Maintenance-free  Dimensions / Weight Dimensions  CE according to 89/336/EEC CE according to 73/23/EEC  At kV (EN 60730-1) A kV (EN 60730-1) A kV (EN 60730-1) Ambient temperature -40 +80 °C Ambient humidity range 95% r.H., non-condensating (EN 60730-1) Maintenance	Safety	Protection class	II Totally insulated □
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Rated impulse voltage 4 kV (EN 60730-1)  Control Pollution Degree 3 (EN 60730-1)  Ambient temperature range -30 +50 °C  Non-operating temperature -40 +80 °C  Ambient humidity range 95% r.H., non-condensating (EN 60730-1)  Maintenance Maintenance-free  Dimensions / Weight Dimensions See «Dimensions» on page 2			
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Ambient temperature range —30 +50 °C  Non-operating temperature —40 +80 °C  Ambient humidity range 95% r.H., non-condensating (EN 60730-1)  Maintenance Maintenance-free  Dimensions / Weight Dimensions See «Dimensions» on page 2			,
Non-operating temperature —40 +80 °C  Ambient humidity range 95% r.H., non-condensating (EN 60730-1)  Maintenance Maintenance-free  Dimensions / Weight Dimensions See «Dimensions» on page 2			,
Ambient humidity range 95% r.H., non-condensating (EN 60730-1)  Maintenance Maintenance-free  Dimensions / Weight Dimensions See «Dimensions» on page 2			
Maintenance Maintenance-free  Dimensions / Weight Dimensions See «Dimensions» on page 2			
Dimensions / Weight Dimensions See «Dimensions» on page 2			
		Maintenance	Maintenance-free
Weight Approx. 650 g	Dimensions / Weight	Dimensions	See «Dimensions» on page 2
		Weight	Approx. 650 g

## Safety notes



- The actuator is not allowed to be used outside the specified field of application, especially not in aircraft or any other form of air transport.
  - Caution: Power supply voltage!
- Assembly must be carried out by trained personnel. Any legal regulations or regulations issued by authorities must be observed during assembly.
- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.
- Mechanical interfaces which are not expressly envisaged by BELIMO for the LU230A must not be created.
- · The cable must not be removed from the device.
- When calculating the required torque, the specifications supplied by the damper manufacturers (cross section, design, installation site), and the air flow conditions must be observed.
- The device contains electrical and electronic components and is not allowed to be disposed
  of as household refuse. All locally valid regulations and requirements must be observed.



## **Product features**

Simple direct mounting Form-fit direct mounting on a 12 mm or 8 mm damper spindle (with insert).

The actuator can also be optionally equipped with a 10 mm form fit or an 8 ... 12 mm clamp

(see «Accessories»).

Manual override Manual operation is possible with the self-resetting pushbutton (the gearing latch remains

disengaged as long as the pushbutton is pressed).

Adjustable angle of rotation The angle of rotation of the full-rotation actuator can be adjusted in 10° increments between

High functional reliability The actuator is overload-proof, requires no limit switches and automatically stops when the

end stop is reached.

## Accessories

#### Description

**Mechanical accessories** 

Form-fit insert 10 x 10 mm, type ZF10-LU

Clamp with 8 ... 12 mm clamping range and anti-rotation strap, type K-LU

#### **Electrical installation**

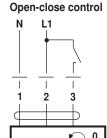
#### Wiring diagrams

### Notes

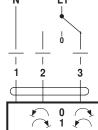
• Caution: Power supply voltage !

**Dimensions** [mm]

• Other actuators can be connected in parallel. Please note the performance data.



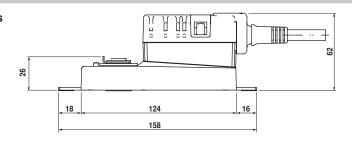


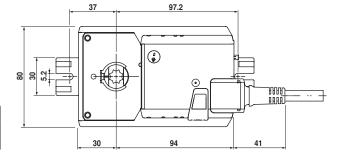


# Direction of rotation



# Dimensional drawings





Damper spindle	Length	■重
	min. 20	12 or
		8 (with insert)



