BELIMO

Technical data sheet TF230-SR

Modulating spring-return actuator with emergency control function for adjusting dampers in technical building installations

- **Damper size up to approx. 0.5 m²**
- **Nominal torque 2.5 Nm**
- **Nominal voltage AC 230 V**
- **Control: modulating DC 0 V ... 10 V**
- **Position feedback DC 2 V ... 10 V**

PROTECT ASSETS
FAIL-SAFE SOLUTIONS BY BELIMO

Technical data

Electrical data	Nominal voltage	AC 230 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 85 V ... 265 V
	Power consumption in operation	2.5 W
	Power consumption in rest position	2 W
	Power consumption for wire sizing	5.5 VA
	Connection supply	Cable 1 m, 2 x 0.75 mm²
	Connection control	Cable 1 m, 3 x 0.75 mm²
Functional data	Torque motor	Min. 2.5 Nm
	Torque spring-return	Min. 2.5 Nm
	Positioning signal Y	DC 0...10 V
	Positioning signal Y note	Input impedance 100 kΩ
	Operating range Y	DC 2...10 V
	Position feedback U	DC 2...10 V
	Position feedback U note	Max. 0.5 mA
	Position accuracy	±5%
	Direction of rotation motor	As an option with switch R / L
	Direction of rotation spring-return	Can be selected by mounting L / R
	Angle of rotation	Max. 95°
	Running time motor	150 s / 90°
	Running time emergency control function	<25 s / 90°
	Sound power level motor max.	35 dB (A)
	Spindle driver	Universal spindle clamp 6...12 mm
	Position indication	Mechanical
	Service life	Min. 60,000 emergency settings
Safety	Protection class IEC/EN	II protective insulated
	Degree of protection IEC/EN	IP42
	EMC	CE in accordance with 2004/108/EC
	Low-voltage directive	CE in accordance with 2006/95/EC
	Certification IEC/EN	Certified to: IEC/EN 60730-1 and IEC/EN 60730-2-14
	Principle of operation	Type 1.AA
	Overvoltage category	II
	Rated impulse voltage supply / control	2.5 kV
	Control pollution degree	2
	Ambient temperature	-30°C ... 50°C
	Non-operating temperature	-40°C ... 80°C
	Ambient humidity	95% r.h., non-condensing
	Maintenance	Maintenance-free
Weight	Weight approx.	0.63 kg

Safety notes

- The actuator is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Caution: Power supply voltage!

Safety notes

- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied with during installation.
- 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.
- The cable must not be removed from the device.
- When calculating the torque required, the specifications supplied by the damper manufacturers (cross-section, construction, place of installation), and the ventilation 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

Principle of operation
The actuator is controlled with a standard signal of DC 0 ... 10 V and moves the damper to the operating position while tensioning the return spring at the same time. The damper is turned back to the emergency position by spring energy when the supply voltage is interrupted.

Direct mounting
Simple direct mounting on the damper spindle with a universal spindle clamp, supplied with a universal mounting bracket to prevent the actuator from rotating.

Adjustable angle of rotation
Adjustable angle of rotation with mechanical end stop.

High functional reliability
The actuator is overload protected, requires no limit switches and automatically stops when the end stop is reached.

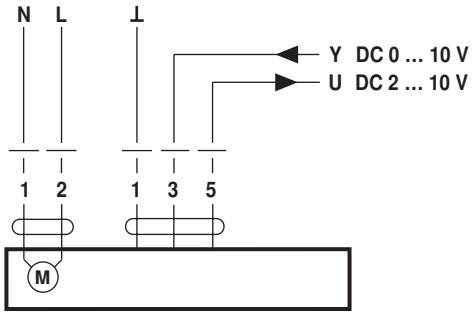
Electrical installation

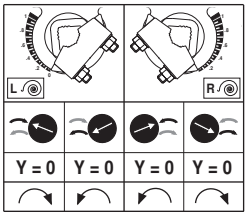
Notes

- Caution: Power supply voltage!
- Parallel connection of other actuators possible. Observe the performance data.

Wiring diagrams

AC 100 ... 240 V, modulating

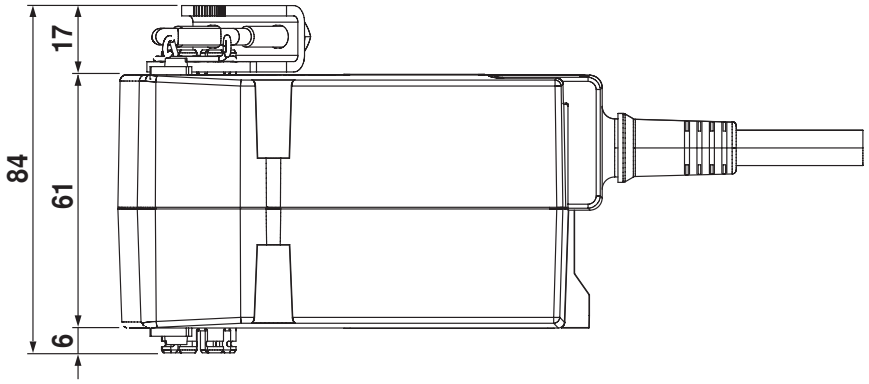


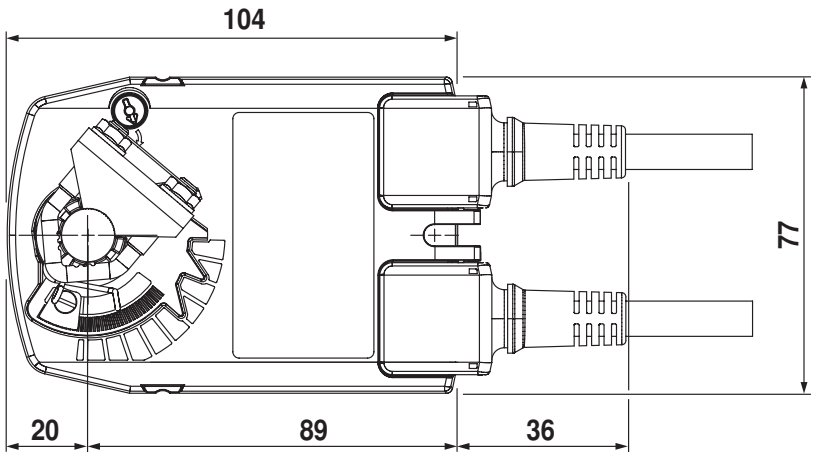


Cable colours:
1 = blue
2 = brown
1 = black
3 = white
5 = orange

Dimensions [mm]

Dimensional drawings





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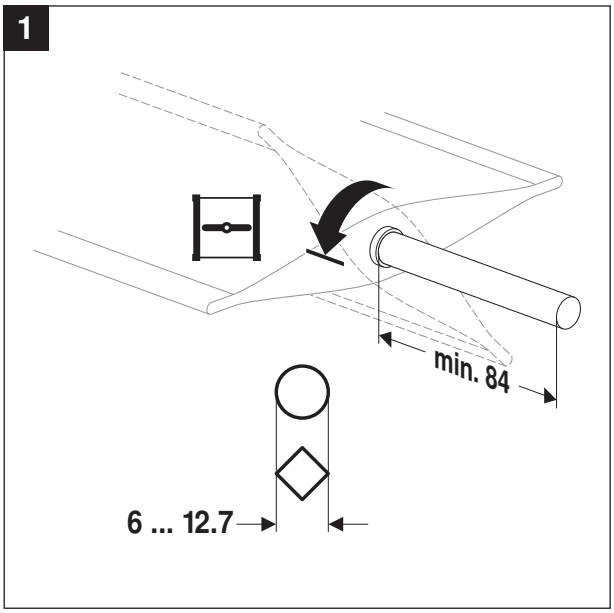

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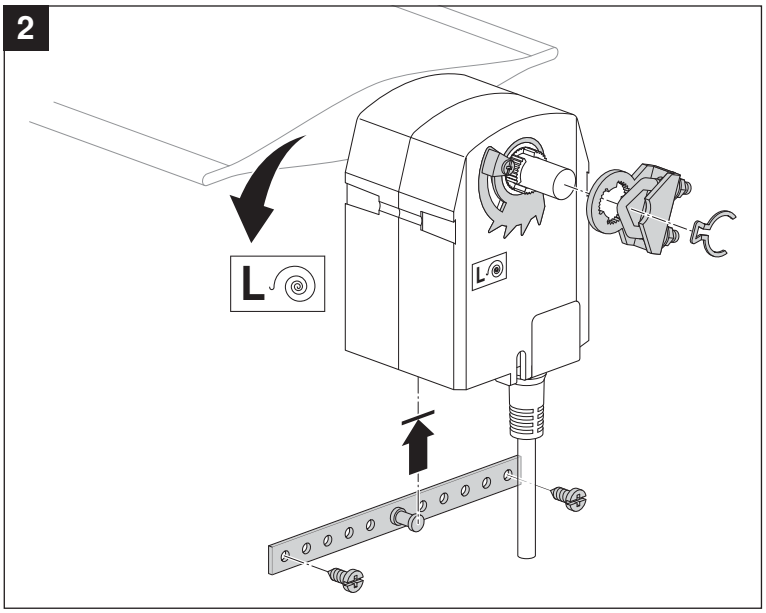

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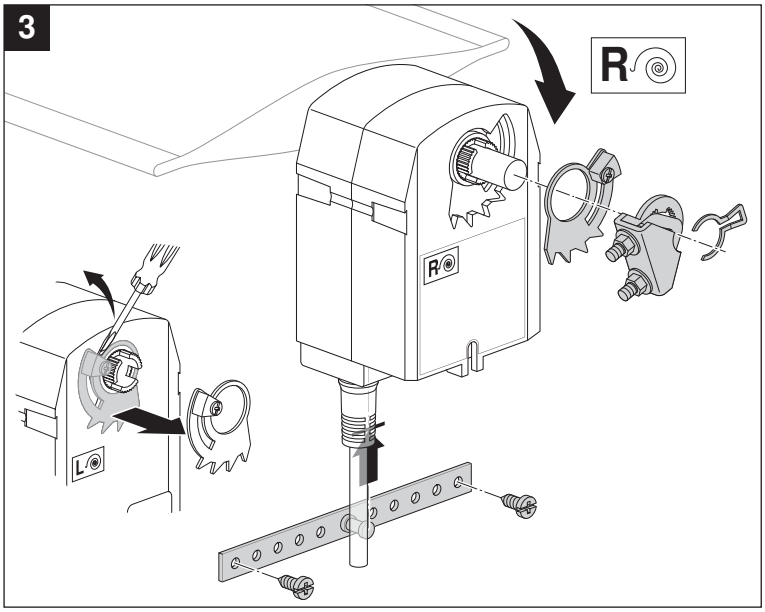

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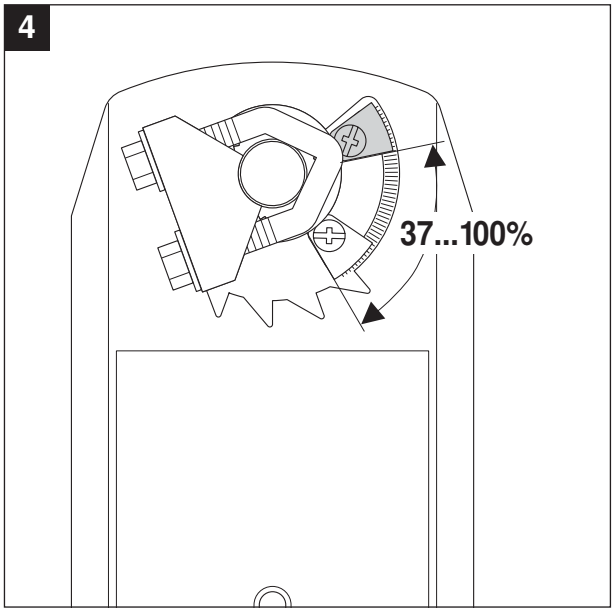

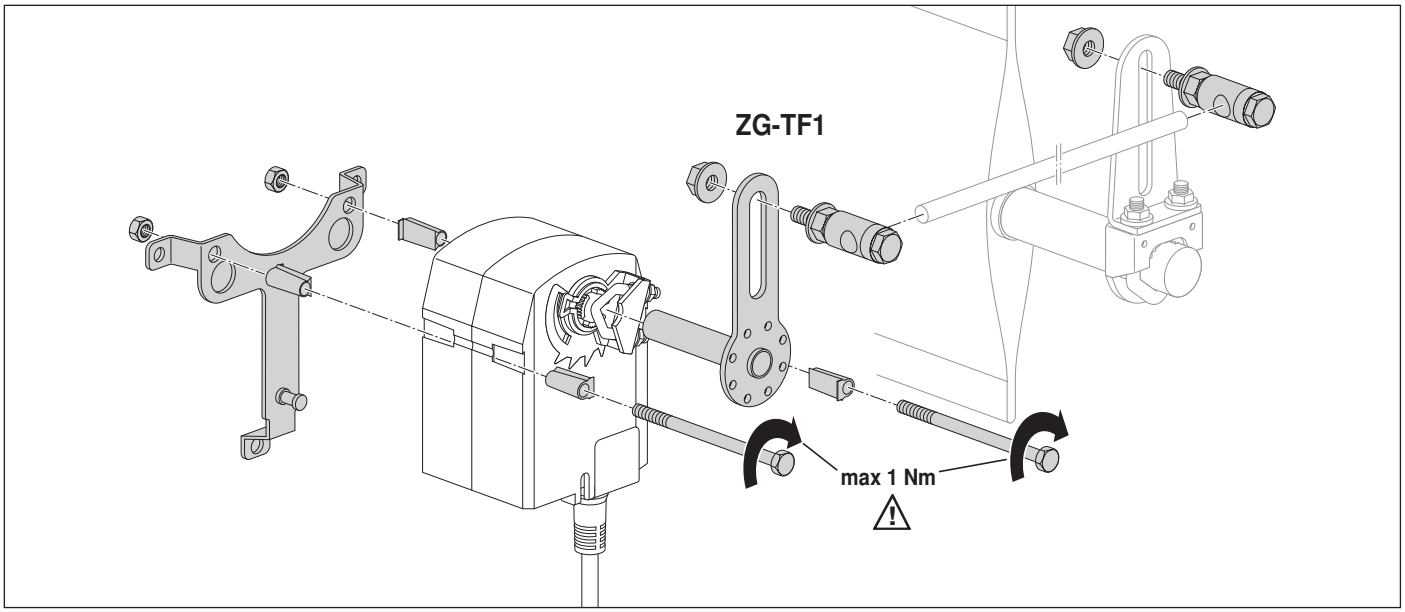

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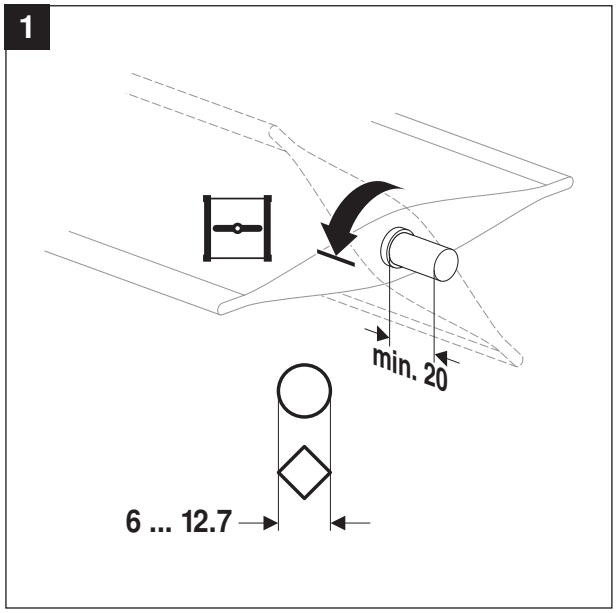
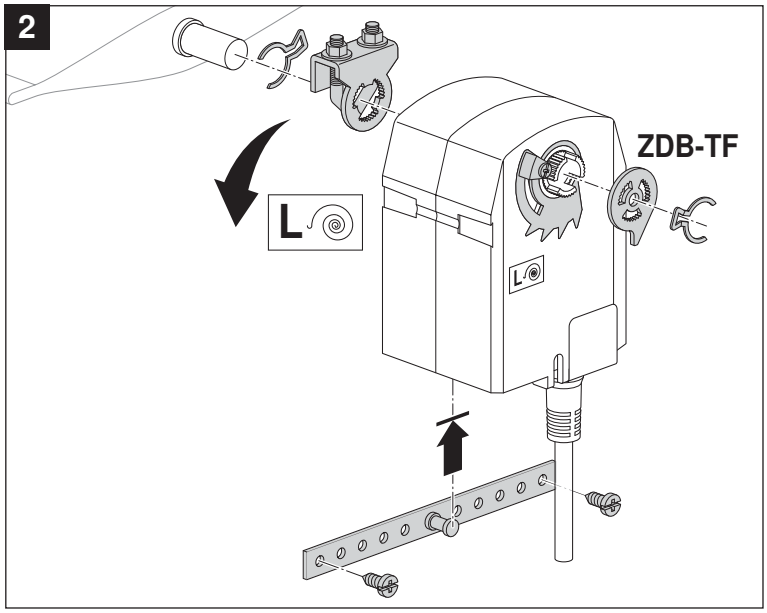
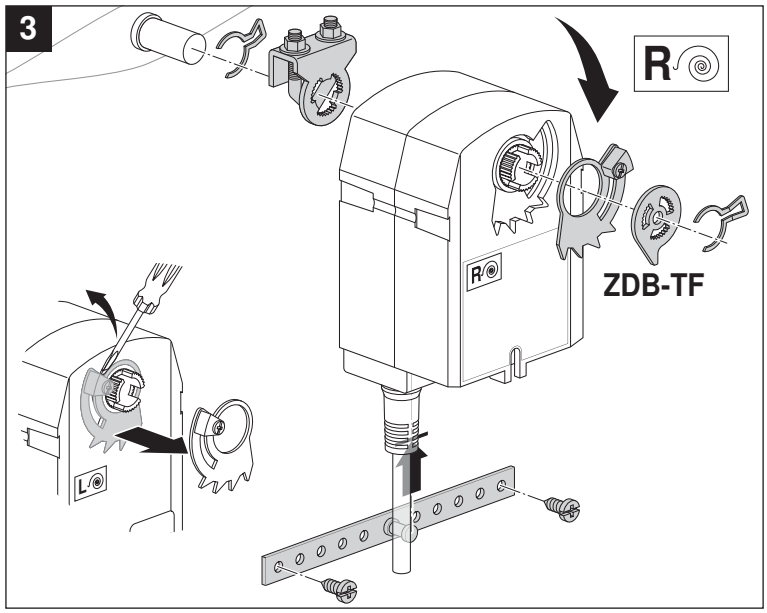
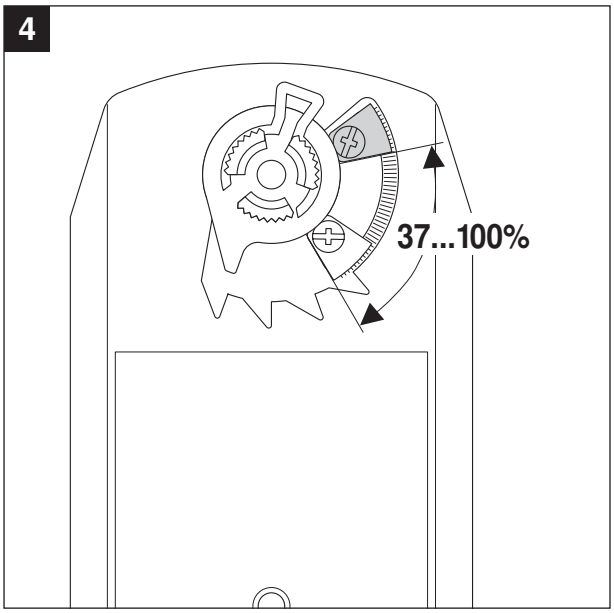
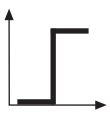


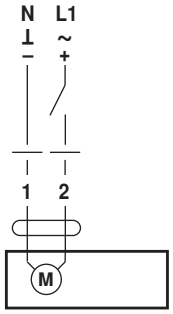




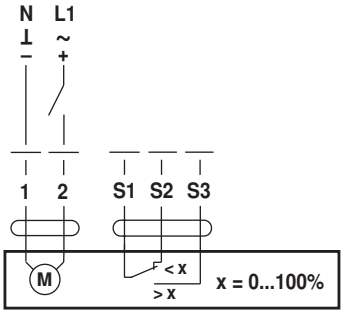




AC 230 V ⚠
AC 24 V / DC 24 V

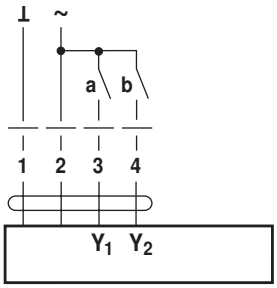


TF230 / TF24



TF230-S / TF24-S

AC 24 V



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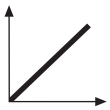
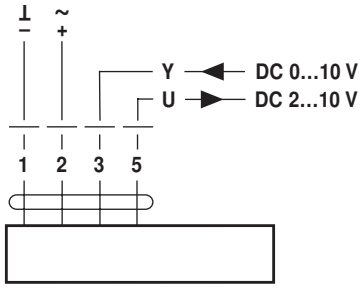


AC 24 V / DC 24 V



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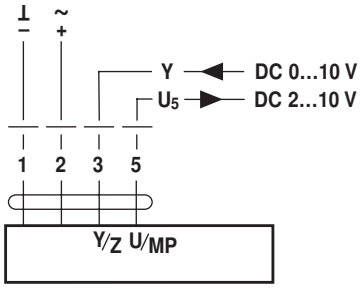

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