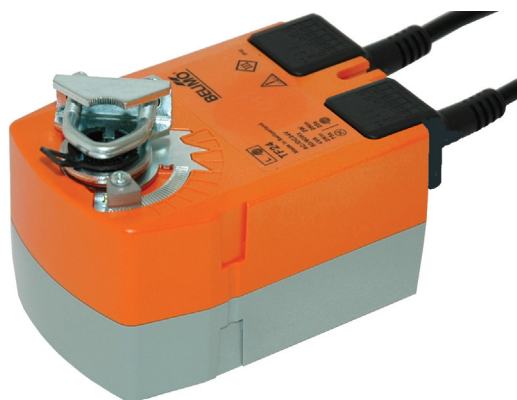


Modulating spring return actuator with emergency function for adjusting air dampers in ventilation and air conditioning systems in buildings

- For air dampers up to approx. 0.4 m²
- **Torque 2 Nm**
- **Nominal voltage AC 100 ... 240 V**
- **Control: modulating DC 0 ... 10 V**
- **Position feedback DC 2 ... 10 V**


Technical data

Electrical data	Nominal voltage	AC 100 ... 240 V, 50/60 Hz
	Nominal voltage range	AC 85 ... 265 V
	Power consumption	In operation 2.5 W @ nominal torque
		At rest 2 W
	For wire sizing	5.5 VA
	Connection Power supply	Cable 1 m, 2 x 0.75 mm ²
	Signals	Cable 1 m, 3 x 0.75 mm ²
Functional data	Torque Motor	Min. 2 Nm @ nominal voltage
	Spring return	Min. 2 Nm
	Control Control signal Y	DC 0 ... 10 V, input impedance 100 kΩ
	Operating range	DC 2 ... 10 V
	Position feedback (measuring voltage U)	DC 2 ... 10 V, max. 0.5 mA
	Position accuracy	±5%
	Direction of rotation Motor	Reversible with switch ↻ / ↻
	Spring return	Can be selected by mounting L / R
	Angle of rotation	Max. 95° ↻ (adjustable 37 ... 100° ↻ with built-in mechanical end stop)
	Running time Motor	≤150 s (0 ... 2 Nm)
	Spring return	≤25 s @ -20 ... 50°C / max. 60 s @ -30°C
	Sound power level Motor	≤35 dB (A) @ 150 s running time
	Spring return	≤62 dB (A)
Service life	Min. 60,000 emergency positions	
Position indication	Mechanical	
Safety	Protection class	II totally insulated □
	Degree of protection	IP42
	EMC	CE according to 2004/108/EC
	Low-voltage directive	CE according to 2006/95/EC
	Certification	Certified to IEC/EN 60730-1 and IEC/EN 60730-2-14
	Mode of operation	Type 1.AA
	Surge category	II
	Rated impulse voltage	2.5 kV
	Control pollution degree	2
	Ambient temperature	-30 ... +50°C
	Non-operating temperature	-40 ... +80°C
	Ambient humidity	95% r.h., non-condensating
	Maintenance	Maintenance-free
Dimensions / Weight	Dimensions	See «Dimensions» on page 3
	Weight	Approx. 630 g

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!**
- It may only be installed by suitably 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.
- 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

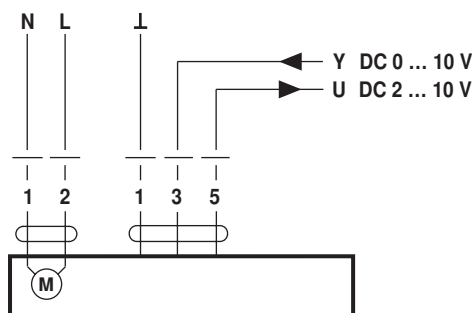
- Mode of operation** The actuator is controlled with a standard signal of DC 0 ... 10 V and moves the damper to the operating position at the same time as tensioning the return spring. The damper is turned back to the emergency position by spring force if the supply voltage is interrupted.
- Simple direct mounting** Simple direct mounting on the damper spindle with a universal spindle clamp, supplied with an anti-rotation strap to prevent the actuator from rotating.
- Adjustable angle of rotation** Adjustable angle of rotation with mechanical end stop.
- High operational reliability** The actuator is overload-proof, requires no limit switches and automatically stops when the end stop is reached.

Electrical installation

Wiring diagram

Notes

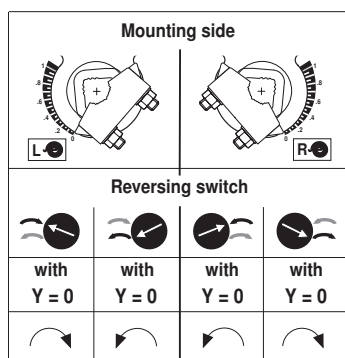
- Caution: Power supply voltage!
- Parallel connection of other actuators possible. Note the performance data.



Cable colours::

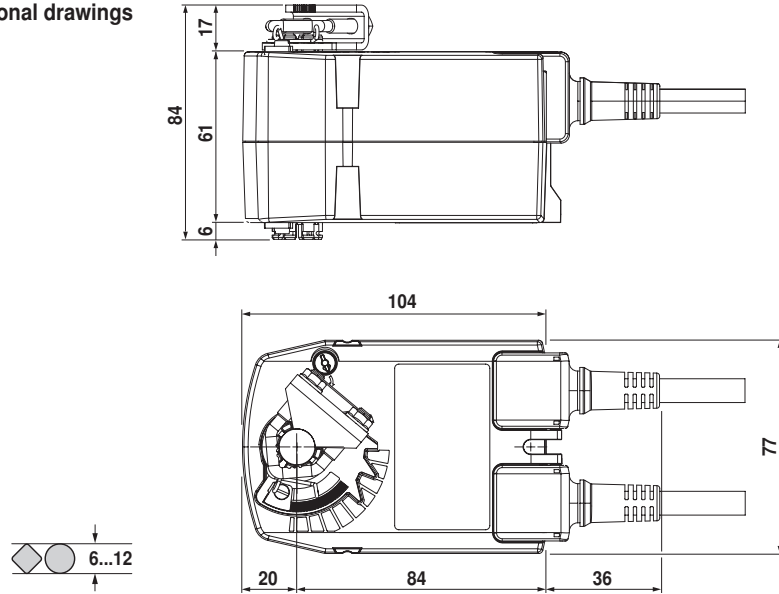
- 1 = blue
- 2 = brown
- 1 = black
- 3 = white
- 5 = orange

Direction of rotation

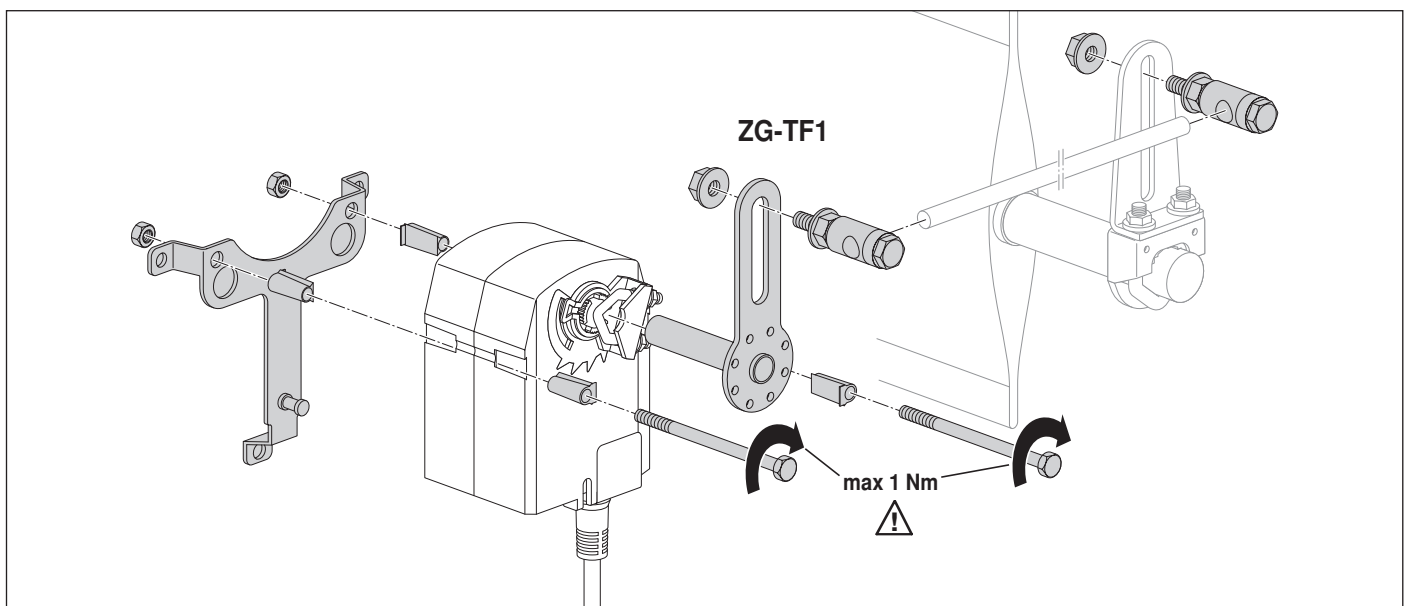
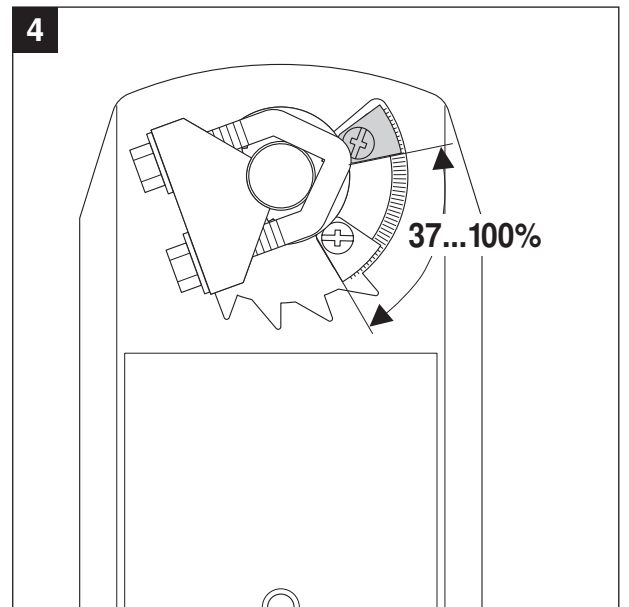
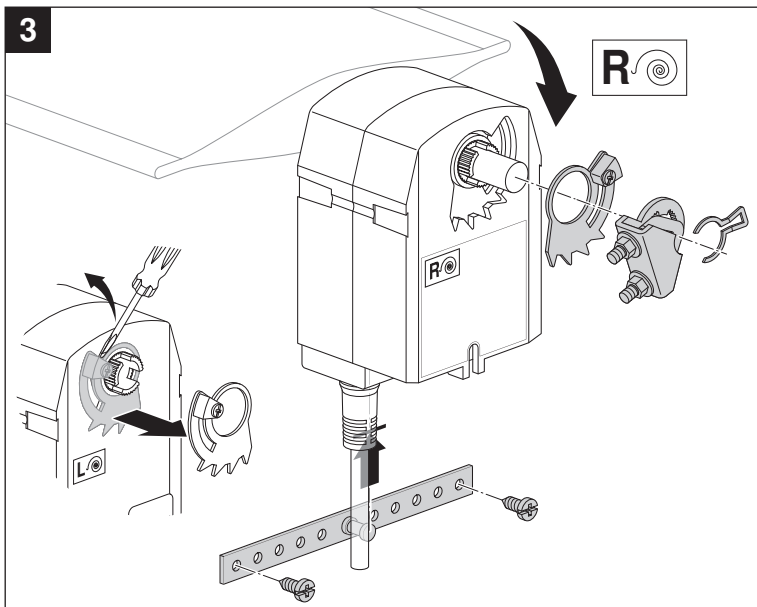
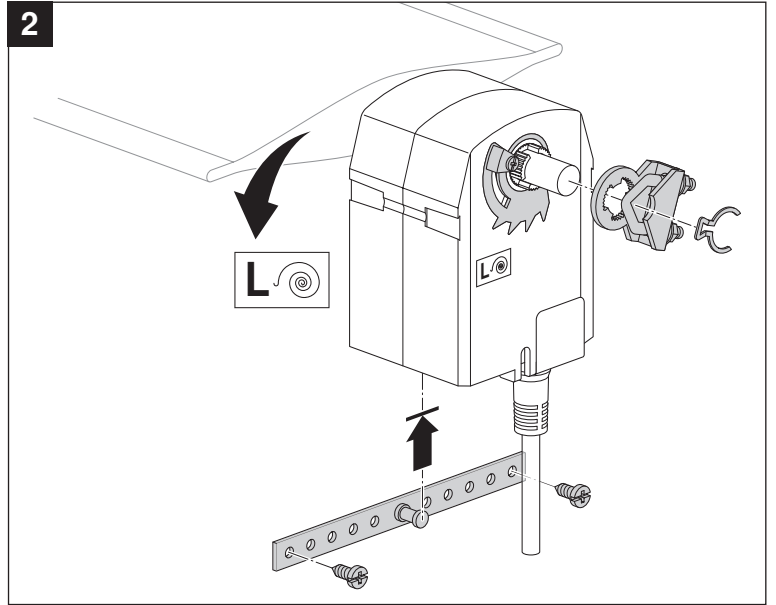
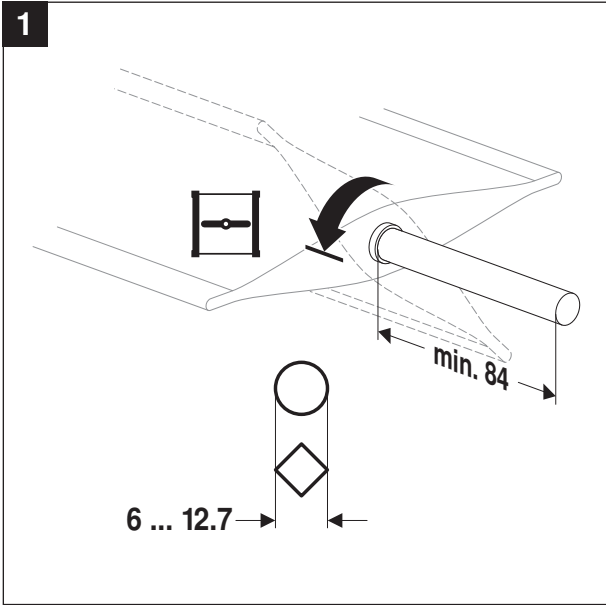


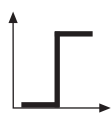
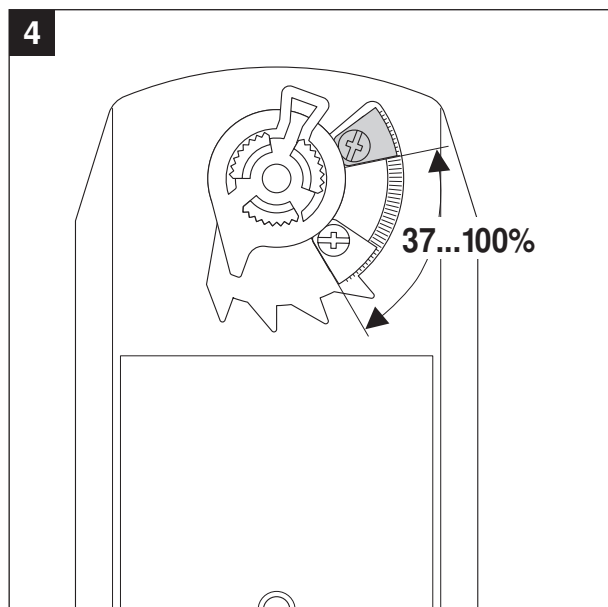
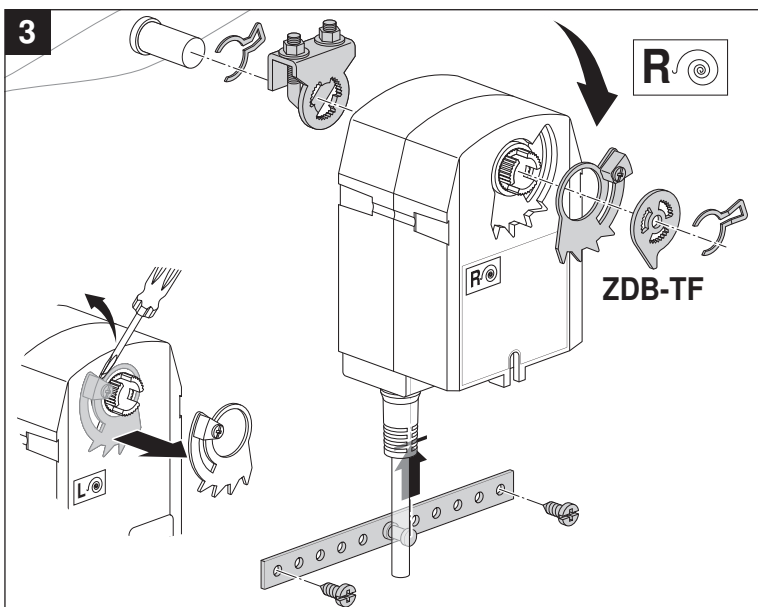
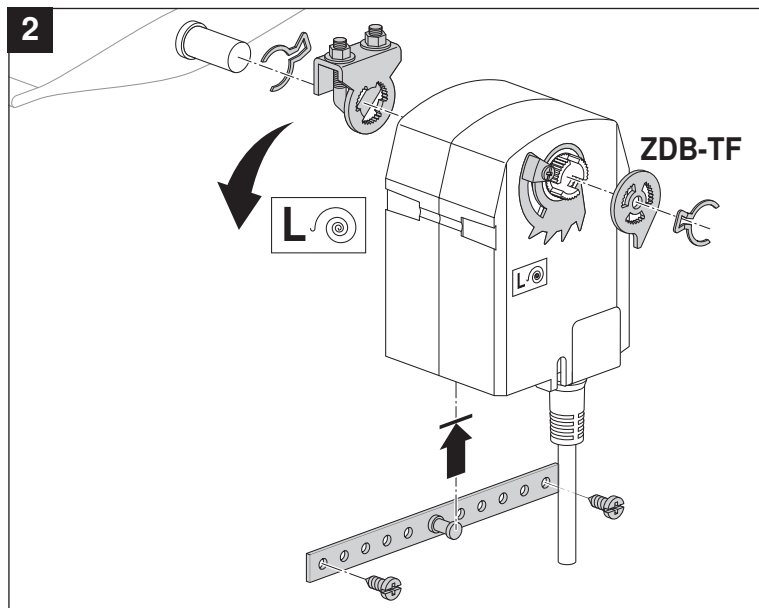
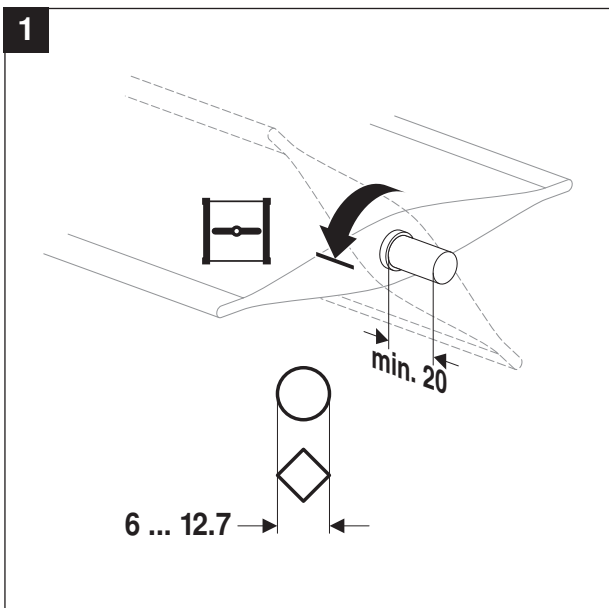
Dimensions [mm]

Dimensional drawings

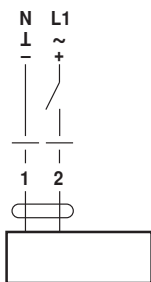


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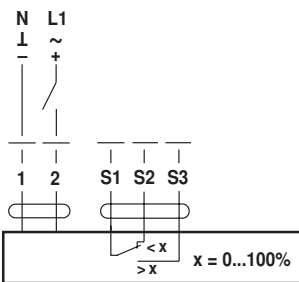




AC 230 V
AC 24 V
DC 24 V

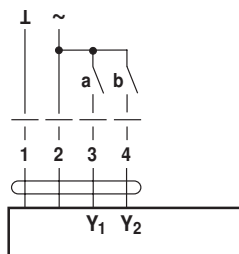


TF230 / TF24

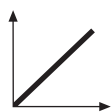


TF230-S / TF24-S

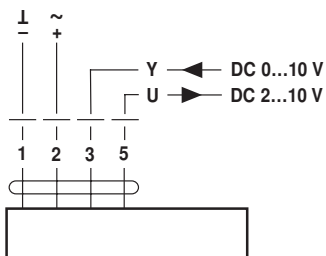
AC 24 V



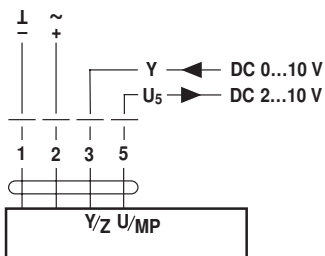
TF24-3



AC 24 V
DC 24 V

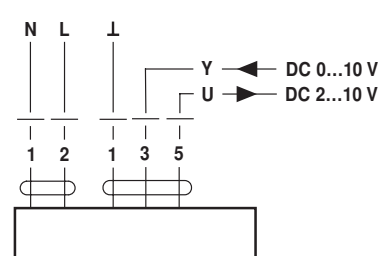


TF24-SR



TF24-MFT

AC 230 V



TF230-SR