

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

- Air damper size up to approx. 6 m<sup>2</sup>
- Nominal torque 30 Nm
- Nominal voltage AC/DC 24 V
- Control Modulating DC (0)2...10 V
- Position feedback DC 2...10 V



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echnical data			
E	Electrical data	Nominal voltage	AC/DC 24 V
		Nominal voltage frequency	50/60 Hz
		Nominal voltage range	AC 19.228.8 V / DC 21.628.8 V
		Power consumption in operation	7 W
		Power consumption in rest position	4.5 W
		Power consumption for wire sizing	12 VA
		Connection supply / control	Cable 1 m, 4 x 0.75 mm <sup>2</sup>
		Parallel operation	Yes (note the performance data)
Fu	unctional data	Torque motor	Min. 30 Nm
		Torque spring return	Min. 30 Nm
		Positioning signal Y	DC 010 V
		Positioning signal Y note	Input impedance 100 kΩ
		Operating range Y	DC 210 V
		Position feedback U	DC 210 V
		Position feedback U note	Max. 0.5 mA
		Position accuracy	±5%
		Direction of motion motor	Selectable with switch L / R
		Direction of motion emergency control function	Selectable by mounting L / R
		Manual override	By means of hand crank and locking switch
		Angle of rotation	Max. 95°
		Angle of rotation note	adjustable starting at 33% in 5% steps (with mechanical end stop)
		Running time motor	150 s / 90°
		Running time emergency control position	<20 s / 90°
		Running time emergency setting position note	<20 s @ -2050°C / <60 s @ -30°C
		Sound power level motor	45 dB(A)
		Sound power level emergency control position	71 dB(A)
		Spindle driver	Universal spindle clamp 1226.7 mm
		Position indication	Mechanical
		Service life	Min. 60,000 emergency positions
	Safety	Protection class IEC/EN	III Safety extra-low voltage
	,	Degree of protection IEC/EN	IP54
		EMC	CE according to 2004/108/EC
		Certification IEC/EN	IEC/EN 60730-1 and IEC/EN 60730-2-14
		Mode of operation	Type 1.AA
		Rated impulse voltage supply / control	0.8 kV
		Control pollution degree	3
		Ambient temperature	-3050°C
		Non-operating temperature	-4080°C
		Ambient humidity	95% r.h., non-condensing

5.3 kg

Weight

Weight



### Safety notes



- The device must not be used outside the specified field of application, especially not in aircraft or in any other airborne means of transport.
- Outdoor application: only possible in case that no (sea)water, snow, ice, insolation
  or aggressive gases interfere directly with the actuator and that is ensured that the
  ambient conditions remain at any time within the thresholds according to the data
  sheet.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied 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.
- Cables must not be removed from the device.
- To calculate the torque required, the specifications supplied by the damper manufacturers concerning the cross-section, the design, the installation site and the ventilation conditions must be observed.
- The device contains electrical and electronic components and must not be disposed
  of as household refuse. All locally valid regulations and requirements must be
  observed.

#### **Product features**

Mode of operation

The actuator is connected with a standard modulating 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 when the supply voltage is interrupted.

Simple direct mounting

Simple direct mounting on the damper spindle with an universal spindle clamp, supplied with an anti-rotation device to prevent the actuator from rotating.

Spindle stabiliser

The spindle clamp of the spring-return actuator is factory-equipped with an axis stabiliser for the stabilisation of the combination of damper, damper spindle and actuator.

This is comprised of two plastic support rings and must be left in place, partially or completely removed, depending on the installation situation and the axis diameter.

Manual override

By using the hand crank the damper can be actuated manually and engaged with the locking switch at any position. Unlocking is carried out manually or automatically by applying the operating voltage.

High functional reliability

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

Adjustable angle of rotation

Adjustable angle of rotation with mechanical end stops.

### **Accessories**

	Description	Туре
Electrical accessories	Signal converter voltage/current, supply AC/DC 24V	Z-UIC
	Digital position indicator for front-panel mounting, 099%, front mass $72 \times 72 \text{ mm}$	ZAD24
	Range controller for wall mounting, adjustable electron. Min./max. angle of rotation limitation	SBG24
	Positioner for wall mounting, range 0100%	SGA24
	Positioner in a conduit box, range 0100%	SGE24
	Positioner for front-panel mounting, range 0100%	SGF24
	Positioner for wall mounting, range 0100%	CRP24-B1
	Description	Туре
Mechanical accessories	End stop indicator for EFA	IND-EFB
	Spindle clamp set for EFA (1", 3/4"), for damper spindles Ø 1226.7	K9-2
	Damper crank arm, for damper spindles	KH10
	Actuator arm for EFA	KH-EFB
	Mounting kit for linkage operation	ZG-EFB



## **Electrical installation**

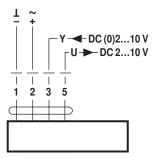


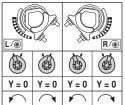
#### **Notes**

- · Connection via safety isolating transformer.
- Parallel connection of other actuators possible. Observe the performance data.

#### Wiring diagrams

AC/DC 24 V, modulating





#### Cable colours:

- 1 = black
- 2 = red
- 3 = white
- 5 = orange

## **Installation notes**



#### **Notes**

 The spindle stabiliser must nevertheless be used with installation of the antirotation device on the opposite side of the spindle clamp and a spindle diameter <20 mm.</li>

# Spindle stabiliser long spindle mounting

In the case of long spindle installation the use of the spindle stabiliser at a spindle diameter of

- 12 to 20 mm is necessary
- 21 to 26.7 mm is not necessary and can be removed

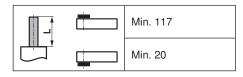
# Spindle stabiliser short spindle mounting

In the case of short spindle installation, the necessity of the spindle stabiliser is dispensed with. It can be removed or - if the spindle length permits this - left in the clamp.



# Dimensions [mm]

# Spindle length



## Clamping range

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1222	1218
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2226.7	1218

# **Dimensional drawings**

