AFR24-SR Spring return actuator 15 Nm

Dampers up to approx. 3 m²

Modulating actuator (AC/DC 24 V)

Control DC 0...10 V and position feedback DC 2...10 V

Versatile applications

The AFR24-SR spring return actuator is intended for the operation of air dampers that perform safety functions (e.g. frost and smoke protection, hygiene, etc.).

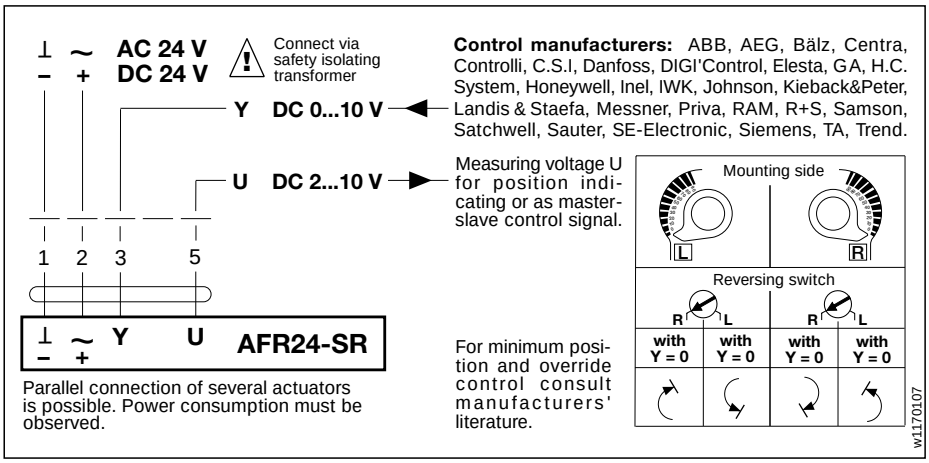
Improved functional safety

The AF R24-SR actuator moves the damper to its normal working position while tensioning the return spring at the same time. If the power supply is interrupted, the energy stored in the spring moves the damper back to its safe position. The actuator is overload-proof, needs no limit switches and halts automatically at the end stops.

Simple installation and commissioning

The actuator is fitted with a universal spindle clamp for quick and easy mounting directly onto the damper spindle. The actuator is also supplied with an anti-rotation strap for fixing it in position. The actuator is delivered with 5.5 % spring pre-tensioning (at the 0 % position). At first power-up the spring pre-tensioning is released and the actuator moves to the closed position (to max. – 5.5 %).

Wiring diagram



Technical data	AFR24-SR	
Nominal voltage	AC 24 V 50/60 Hz,	DC 24 V
Nominal voltage range	AC 19.2...28.8 V,	DC 21.6...28.8 V
For wire sizing	10 VA (Imax 5.8 A @ 5 ms)	
Power consumption – motoring – holding	 6 W 2.5 W	
Connecting cable	1 m long, 4 × 0.75 mm²	
Control signal Y	DC 0...10 V @ input resistance 100 kΩ (0.1 mA)	
Operating range	DC 2...10 V (at control signal Y))	
Measuring voltage U	DC 2...10 V @ max. 0.5 mA (for 0...100 % ∢)	
Synchronisation tolerance	± 5 %	
Direction of rotation	– motor – spring return	selected with switch L/R selected by L/R mounting
Torque	– motor – spring	min. 15 Nm (at rated voltage) min. 15 Nm
Angle of rotation	max. 95° (adjustable from 33 % in 5.5 % steps ∢ with limit stop ZDB-AF)	
Running time	motor 150 s, spring return ≈ 16 s	
Sound power level	motor max. 45 dB(A), spring ≈ 62 dB(A)	
Service life	> 60 000 operations	
Position indication	mechanical	
Protection class	⧫ (safety extra-low voltage)	
Degree of protection	IP 54	
Ambient temp. range Non-operating temp. Humidity test	–30… +50 °C –40… +80 °C to EN 60335-1	
EMC	CE according to 89/336/EEC, 92/31/EEC, 93/68/EEC	
Maintenance	maintenance free	
Weight	2700 g	

Electrical accessories (see doc. 2.Z-...)

SG...24	Positioners
ZAD24	Digital position indicator

Mechanical accessories, page 8

KH-AF	Universal crank arm
IND-AF2	Pointer with circlip
ZDB-AF	Angle of rotation limiting
AV10-18	Universal spindle extension

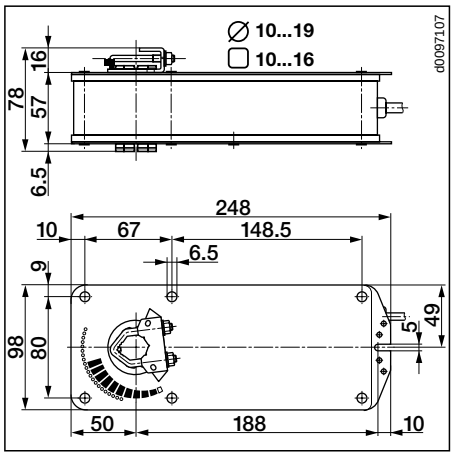
Control and monitoring functions, p.7

Mounting instructions, page 9

Important

Read the notes about the use and torque requirements of the damper actuators on page 3.

Dimensions



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