

**DAFx.10(S) / DAFx.20(S) Series**  
**ON/OFF Spring Return Actuators**

**Application**

The **JOVENTA SPRING RETURN** electric damper-actuator series has been specially developed for the motorized operation of safety air dampers, (anti-icing) in air conditioning systems, smoke evacuation dampers and sealing dampers.

When the control signal is applied, the actuator drives the damper to the operational position, while evenly tensioning the integrated spring. After a power failure the stored energy in the spring immediately brings the damper to the safety position.

Manual operation is automatically cancelled when the actuator is in electrical operation.

The compact design and universal adapter fitted with limitation of rotation angle make this JOVENTA actuator highly versatile.

**Features**

- ON/OFF control
- Up to 5 actuators in parallel operation possible
- Electrical connection with halogen-free cable
- Simple direct mounting with universal adapter on Ø 12 mm to 19 mm shaft or 10-12-14 mm square shaft.  
An optional M9220-600 Jackshaft Coupler Kit is available for 19 to 27 mm round shafts, or 16, 18, and 19 mm square shafts
- 80 mm min shaft length
- Tandem Operation possible
- Limitation of rotation angle
- Manual positioning with crank handle
- 2 auxiliary switches, 1 adjustable  
(See back page for settings)
- Automatic shut-off at end position (overload switch)
- Energy saving at end positions
- Actuators available with 1 m halogen-free cable
- Devices meet CE requirements



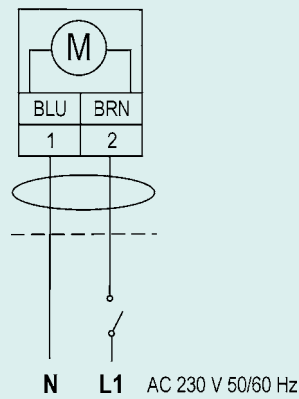
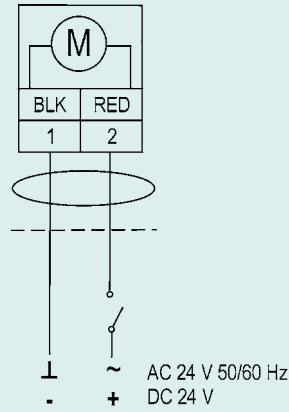
**Technical Specifications**

Actuator	DAF1.10(S)	DAF2.10(S)	DAF1.20(S)	DAF2.20(S)
<b>Torque</b>	10 Nm	10 Nm	20 Nm	20 Nm
<b>Damper area*</b>	2.0 m <sup>2</sup>	2.0 m <sup>2</sup>	4.0 m <sup>2</sup>	4.0 m <sup>2</sup>
<b>Running time Motor</b>	24...57 s			
<b>Running time Spring return</b>	11...15 s			
<b>Supply Voltage</b>	AC/DC 24V	AC 230 V	AC/DC 24V	AC 230 V
<b>Frequency</b>	50-60 Hz			
<b>Power Consumption</b>				
- Running AC	24.6 VA	0.12 VA	26 VA	0.15 A
- Running DC	17.6 W	---	15.6 W	---
- At end position AC	5.4 VA	0.09 A	9.3 VA	0.09 A
- At end position DC	2.8 W	---	2.6 W	---
<b>Dimensioning</b>	20.0 VA		14.0 VA	
<b>Control signal</b>	ON/OFF (2-Point)			
<b>Position signal</b>	None			
<b>Angle of rotation</b>				
- Working range	90°			
- Limitation	0°...30° and 90°...60°			
<b>Auxiliary Switches</b>	3(1.5)A, AC 230 V			
- S1 setting range	10° fix			
- S2 setting range	25°...90° adjustable			
<b>Cable</b>	1.2 m halogen-free			
- Motor	2-wire 1-2			
- Switches	6-wire 21-22-23-24-25-26			
<b>Lifetime</b>	60'000 Rotations			
<b>Noise level</b>	66 dB (A)			
<b>Protection class</b>	II			
<b>Degree of protection</b>	IP 54			
<b>Mode of action</b>	Type1			
<b>Ambient conditions</b>				
- Operating temperature	-40...+55 °C / IEC 721-3-3			
- Storage temperature	-65...+85 °C / IEC 721-3-2			
- Humidity	5...95% r.F. no condensed			
<b>Service</b>	Maintenance-free			
<b>Weight</b>	2.9 kg	3.5 Kg	2.9 kg	3.5 Kg
<b>Standards</b>				
- Mechanics	EN 60 529 / EN 60 730-2-14			
- Electronics	EN 60 730-2-14			
- EMC Emissions	EN 50 081-1:92 / IEC 61000-6-3:96			
- EMC Immunity	EN 50 082-2:95 / IEC 61000-6-2:99			

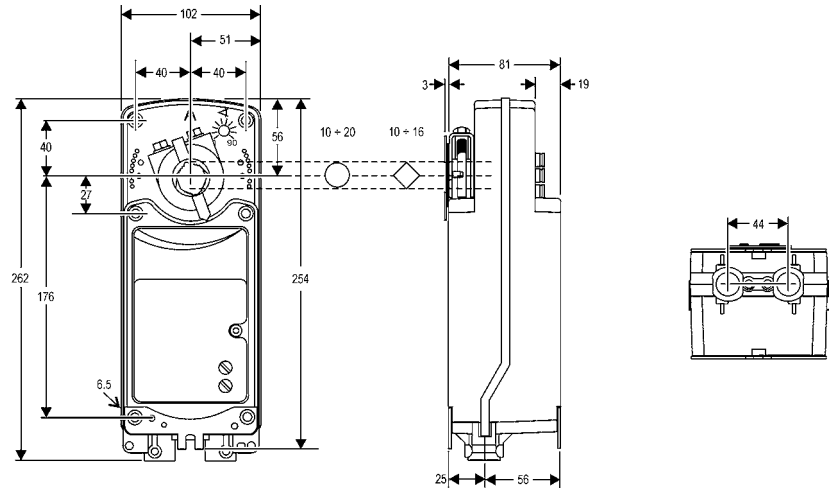
\*Caution: Please note damper manufacturer's information concerning the open/close torque.

**DAFx.10(S) / DAFx.20(S) Series**  
**ON/OFF Spring Return Actuators**

**Wiring Diagrams**



**Dimensions in mm**



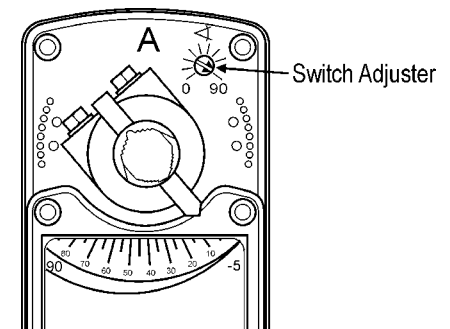
**Setting the auxiliary switches**

The 10S and 20S models include two integral auxiliary switches with a switch adjuster accessible on either face of the actuator.

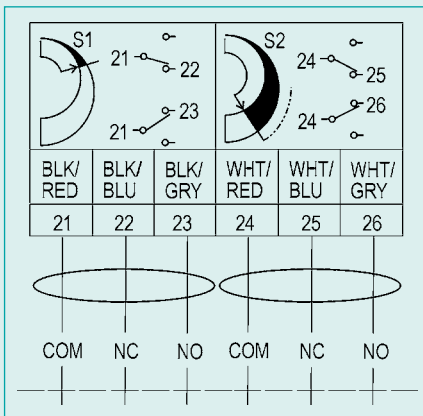
The nominal factory setting for auxiliary switch S1 is 11° closing, and the nominal factory setting for auxiliary switch S2 is 81° opening. The switch point of auxiliary switch S1 is fixed.

The switch point of auxiliary switch S2 is independently and continuously adjustable from 25° to 95°.

The switching position can be manually changed to any required position by turning the ratchet.

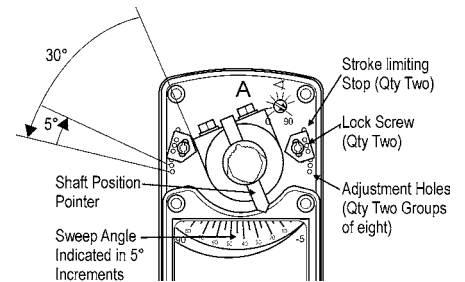


**Auxiliary Switches (S)**



**Limitation of rotation angle**

Determine the desired rotation range. If a 65° to 90° rotation range is desired, add one stroke limiting stop. If a 35° to 60° rotation range is desired, add two stroke limiting stops. Mount the stroke stop(s) in the desired position using the two M4 x10 mm selftapping screws provided. Tighten the screws to a torque of 4 Nm. Manually reposition the coupler so that the coupler set screw aligns with the nodule guide that corresponds to the value determined in Step 2. For a rotation range of 65°, mount one stroke limiting stops in the minimum stroke position.



**DAFx.10(S) / DAFx.20(S) Series  
ON/OFF Spring Return Actuators**

**Ordering Codes**

Codes	Descriptions
DAF1.10	10 Nm, AC/DC 24 V
DAF1.10S	10 Nm, AC/DC 24 V, with 2 auxiliary switches
DAF2.10	10 Nm, AC 230 V
DAF2.10S	10 Nm, AC 230 V, with 2 auxiliary switches
DAF1.20	20 Nm, AC/DC 24 V
DAF1.20S	20 Nm, AC/DC 24 V, with 2 auxiliary switches
DAF2.20	20 Nm, AC 230 V
DAF2.20S	20 Nm, AC 230 V, with 2 auxiliary switches

**Accessories and Replacement Parts**

(Order Separately)

Codes	Descriptions
M9000-158	Tandem Mounting Kit used to Mount Two Like Models of Dx F Series On/Off Electric Springback Actuators in Tandem to Deliver Twice the Torque
M9000-200	Commissioning Tool that Provides a Control Signal to Drive 24 V On/Off, Floating, Proportional, and/or Resistive Electric Actuators
M9000-604	Replacement Anti-Rotation Bracket Kit (with Screws) for Dx F Series On/Off Electric Springback Actuators
M9220-600	25 mm Jackshaft Coupler Kit (with Locking Clip) for Mounting Dx F Series On/Off Electric Springback Actuators on Dampers with 19 to 27 mm Round Shafts, or 16, 18, and 19 mm Square Shafts
M9220-601	Replacement Coupler Kit (with Locking Clip) for Mounting Dx F Series On/Off Electric Springback Actuators on Dampers with 12 to 19 mm Round Shafts or 10, 12, and 14 mm Square Shafts
M9220-602	Replacement Locking Clips for Dx F Series On/Off Electric Springback Actuators (Five per Bag)
M9220-603	Adjustable Stop Kit for Dx F Series On/Off Electric Springback Actuators
M9220-604	Replacement Manual Override Cranks for Dx F Series On/Off Electric Springback Actuators (Five per Bag)
M9220-610	Replacement Shaft Gripper, 10 mm Square Shaft with Locking Clip
M9220-612	Replacement Shaft Gripper, 12 mm Square Shaft with Locking Clip
M9220-614	Replacement Shaft Gripper, 14 mm Square Shaft with Locking Clip