

**SPECIAL**

**MODULATING Actuators**

**5.15**

**Application**

The JOVENTA SPECIAL electric damper-actuator series is designed to operate air dampers in ventilation and air conditioning systems. The compact design and universal adapter fitted with limitation of rotation angle make this JOVENTA actuator highly versatile.

**Key features**

- DC0...10V or 0...20 mA control
- Load-independent running time
- Up to 5 actuators in parallel operation possible
- Plug-in terminal block connection
- Simple direct-mount with universal adapter on Ø 10 mm to 20 mm shaft or square shaft from 10 mm to 16 mm. 48 mm minimum damper shaft length
- Selectable direction of rotation
- Limitation of rotation angle
- Manual release button
- 2 adjustable auxiliary switches  
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
- Customized versions available
- Devices meet CE requirements

**Accessories**

- ZK damper linkage selection
- ZKG ball joints  
(see product sheet 6.10)

**Nomenclature/Specification/Technical data**

SM1.10	AC/DC24V	
SM1.10S	AC/DC24V	with 2 auxiliary switches
SM1.12	AC/DC24V	
SM1.12S	AC/DC24V	with 2 auxiliary switches
.....K		with 1 m halogen-free cable

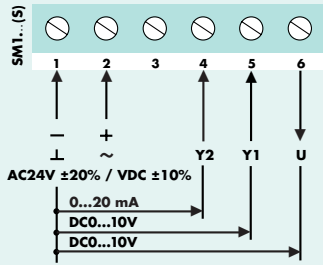
Actuator	SM1.10(S)	SM1.12(S)
Torque	16 Nm	8 Nm
Damper area*	3.0 m <sup>2</sup>	1.5 m <sup>2</sup>
Running time	16 s	8 s
Supply voltage	AC/DC24V	AC/DC24V
Frequency	50-60 Hz	50-60 Hz
Power consumption		
- Running	6.0 W	6.0 W
- At end position	0.6 W	0.6 W
Dimensioning	15.0VA / 3.6A @ 2 ms	15.0VA / 3.6A @ 2 ms
Weight	1.1 kg	1.1 kg
Control signal	Y1	DC0...10V
Control signal	Y2	0...20 mA
Position signal	U	DC0...10V
Angle of rotation / working range	90° (93° mech.)	
Angle of rotation / limitation	5°...85° in 5° < steps	
Service lifetime	60,000 rotations	
Auxiliary switches	3(1.5)A, AC24V	
Setting range / adjustable	5°...85° < infinity	
Noise level	45 dB (A)	
Protection class	II	
Degree of protection	IP 54 (cable downwards)	
Cable aperture connection	M16 x 1.5	
Mode of action	Type 1	
Ambient conditions		
- Operating temperature	-20...+50°C / IEC 721-3-3	
- Storage temperature	-30...+60°C / IEC 721-3-2	
- Humidity	5...95% r.F.	
Service	Maintenance-free	
Standards	Mechanics	EN 60 529 / EN 60 730-2-14
	Electronics	EN 60 730-2-14
	EMC Emissions	EN 50 081-1:92 / IEC 61 000-6-3:96
	EMC Immunity	EN 50 082-2:95 / IEC 61 000-6-2:99

## SPECIAL

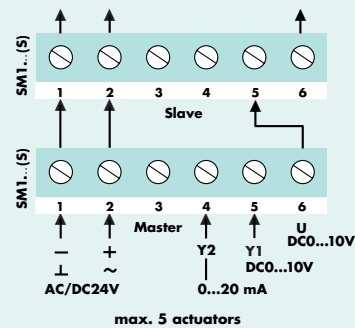
## MODULATING Actuators

## 5.15

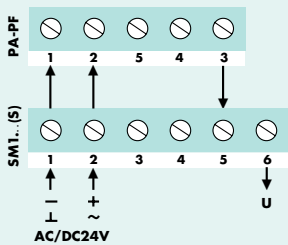
### Wiring diagram



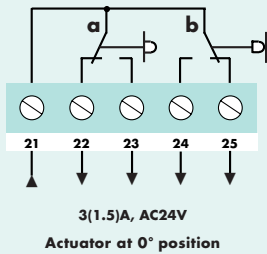
### Parallel connections



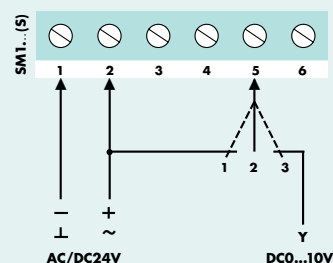
### Position transmitter



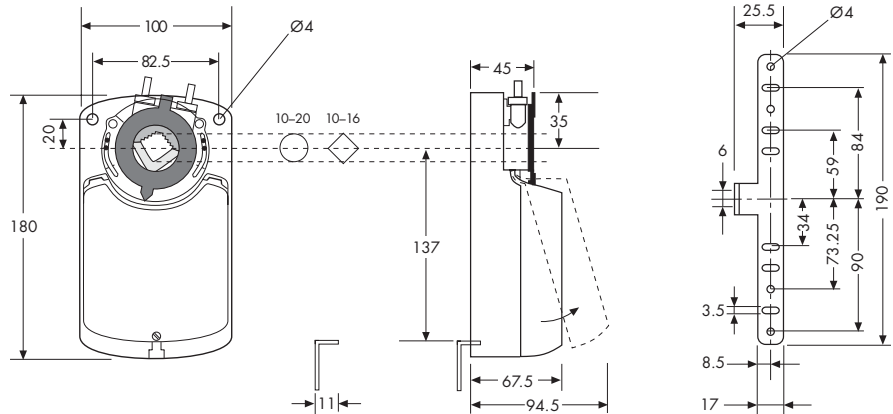
### Auxiliary switches (S)



### Override control



### Dimensions in mm



### Setting the control signal

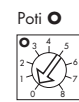
Control signal Y1	DC0...10V
Input resistance	Ri 200 kΩ
Control signal Y2	0...20 mA
Input resistance	Ri 388 Ω
Position signal U	DC0...10V
Load resistance	> 50 kΩ

By switching microswitch **d1** to ON position, the control signal Y1 or Y2 will be adapted to the chosen angle of rotation.

Micro-switch **d**  
Self-adapting

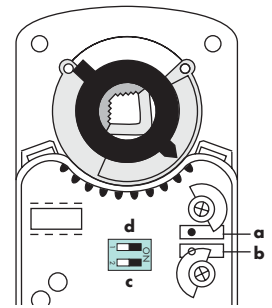
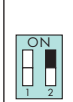
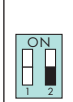


Poti **p**  
for Y signals



### Changing the direction of rotation

Micro-switch **c**



For more information see data sheet 5.50

### Position transmitter

The SM1...(S) can also be controlled using the JOVENTA Positioner (PA/PF) with control signal of DC0...10V. For further information concerning the PA and PF positioner please refer to data sheet 6.20.

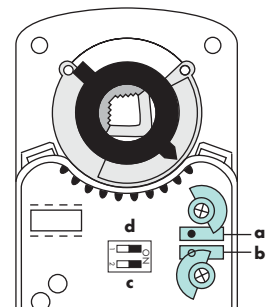
**Caution:** A maximum of 5 actuators can be controlled in parallel operation.

### Setting the auxiliary switches

Factory setting:

Switch **a** at 10°  
Switch **b** at 80°

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



### Override control

The actuator SM1...(S) can be forced to override control when wired in accordance with the relevant diagram on the left.

Switch position:

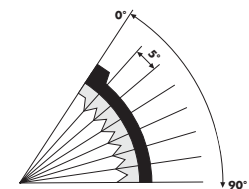
- 1 = Actuator runs at 10 V
- 2 = Actuator runs at 0(2) V
- 3 = Automatic control

### Rotation angle

The limitation or rotation angle can be set in 5° steps by moving the adapter.

The adapter can be removed simply by pressing the adapter clip on the underside of the actuator.

### Limitation of rotation angle



### Adapter release

