

**DMG1.1****Proportional Actuators AC/DC 24 V****Application**

The **JOVENTA STANDARD** 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.

**Features**

- DC 0...10 V or 0...20 mA control signal
- Working area adjustable
- Load-independent running time
- Up to 5 actuators in parallel operation possible
- Plug-in terminal block connection
- Simple direct-mount with universal adapter on 10...20 mm Ø round-axis or 10...16 mm square shaft
- 48 mm minimum damper shaft length
- Selectable direction of rotation
- Limitation of rotation angle
- Manual release button
- 2 adjustable auxiliary switches
- Automatic shut-off at end position (overload switch)
- Actuators available with 1 m cable
- Customized versions available
- Devices meet CE requirements

**Accessories**

- ZK Damper linkage selection
- ZKG Ball joints

**Technical Specifications**

Actuator	DMG1.1(S)
<b>Torque</b>	32 Nm
<b>Damper area*</b>	6.0 m <sup>2</sup>
<b>Running Time OPEN</b>	200 s
<b>Running Time CLOSE</b>	200 s
<b>Supply Voltage</b>	AC/DC 24 V
<b>Frequency</b>	50-60 Hz
<b>Power Consumption</b>	
- Running	2.5 W
- At end position	0.3 W
<b>Dimensioning</b>	4.5 VA / 3.6 A @ 2 ms
<b>Working area Y</b>	Adjustable
<b>Control Signal Y1</b>	DC 0... 10 V
<b>Input resistance Y1</b>	Ri 250 Ω
<b>Control Signal Y2</b>	0...20 mA
<b>Input resistance Y2</b>	Ri 388 Ω
<b>Position signal U</b>	DC 0...10 V
<b>Load resistance</b>	> 50 kΩ
<b>Angle of rotation/Working range</b>	90° (93° mech.)
<b>Angle of rotation/Limitation</b>	5°...85° in 5° < steps
<b>Auxiliary Switches</b>	3(1.5) A, AC 230 V
- S1 setting range	5°...85° < adjustable
- S2 setting range	
<b>Cable</b>	
- Motor	1.0 m halogen-free
- Switches	5-Wire 1-2-4-5-6 5-Wire 21-22-23-24-25
<b>Life time</b>	60,000 rotations
<b>Noise level</b>	45 dB (A)
<b>Protection Class</b>	II
<b>Degree of Protection</b>	IP 54
<b>Mode of Action</b>	Type 1
<b>Ambient conditions</b>	
- Operating temperature	-20...+50 °C / IEC 721-3-3
- Storage temperature	-30...+60°C / IEC 721-3-2
- Humidity	5...95% r.F. no condensed
<b>Weight</b>	1.1 Kg
<b>Service</b>	Maintenance-free
<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

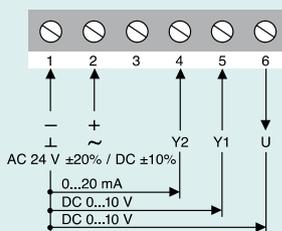
\*Caution: Please note damper manufacturer's information concerning the open/close torque.

**Ordering Codes**

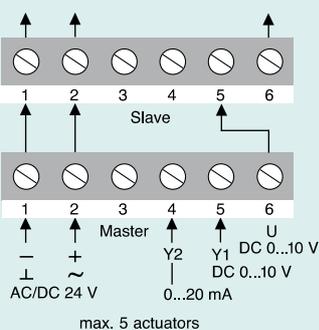
Codes	Descriptions
<b>DMG1.1</b>	AC/DC 24 V
<b>DMG1.1S</b>	AC/DC 24 V, with 2 auxiliary switches

**DMG1.1**  
Proportional Actuators AC/DC 24 V

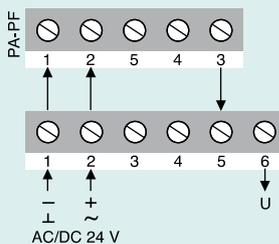
**Wiring Diagram**



**Parallel Connections**



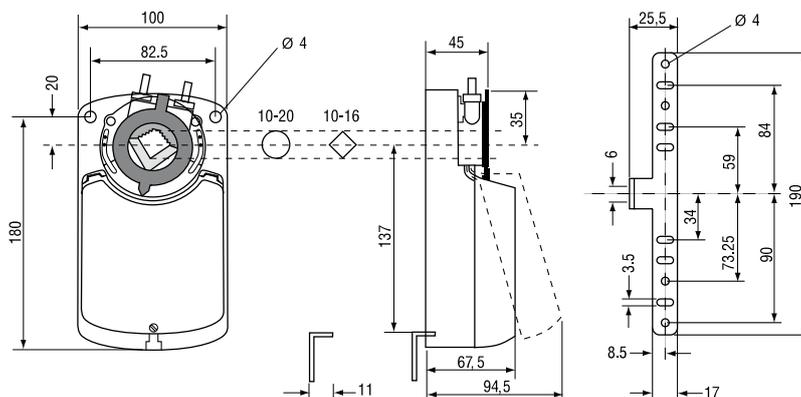
**Position transmitter**



The DMGxx can also be controlled using the JOVENTA Positioner (PA/PF) with control signal of DC 0...10 V. For further information concerning the PA and PF positioner please refer to sheet 6.20.

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

**Dimensions in mm**

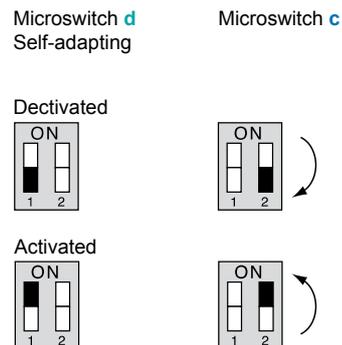


**Setting the control Signal**

Control signal Y1	DC 0...10 V
Input resistance	Ri 250 k $\Omega$
Control signal Y2	0...20 mA
Input resistance	Ri 388 $\Omega$
Position signal U	DC 0...10 V
Load resistance	> 50 k $\Omega$

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

By switching microswitch **c** the direction of rotation can be changed.



**Setting Span and OFFSET**

The potentiometers **O** and **S** help to match control signals Y1 and Y2 to any make of controller.

**Example 1**

Control signal Y1 working between DC 2...10 V  
 Setting: Starting point **O** = 2  
 working range **S** = 8

**Example 2**

Control signal Y2 working between 6...18 mA  
 Setting: Starting point **O** = 3  
 Working range **S** = 6

**Start point O**

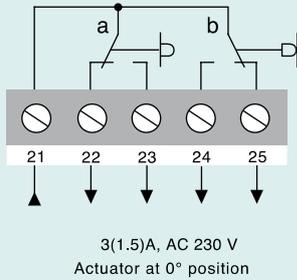
	<b>Scale O</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
	for Y1 (VDC)	0	1	2	3	4	5	6	7	8
	for Y2 (mA)	0	2	4	6	8	10	12	14	16

**Working range S**

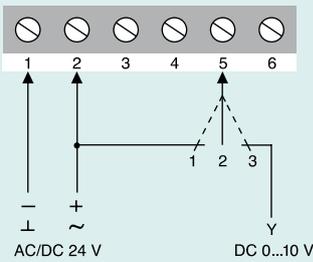
	<b>Scale S</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
	for Y1 (VDC)	2	3	4	5	6	7	8	9	10
	for Y2 (mA)	4	6	8	10	12	14	16	18	20

**DMG1.1**  
Proportional Actuators AC/DC 24 V

**Auxiliary Switches (S)**



**Override Control**



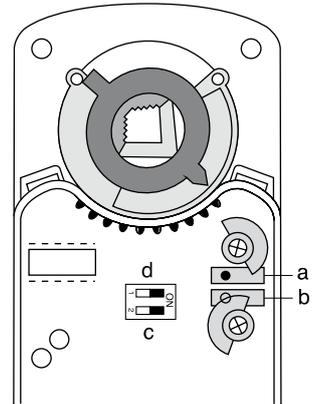
The actuator DMGxx can be forced to override control when wired in accordance with the diagram.

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

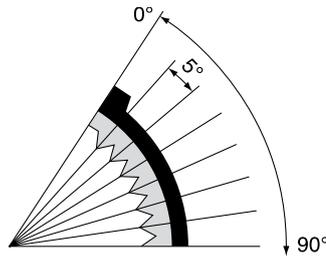
**Settings the auxiliary switches**

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

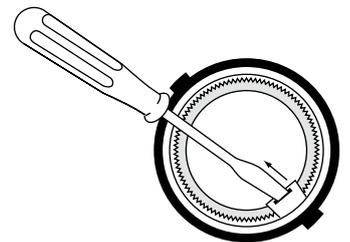


**Limitation of Rotation Angle**



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

**Adapter release**



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