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# DMS2.2 / DM2.2 / DML2.2 Modulating Actuators AC 230 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 CONTROLS actuator highly versatile.

#### **Features**

- DC 0(2)...10 V control signal
- Up to 5 actuators in parallel operation possible
- Plug-in terminal block connection
- Simple direct-mount with univer-sal adapter on 10...20 mm Ø round-axis or 10...16 mm square shaft 48 mm minimum damper shaft lenght
- 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	DMS2.2x	DM2.2x	DML2.2x
Torque	8 Nm	16 Nm	24 Nm
Damper area*	1.5 m <sup>2</sup>	3.0 m <sup>2</sup>	4.5 m <sup>2</sup>
Running Time OPEN	30 s	80 s	125 s
Running Time CLOSE	30 s	80 s	125 s
Supply Voltage	AC 230 V		
Frequency	50-60 Hz		
Power Consumption	33 30 112		
- Running	5.5 W		
- At end position	0.6 W		
Dimensioning	6.0 VA / 0.1 A @ 2 ms		
Control Signal Y1	DC 0(2) 10 V		
Imput resistance Y1	Ri 100 Ω		
Position signal U	DC 010 V		
Load resistance	> 50 kΩ		
Angle of rotation/ Working range	90° (93°mech.)		
Angle of rotation/ Limitation	5°85° in 5° < steps		
Auxiliary Switches	3(1.5) A, AC 230 V		
- S1 setting range - S2 setting range	5°85° < adjustable		
Cable	1.0 m halogen-free		
- Motor	6-Wire 1-2-3-4-5-6		
- Switches	5-Wire 21-22-23-24-25		
Life time	60.000 rotations		
Noise level	45 dB (A)		
Protection Class	II		
Degree of Protection	IP 54		
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	595% r.F. no condensed		
Weight	1.2 Kg		
Service	Maintenance-free		
Standards - Mechanics	EN 00 500 / EN 00 700 0 44		
- Wechanics - Electronics	EN 60 529 / EN 60 730-2-14 EN 60 730-2-14		
- EIECTRONICS - EMC Emissions	EN 50 730-2-14 EN 50 081-1:92 / IEC 61000-6-3:96		
- EMC Immunity			
- Line illinulity	EN 30 002-2.93 / IEC 0 1000-0-2.99		

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

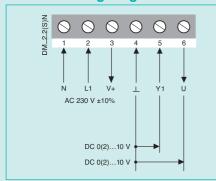
#### **Ordering Codes**

Codes	Descriptions	
DMxx2.2	AC 230 V	
DMxx2.2S	AC 230 V, with 2 auxiliary switches	

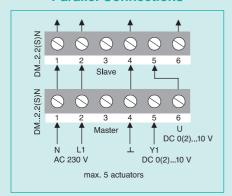
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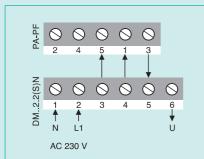
## **Wiring Diagram**



## **Parallel Connections**



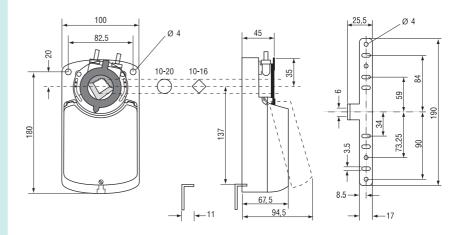
### **Position transmitter**



The DMxx2.2(S) can also be controlled using the JOVENTA Positioner (PA/PF) with control signal of DC 0(2)...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 100 k $\Omega$ 

Position signal U DC 0...10 V Load resistance  $> 50 \text{ k}\Omega$ 

By switching microswitch **d** 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

Microswitch d Self-adapting Microswitch c

Dectivated





Activated





# **Setting Span and OFFSET**

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

### Example 1

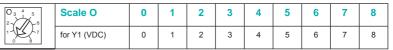
working range S = 8

### Example 2

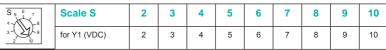
Control signal Y2 working between 6...18 mA
Setting: Starting point 0 = 3

Working range S = 6

Start point O



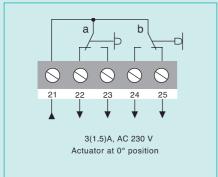
### Working range S



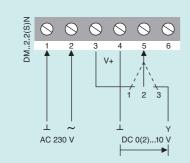
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## **Auxiliary Switches (S)**



### **Override Control**



The actuator DMxx2.2 can be forced to override control when wired in accordance with the diagram.

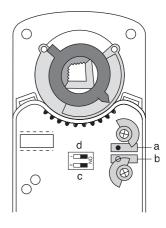
### Switch position:

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

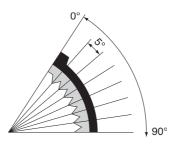
# Settings the auxiliary switches

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  $5^{\circ}$  steps by moving the adapter.

# **Adapter release**



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