



MODEL	CONTROL	POWER SUPPLY	DESCRIPTION	TORQUE
MDB42	on/off or floating	24 Vac/dc	Damper actuators	5 Nm
MDB52	Modulating 2-10 V			
MDB42M	on/off or floating		Damper actuators with auxiliary microswitches	



## APPLICATION AND USE

MDB42/52 are damper actuators operating air control dampers in ventilation and air-conditioning systems in building services installations for air dampers up to approx. 1 m<sup>2</sup>.

## TECHNICAL CHARACTERISTICS

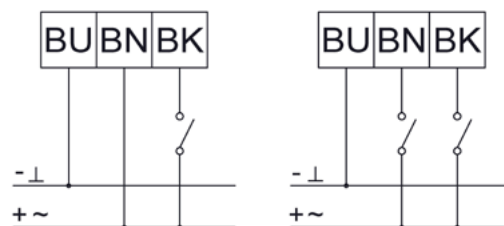
<b>Control</b>	On/Off + floating (MDB42/42M) Modulating 2-10 V (MDB52)
<b>Damper shaft</b>	∅ 8...12 mm / Ø 8...16 mm
<b>Power supply</b>	24 Vac/dc
<b>Consumption</b>	1.5 W / 2.5 VA (MDB42/42M) 2 W / 3 VA (MDB52)
<b>Connections cable</b>	Supplied 1000 mm cable 3 x 0,75 mm <sup>2</sup> (MDB42/42M) 4 x 0,75 mm <sup>2</sup> (MDB52)
<b>Angle of rotation</b>	95° max. (changeable from outside)
<b>Direction of rotation</b>	Changeable from inside
<b>Torque</b>	5 Nm min. with nominal voltage
<b>Running time</b>	60...120 s @ 90°
<b>Position indicator</b>	mechanical
<b>S1/S2 aux. microswitches</b>	n° 2, changeable from inside (MDB42M only)
<b>Power supply aux. microswitches</b>	250 Vac / 5A (res.) 2.5A (ind.)
<b>Protection degree</b>	IP52
<b>Room humidity</b>	95% R.H. (EN 60730-1)
<b>Room temperature</b>	-30T50 °C
<b>Storage temperature</b>	-30T80 °C
<b>Maintenance</b>	Free
<b>Weight</b>	about 0.5 kg
<b>Directive compliance</b>	EMC CE (2014/30/EU), LVD CE (2014/35/EU), RoHS CE (2011/65/EU)
<b>MDB52 only</b>	
<b>Control signal Y</b>	0...10 Vdc or 2..10 Vdc (Standard) or 0...20 mA or 4...20 mA
<b>Feedback signal U</b>	0...10 Vdc or 2..10 Vdc (Standard)

## INSTALLATION AND MOUNTING

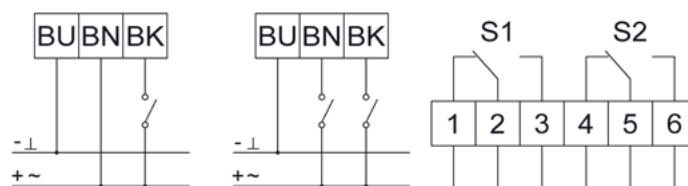
For actuation and control of dampers in ventilation and air-conditioning applications, the actuators should be mounted in dry environment, absolutely free from acrid fumes. In case of outdoor installation, the actuator has to be protected against climatic influences.

## WIRING DIAGRAM

### MDB42



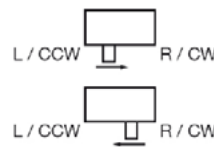
### MDB42M



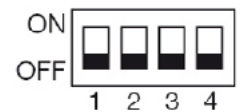
Direction of rotation	Clockwise (0...90°)	Anticlockwise (90...0°)
Switch position		
L/CCW	2/3 powered terminals	2 powered terminal
R/CW	2 powered terminal	2/3 powered terminals

**SWITCH CONFIGURATION - DIRECTION OF ROTATION MDB42 FLOATING (FIG. 3)**

Direction of rotation	Clockwise (0...90°)	Anticlockwise (90...0°)
Switch position		
L/CCW	3 powered terminal	2 powered terminal
R/CW	2 powered terminal	3 powered terminal



**FIG. 3**



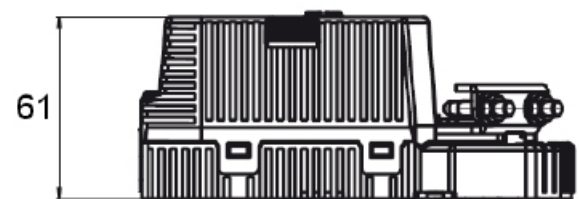
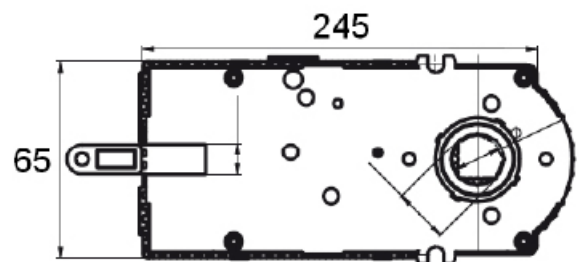
**FIG. 4**

**OPERATING DIP SWITCH CONFIGURATION MDB52 (FIG. 4)**

Configuration	OFF	ON	
<b>Direction of rotation</b>	Clockwise (0...90°)	3	--
	Anticlockwise (90...0°)	--	3
<b>Control signal Y</b>	2... 10 Vdc (Standard)	1/2	--
	0... 10 Vdc	2	1
	4...20 mA	1	2
<b>Stroke learning</b>	0...20 mA	--	1/2
	Enable	--	4
	Disable	4	--

All auxiliary switches are factory set in Off position.

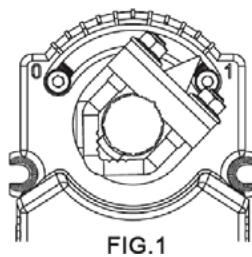
**DIMENSIONS [mm]**



**OPERATION**

**ADJUSTMENT OF THE ROTATION ANGLE (FIG. 1)**

Both end stops are adjusted to 0 (0°) and 1 (90°). For smaller rotation angles, loosen the screws at the metal end stop, adjust the end stops as requested, and fasten the screws again.



**FIG. 1**

**DAMPER SHAFT LOCKING (FIG. 1)**

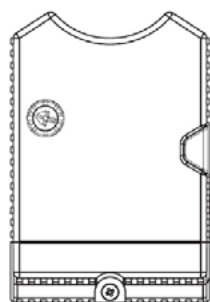
It is carried out through the clamp for the dimensions:  $\varnothing 8...12$  mm /  $\varnothing 8...16$  mm.

**AUX. MICROSWITCHES ADJUSTMENT (FIG. 2)**

The scale at the adjusting knob corresponds to a percentage graduation, related to 0° - 90°.

End stop is set to "0": Switch off the motor and choose the requested switching position by turning the knob to the right, i.e. "2" = 20%.

End stop is set to "1": Switch off the motor and choose the requested switching position by turning the knob to the left, i.e. "8" = 20%.



**FIG. 2**

The performances stated in this sheet can be modified without any prior notice