

## Actuators for Dampers

MODEL	CONTROL	POWER SUPPLY	DESCRIPTION	TORQUE
MDB42	On/off or floating	24 V AC/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

DESCRIPTION	MDB42-52
Control	On/Off + floating (MDB42/42M) Modulating 2-10 V (MDB52)
Damper shaft	∅ 8...12 mm / ∅ 8...16 mm
Power supply	24 V AC/DC
Consumption	1.5 W/2.5 VA (MDB42/42M) 2 W/3 VA (MDB52)
Connections cable	Supplied 1000 mm cable 3 x 0,75 mm <sup>2</sup> (MDB42/42M) 4 x 0,75 mm <sup>2</sup> (MDB52)
Angle of rotation	95° max. (changeable from outside)
Direction of rotation	Changeable from inside
Torque	5 Nm min. with nominal voltage
Running time	60...120 s @ 90°
Position indicator	mechanical
S1/S2 aux. microswitches	n° 2, changeable from inside (MDB42M only)
Power supply aux. microswitches	250 V AC / 5A (res.) 2.5A (ind.)
Protection degree	IP52
Room humidity	95% R.H. (EN 60730-1)
Room temperature	-30°C to 50°C
Storage temperature	-30°C to 80°C
Maintenance	Free
Weight	about 0.5 kg

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

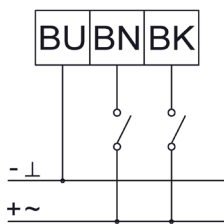
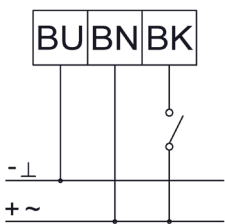
Directive compliance	EMC CE (2014/30/EU), LVD CE (2014/35/EU), RoHS CE (2011/65/EU)
<b>MDB52 ONLY</b>	
Control signal Y	0...10 V DC or 2..10 V DC (Standard) or 0...20 mA or 4...20 mA
Feedback signal U	0...10 V DC or 2..10 V DC (Standard)

## INSTALLATION AND MOUNTING

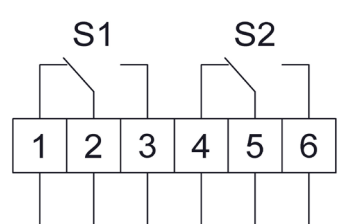
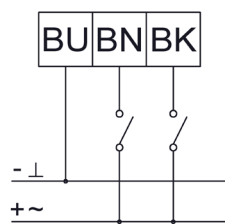
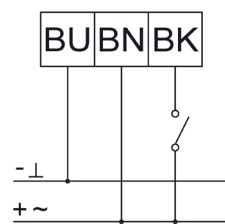
For actuation and control of dampers in ventilation and air-conditioning applications, the actuators should be mounted in dry environment, absolutely free from acrid fumes. In case of outdoor installation, the actuator has to be protected against climatic influences.

## WIRING DIAGRAMS

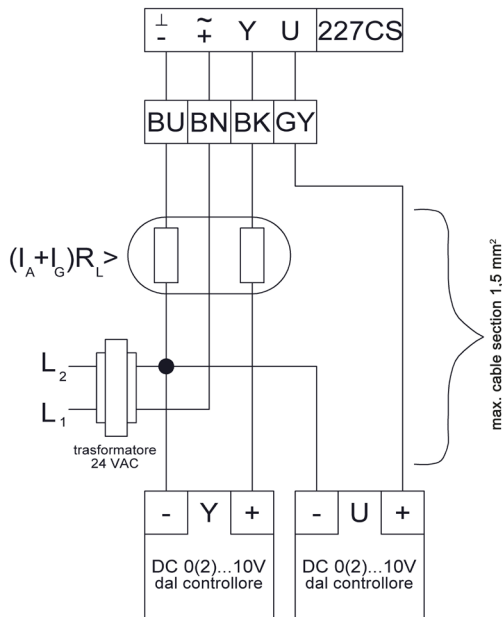
### MDB42



### MDB42M



### MDB52



CODE	COLOR	NUMBER
BU	Blue	cabl 1
BN	Brown	cabl 2
BK	Black	cabl 3
GY	Grey	cabl 4

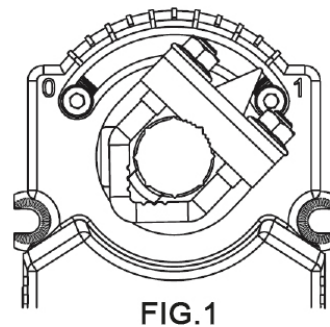
## OPERATION

### 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.

### Damper Shaft Locking (Fig. 1)

It is carried out through the clamp for the dimensions:  $\diamond 8...12$  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%.

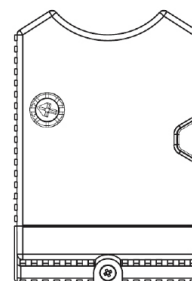


FIG. 2

For MDB42x, MDB52 models use a cable with a section of at least 1,5 mm<sup>2</sup>.

### Switch Configuration - Direction of Rotation MDB42 On/Off (Fig. 3)

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

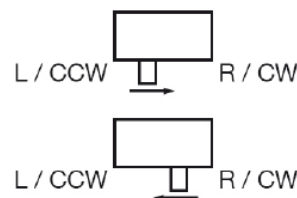


FIG. 3

### 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

### Operating DIP Switch Configuration MDB52 (Fig. 4)

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

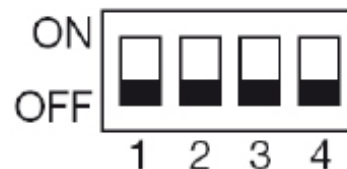


FIG. 4

All auxiliary switches are factory set in Off position.

### DIMENSIONS [mm]

