MDB24-44-54

Actuators for Dampers and Shoe Valves

MODEL	CONTROL	POWER SUPPLY	DESCRIPTION	TORQUE
MDB24	On/Off or Floating	85-265 V AC	Actuator for dampers and shoe valves	10 Nm
MDB44		24 V AC/DC		
MDB54	Proportional 2-10 V DC			
MDB24M	On/Off or Floating	85-265 V AC	Actuator for dampers and shoe valves with auxiliary microswitches	
MDB44M		24 V AC/DC		

APPLICATION AND USE

MDB24/44/54 are actuators for dampers and shoe valves for operating air control dampers in ventilation and air-conditioning systems in building services installations for air control dampers up to approx. 2 m^2.

TECHNICAL CHARACTERISTICS

DESCRIPTION	MDB24-44-54
Control	On/Off or floating (MDB24/24M/44/44M) Proportional (MDB54)
Damper shaft	◊ 8...15 mm / Ø 8...20 mm
Power supply	85-265 V AC (MDB24/24M) 24 V AC/DC (MDB44/44M/MDB54)
Consumption	2 W/4,5 VA (MDB24/24M) 2 W/3,5 VA (MDB44/44M/54)
Connection cable	Supplied 1000 mm cable 3 x 0,75 mm2 (MDB24/24M/44/44M) 4 x 0,75 mm2 (MDB54)
Torque	10 Nm with nominal voltage
Stroke	< 150 s /90°
Auxiliary switch	n° 1 adjustable from the outside (MDB24M/44M)
Auxiliary internal power supply	250 Vac / 5 (2,5)A, 1 x SPDT(Ag) (MDB24M/44M) supplied connection cable 1000 mm / 3 x 0,75 mm2
Protection degree	IP54 (downwards cable)
Maintenance	Free
Temperature	operating -30T50 °C storage -30T80 °C
Ambient humidity	5...95% r.H. (not condensing)
MDB54 ONLY	
Control signal Y	0...10 V DC or 2...10 V DC (standard)
Control signal U	2...10 V DC

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

DIRECTIVE COMPLIANCE	MDB24/24M/44/44M	MDB54
EMC	CE (2004/108/EU)	CE (2014/30/EU)
LVD	CE (2006/95/EU)	CE (2014/35/EU)
RoHS	CE (2011/65/EU)	
Operation mode	Typ 1 (EN60730-1)	
Nominal pulse voltage	4 Kv (EN60730-1)	0,8 Kv (EN60730-1)
Pollution	3 (EN60730-1)	

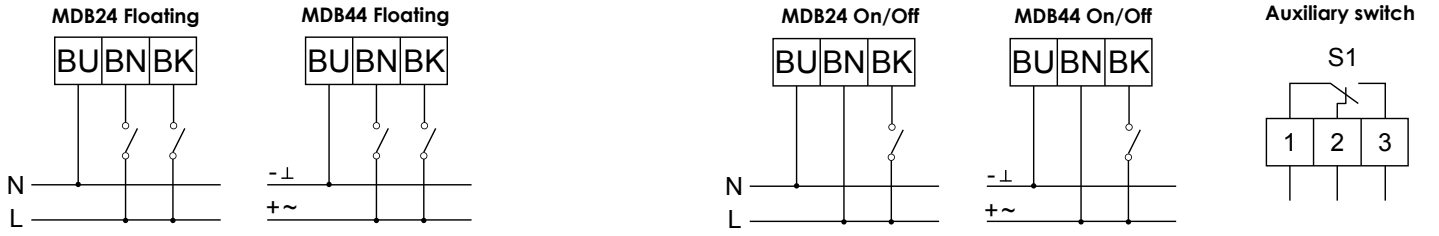
ACCESSORIES

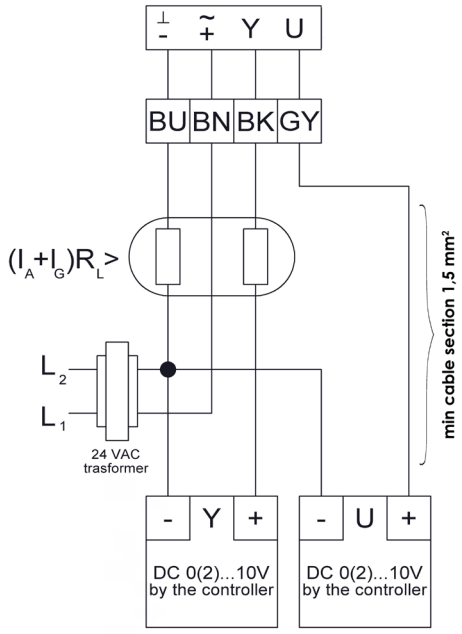
AM72 Linkage with M3-M4 valves

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





INITIAL	COLOR	NUMBER
BU	Blue	Wire 1
BN	Brown	Wire 2
BK	Black	Wire 3
GY	Grey	Wire 4

For MDB24x, MDB44x models use a cable with a section of at least 1.5 mm2.

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:
◊ 8...12 mm and Ø 8...15 mm.
For diameters ◊ 13...15 mm and Ø 16...20 mm remove the clamp reduction.

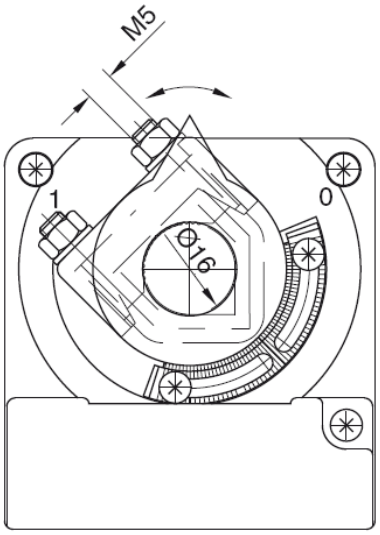


Fig.1

Rotation Direction Setting (Fig. 2)
The actuator is adjusted to clockwise direction by the factory to “R“. For changing the direction of rotation, turn the adjusting knob to “L”.

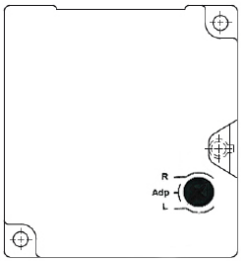


Fig.2

Aux. Microswitch Setting (Fig. 3)
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 rand choose the requested switching position by turning the knob to the left, i.e. “.8“ = 20%.

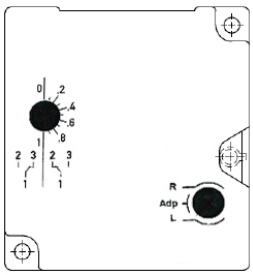
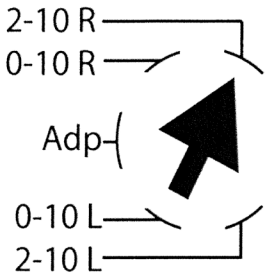


Fig. 3

MDB54 Setting
Mode switch with five positions at the housing:
1. Rotary direction right 2-10 Vdc
2. Rotary direction right 0-10Vdc
3. Adaption
4. Rotary direction left 0-10 Vdc
5. Rotary direction left 2-10 Vdc



Adaption Drive
- Actuator power off
- Setting the mechanical end stops
- Actuator power on
- Adaption to enable
- Actuator drive to position 0
- Actuator drive to position 1
- Adaption to disable if desired reached angular range or drive to endstop
- “Y” refers to the measured angular range

DIMENSIONS [mm]