

MODEL	CONTROL SIGNAL	POWER SUPPLY	MICRO AUX	TORQUE [Nm]	IP
MDS420R	On/Off	24 Vac/dc ±10%	No	20	54
MDS420RM			2 x SPDT		
MDS220R		230 Vac ±10%	No		
MDS220RM			2 x SPDT		



APPLICATION AND USE

MDS.20R(M) rotary actuators with electronic return function are designed for the direct operation of dampers up to 4 m². All models are equipped with an electronic return function in case of power supply loss and are used in applications where it is necessary to ensure a fixed position of the damper in emergency and/or power-off conditions.

TECHNICAL CHARACTERISTICS

DESCRIPTION	MDS420R(M)	MDS220R(M)
Torque:	20 Nm	
Max damper size:	4 m ²	
Shaft:	Ø 10 to 20 mm / □ 11 to 14 mm	
Minimum shaft length:	45 mm	
Power supply:	24 Vac/dc ± 10%	230 Vac ± 10%
Frequency:	50 ... 60 Hz	
Control signal:	On - Off	
Operating power consumption:	7,2 W	
End position power consumption:	1,2 W	
Power consumption for wire sizing:	10 VA	
Auxiliary switch rating:	3 (1,5) A 250 Vac	
Electrical connection:	Cable 1000 mm (supplied)	
Maximum connection length:	12 m	
Max. number of actuators in parallel:	5	
Running time:	90 ... 125 sec	
Running time in emergency return:	70 sec	
Protection class:	III	II
Angle of rotation:	0° ... 90° (95° mechanical)	
Weight:	1,2 kg	
Life cycle actuator:	60000 rotation	
Motor sound level:	< 45 dB (A)	
IP protection:	IP54	
Operating temperature:	-20° ... +50° C / IEC 721-3-3	

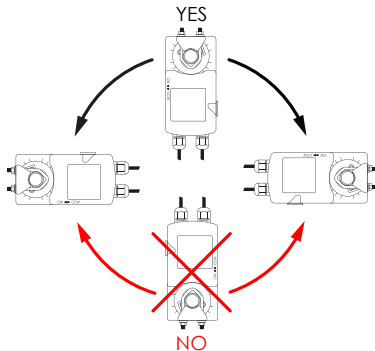


DESCRIPTION	MDS420R(M)	MDS220R(M)
Non-operating temperature:	-30° ... +60° C / IEC 721-3-2	
Ambient humidity:	5% ... 95% rH non condensing	
Maintenance:	Maintenance free	
Mode of operation:	Type I / EN 60730-1	
Compliance:	EMC: EN 55015:2013+A1:2015; EN 61547: 2009; EN 61000-3-2:2014; EN 61000-3-3:2013. LVD (only for 230 Vac power supply models): EN 60730-2-14:2019, EN 60730-1:2016+A2:2019.	

INSTALLATION AND MOUNTING

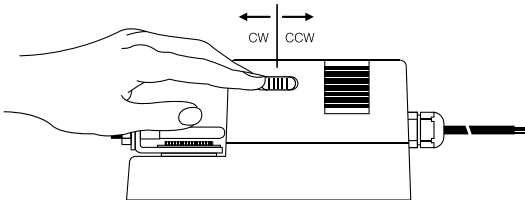
The actuator is fitted directly to the damper and the clamp tightened securely to the damper shaft. A universal anti-rotation bar is supplied with each actuator and must be fitted to prevent rotation during operation.

Mounting position



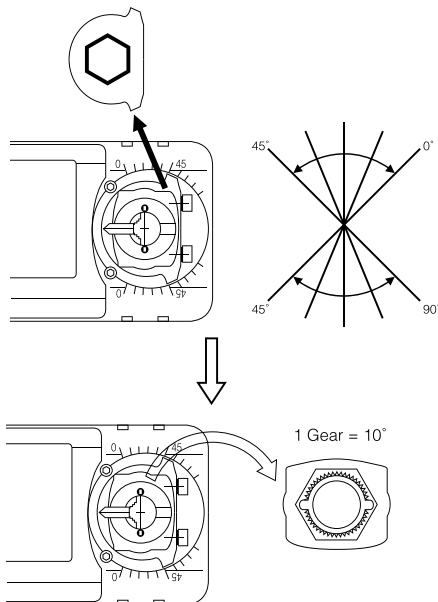
Changing direction of rotation

Default factory setting: CW.
Direction of rotation can be changed by toggling between CW/CCW switch on the actuator's housing.



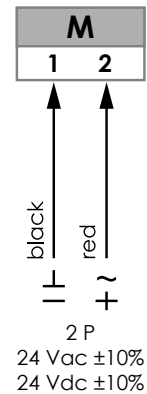
Mechanical limiting angle of rotation

The rotation of the actuator can be mechanically limited by adjusting as follow:

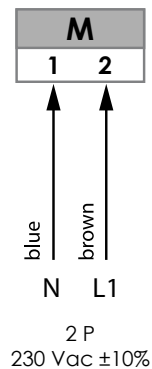


WIRING CONNECTION

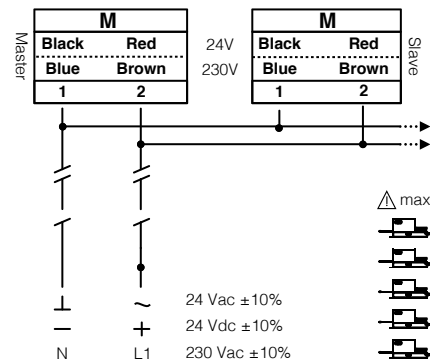
Connection for 24 Vac/dc models



Connection for 230 Vac models

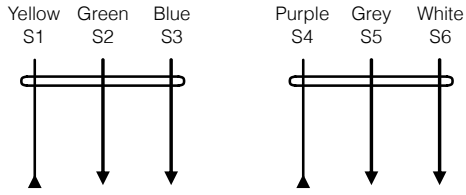
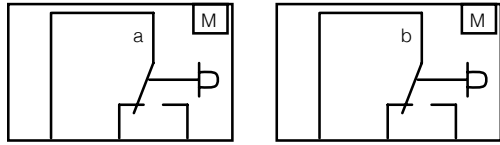


Parallel connection

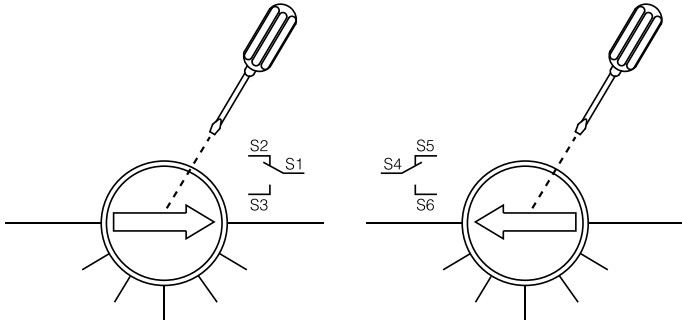


Parallel connection of maximum five MDS actuators is possible. The power consumption must be observed.

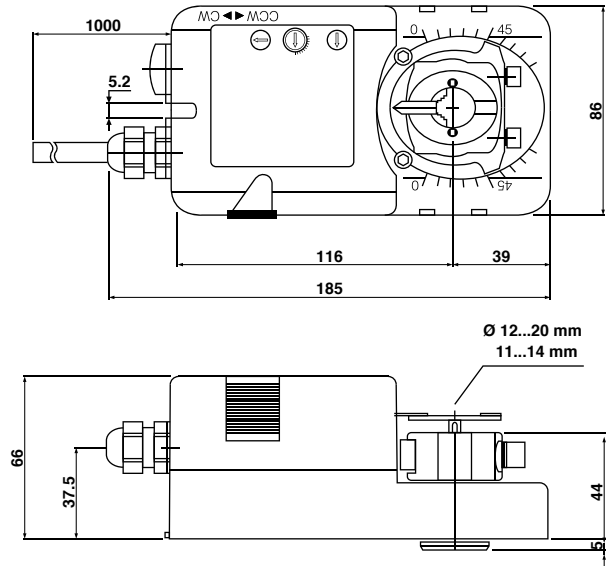
Auxiliary switch connection



3 (1.5) A, 250 Vac
Actuator at 0° position



DIMENSIONS [mm]



! SAFETY NOTES

24 Vac/dc: connect via safety isolating transformer.

230 Vac: to isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least 3 mm contact gap).

LEDS FUNCTIONALITY

WORKING MODE	LEDs STATUS			DESCRIPTION
	RED	ORANGE	GREEN	
SUPERCAPS PHASE CHARGE	ON	OFF	OFF	SUPERCAPS IN CHARGING
	ON	ON	OFF	SUPERCAP ALMOST CHARGED
	ON	ON	ON	SUPERCAP CHARGED
WORKING MODE	ON	OFF	2 BLINKING	CLOCKWISE DIRECTION MOVEMENT
	ON	OFF	3 BLINKING	COUNTERCLOCKWISE DIRECTION MOVEMENT
EMERGENCY RETURN MODE	OFF	OFF	ON	CHARGE SUPERCAPS > 99%
	OFF	ON	OFF	CHARGE SUPERCAPS > 66%
	ON	OFF	OFF	CHARGE SUPERCAPS > 33%

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