

Damper actuator with emergency electronic return - 20 Nm - Modulating control

MDS520R(M)



MODEL	CONTROL SIGNAL	POWER SUPPLY	MICRO AUX	TORQUE [Nm]	IP
MDS520R	0 ... 10 Vdc	24 Vac/dc ±10%	No	20	54
MDS520RM	0 ... 20 mA		2 x SPDT		



APPLICATION AND USE

MDS520R(M) rotary actuator with electronic return function is 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	MDS520R(M)
Torque:	20 Nm
Max damper size:	4 m ²
Shaft:	∅ 12 to 20 mm / □ 11 to 14 mm
Minimum shaft length:	40 mm
Power supply:	24 Vac/dc ± 10%
Frequency:	50 ... 60 Hz
Control signal:	0(2) ... 10 Vdc (yellow wire) / 0(4) ... 20 mA (orange wire)
Operating power consumption:	7,2 W
Input impedance:	0 ... 10 Vdc 100 KΩ, 0 ... 20 mA 500 Ω
End position power consumption:	1,2 W
Power consumption for wire sizing:	8 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
Angle of rotation:	0° ... 90° (95° mechanical)
Weight:	1,2 kg
Life cycle actuator:	60000 rotation
Motor sound level:	40 dB
IP protection:	IP54

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The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.

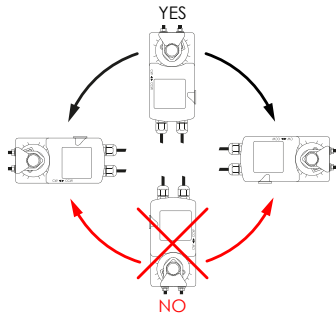


DESCRIPTION	MDS520R(M)
Operating temperature:	-20° ... +50° C / IEC 721-3-3
Non-operating temperature:	-30° ... +60° C / IEC 721-3-2
Ambient humidity:	5% ... 95% rH non condensing
Maintenance:	Maintenance free
Mode of operation:	Type I / EN 60730-1
Compliance:	EMC: EN 55015:2013+A1:2015; EN 61547: 2009; EN 61000-3-2:2014; EN 61000-3-3:2013.

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.

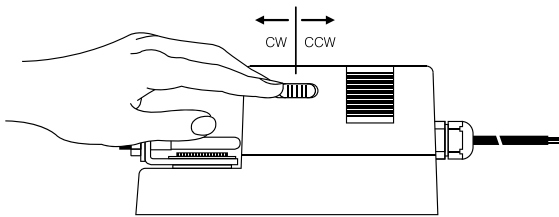
Mounting position



Changing direction of rotation

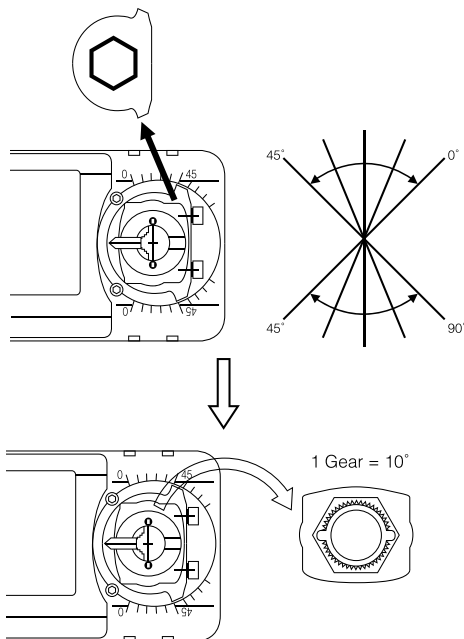
Default factory setting: CW.

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



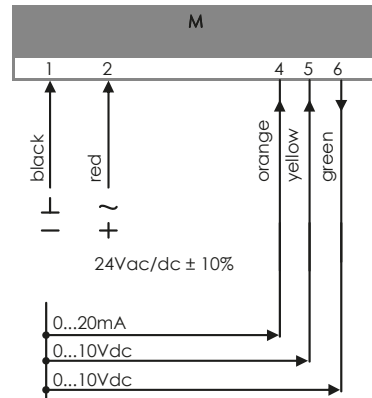
Mechanical limiting angle of rotation

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

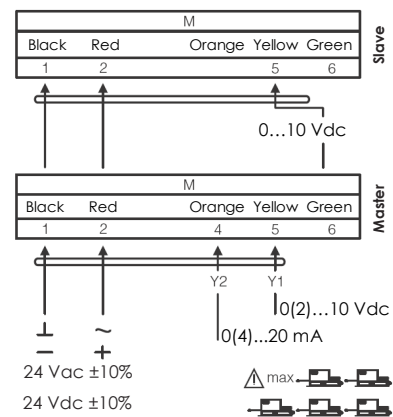


WIRING CONNECTION

Connection for 24 Vac/dc models

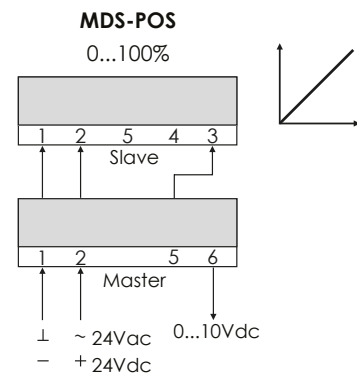


Parallel connection

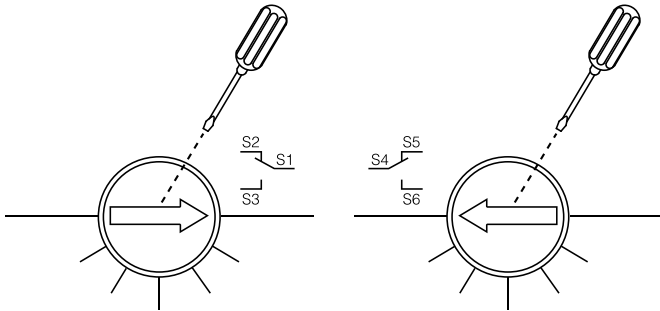
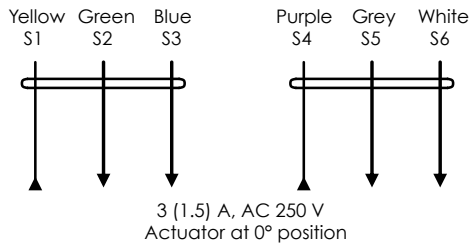
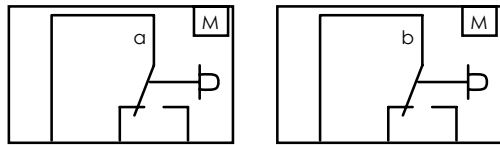


During parallel operation, the output signal (terminal 6, 0...10Vdc) of the master actuator must be connected to terminal 5 of the slave actuator.

MDS-POS connection



Auxiliary switch connection



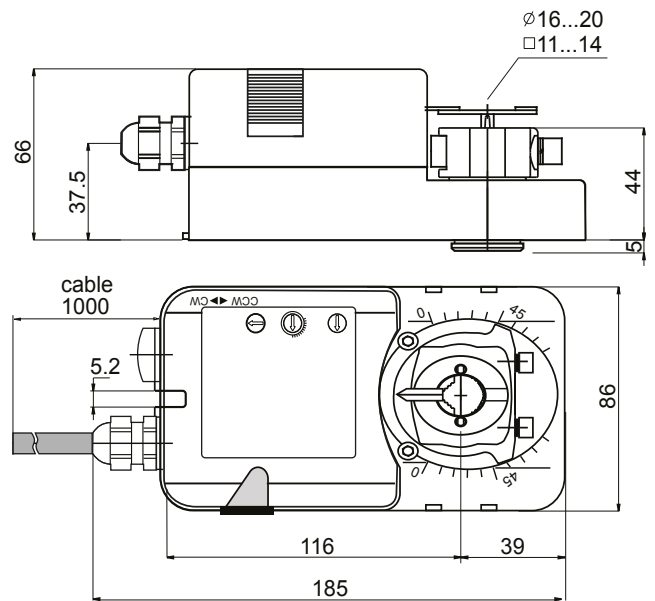
SAFETY NOTES

24 Vac/dc: connect via safety isolating transformer.

ACCESSORIES

MDS-POS Position transmitter liquid crystal display

DIMENSIONS [mm]



LEDS FUNCTIONALITY

WORKING MODE	LEDs STATUS			DESCRIPTION
	RED	ORANGE	GREEN	
SUPERCAPS PHASE CHARGE	ON	OFF	OFF	SUPERCAPS IN CHARGING
	ON	ON	OFF	SUPERCAPS ALMOST CHARGED
	ON	ON	ON	SUPERCAPS CHARGED
WORKING MODE	ON	1 BLINKING	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