

MDS520R(M)



Damper Actuator with Emergency Electronic Return - 20 Nm - Modulating Control

MODEL	CONTROL SIGNAL	POWER SUPPLY	MICRO AUX	TORQUE [Nm]	IP
MDS520R	0 ... 10 V DC 0 ... 20 mA	24 V AC/DC ±10%	No	20	54
MDS520RM			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	Ø 12 to 20 mm / □ 11 to 14 mm
Min. shaft length	40 mm
Power supply	24 V AC/DC ±10%
Frequency	50 ... 60 Hz
Control signal	0(2) ... 10 V DC (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 V AC
Electrical connection	Cable 1000 mm (supplied)
Max. connection length	12 m
Max. number of actuators in parallel	5
Runnting time	90 ... 125 sec
Runnting 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	IP 54

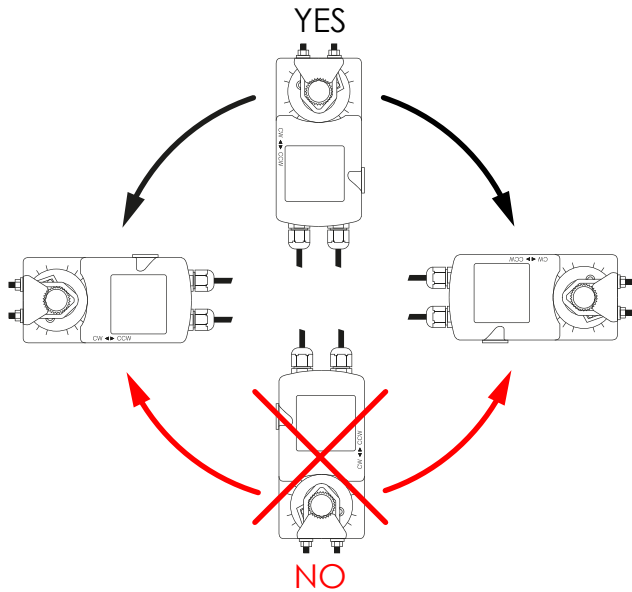
The performances stated in this sheet can be modified without any prior notice.

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

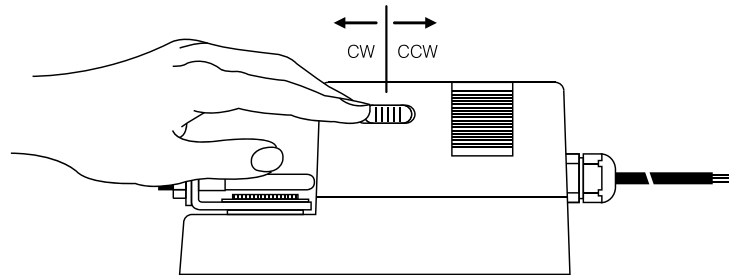
INSTALLATION AND MOUNTING

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



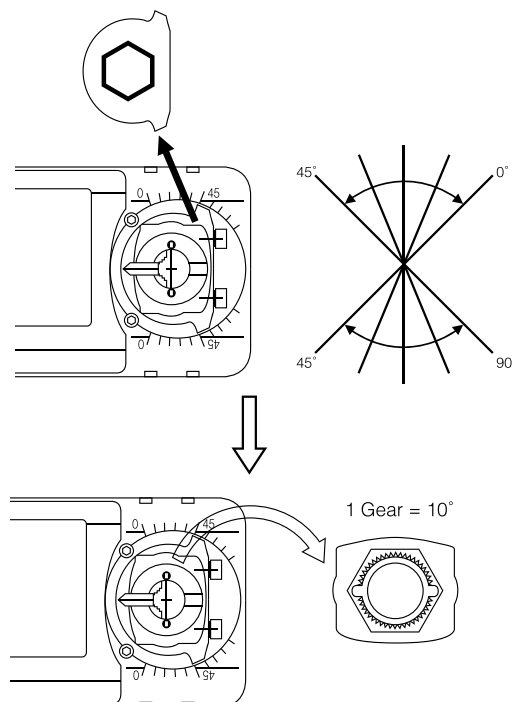
Changing direction of rotation



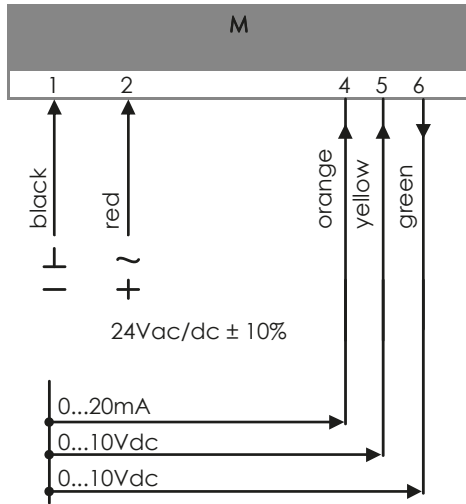
Default factory setting: CW.
Direction of rotation can be changed by toggling between CW/CCW switch on the actuator's housing.

Mechanical limiting angle of rotation

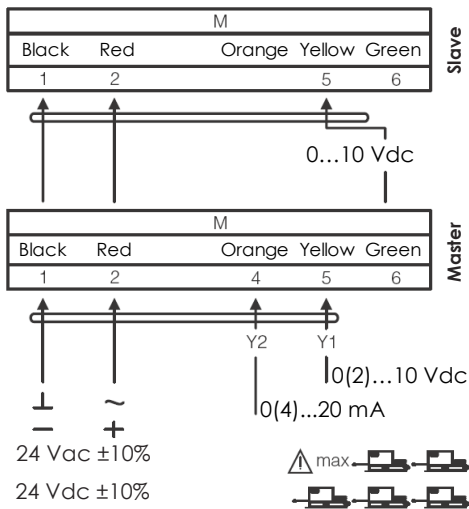
The rotation of the actuator can be mechanically limited by adjusting as follows:



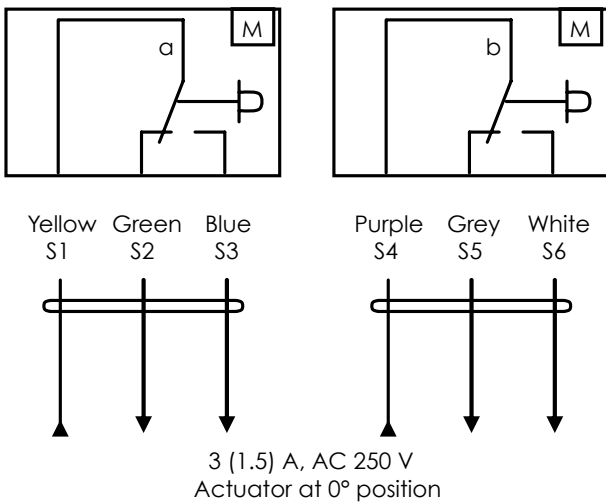
Connection for 24 V AC/DC models



Parallel connection



Auxiliary switch connection



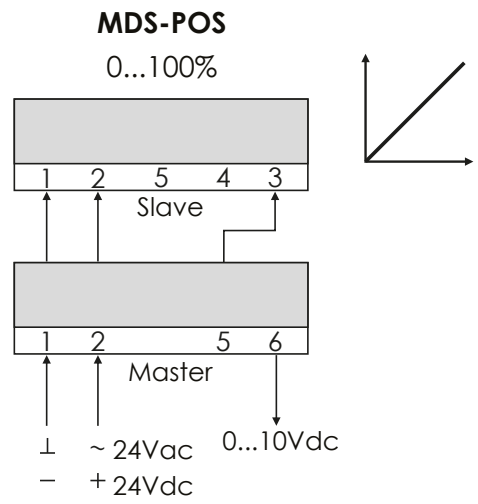
SAFETY NOTES

24 V AC/DC: connect via safety isolating transformer.

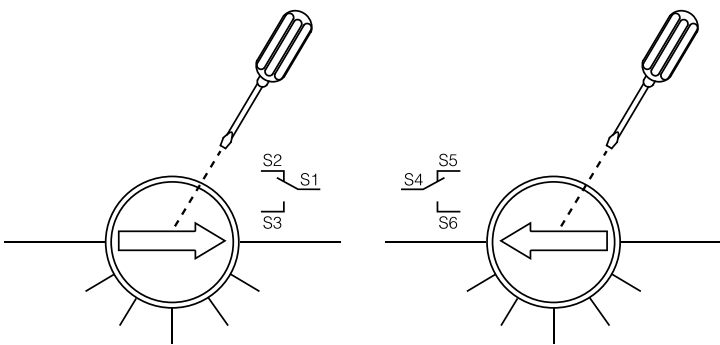
ACCESSORIES

MDS-POS Position transmitter liquid crystal display

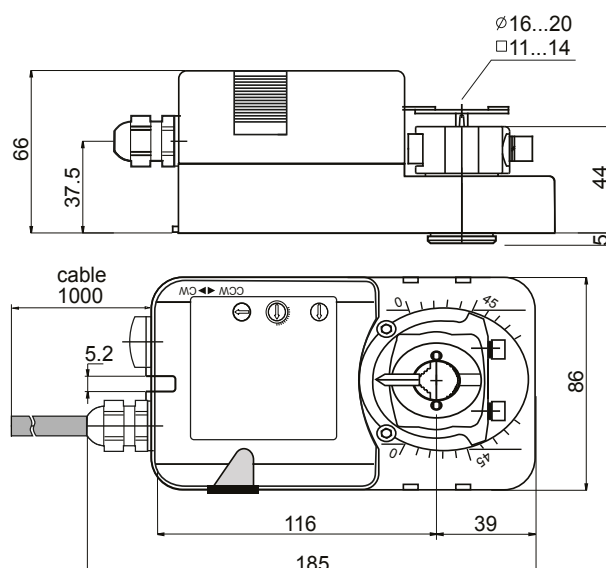
MDS-POS connection



Parallel connection of maximum five MDS actuators is possible. The power consumption must be observed. During parallel operation, the output signal (terminal 6, 0...10 V DC) of the master actuator must be connected to terminal 5 of the slave actuator.



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%