

# FA SERIES SPRING RETURN DAMPER ACTUATOR

**2 Point Spring Return Control**  
**3 Nm**

## FA...03 (S1) SERIES

FA series Spring Return actuators are developed for general air damper application, rotary valve and other devices which require a fail-safe function. During normal operation, the actuator motorized the device. In the event of power outage, the actuator springs back to its original position.



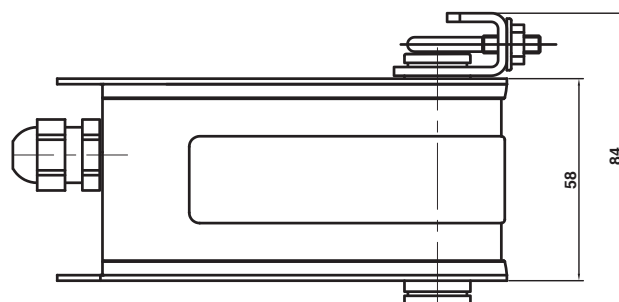
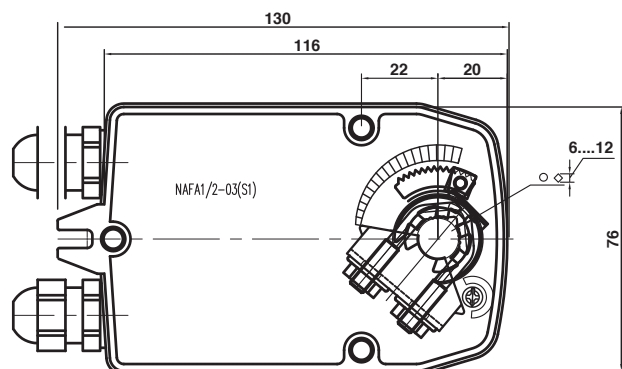
## PRODUCT FEATURE

- Torque 3 Nm
- Damper size 0.6 m<sup>2</sup>
- Power supply AC/DC 24V and AC 230 V
- Shaft dimensions - Ø 10...16 mm / □ 7...11 mm
- Minimum Shaft Length 40 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Optional 1 Adjustable SPDT auxiliary switch

## MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
FA 1-03	3 Nm	AC/DC 24 V ± 10%	25...55 sec (Spring Back <20 sec)	-
FA 1-03S1	3 Nm	AC/DC 24 V ± 10%	25...55 sec (Spring Back <20 sec)	1 x SPDT (Adjustable)
FA 2-03	3 Nm	AC 230 V ± 10%	25...55 sec (Spring Back <20 sec)	-
FA 2-03S1	3 Nm	AC 230 V ± 10%	25...55 sec (Spring Back <20 sec)	1 x SPDT (Adjustable)

## DIMENSION (mm)



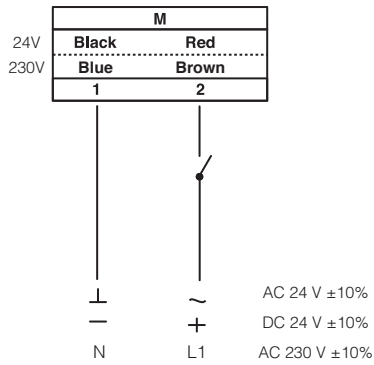
## TECHNICAL SPECIFICATION

MODEL NUMBER	FA 1-03 (S1)	FA 2-03 (S1)
TORQUE	3 Nm	3 Nm
DAMPER SIZE	0.6 m <sup>2</sup>	0.6 m <sup>2</sup>
SHAFT DIMENSION	Ø 10...16 mm / □ 7...11 mm	Ø 10...16 mm / □ 7...11 mm
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 point control	2 point control
POWER CONSUMPTION		
● OPERATING	7.2 W	7.2 W
● END POSITION	1.2 W	1.2 W
FOR WIRE SIZING	10.0 VA	10.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A, AC 250 V	3 (1.5) A, AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
WEIGHT	1.8 Kg	1.9 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	40 dB	40 dB
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC	CE & ISO 9000 EN / EEC

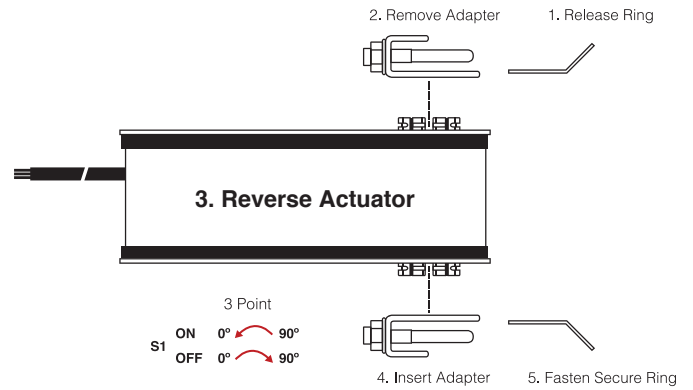
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**3 Nm**

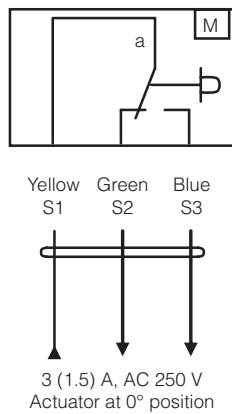
## WIRING DIAGRAM FA...03 (S1) POWER SUPPLY AC/DC 24 V / AC 230V



## CHANGING DIRECTION OF ROTATION FA...03 (S1)

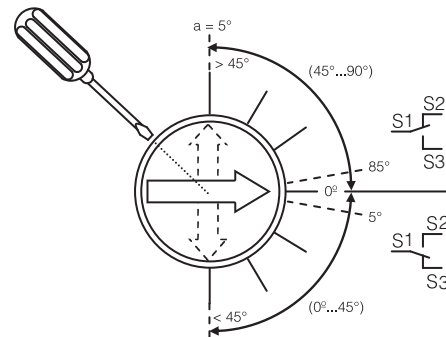


## WIRING DIAGRAM FA...03 (S1) AUXILIARY SWITCH

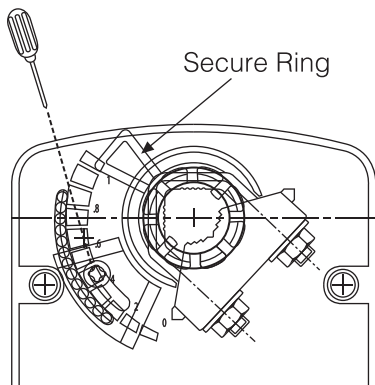


## AUXILIARY SWITCH FA...03 (S1)

Switch **a** factory-set at 5°.  
The auxiliary switch can be optimally adjusted between 0°...90°.



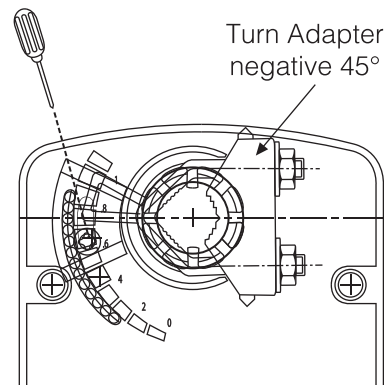
## ANGLE OF ROTATING LIMITATING 5°...85° ADJUSTMENT



For 5°...45° Adjustment  
(Diagram 1)

### For 5°...45° Adjustment (Diagram 1)

- ① Loosen screw of the mechanical limiter plate.
- ② Move the limiter plate to the appropriate position.
- ③ Tighten the screw.

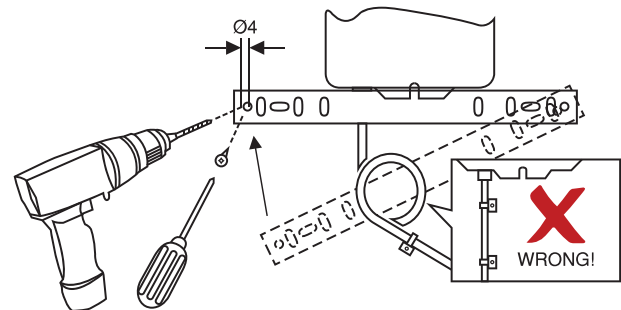
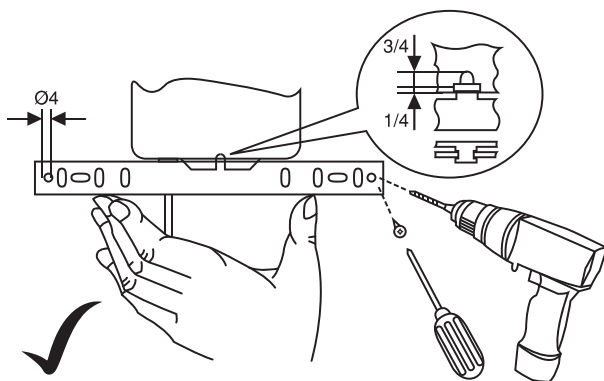


For 45°...85° Adjustment  
(Diagram 2)

### For 45°...85° Adjustment (Diagram 2)

- ① Release the secure ring of the adapter.
- ② Remove the adapter and turn negative 45° as shown.
- ③ Insert adapter and secure the adapter.
- ④ Loosen screw of the mechanical limiter plate.
- ⑤ Move the limiter plate to the appropriate position.
- ⑥ Tighten the screw.

## INSTALLATION / MOUNTING INSTRUCTION



### IMPORTANT REMARK

For special requirement, consult your local Swisotec's representative.



This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.



AC / DC 24 V: Connect via safety isolating transformer.  
AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. Swisotec shall not be liable for damages resulting from misapplication or misuse of its products.