

SA 05-X - SA 09-X ELECTRIC ACTUATOR

FEATURES

SA05-X - SA09-X electric actuators are intended for motorising 1/4 turn valves in hazardous areas. The torque are 50 Nm (SA05-X) and 90 Nm (SA09-X). The protection mode is a "d" explosion-proof. With a compact, robust construction and IP67 epoxy-coated aluminium housing, the SA05-X and SA09-X actuator are especially well suited for motorising ball valves and butterfly valves installed in hazardous areas. The SA05-X and SA09-X are equipped with a key-operated hand control and a 3D visual position indicator. It is compliant with the EN 15714-2 standard.

AVAILABLE MODELS

Supply voltages: 230V AC (50-60Hz), 24V AC/DC.

LIMITS OF USE

IP Code	IP 67
Ambient temperature	- 20°C / +55°C
Service factor	S2 : 15mn - S4 : 50%



ATEX APPROVAL

Protection mode	"d" according to the EN 60079-1 standard
Category of material	2
Operation zones	1G and 2G
Marking	II 2 G Ex d IIB T4 (ON KEMA no. 0344)



MECHANICAL FEATURES

Gear box	treated steel pinions
Torque	50 Nm (SA05-X) / 90 Nm (SA09-X)
Angle of rotation	90° +/- 5°
Declutching	Without
Override control	By key

Actuator	SA05-X (50Hz)		SA05-X (60Hz)	SA09-X (50Hz)	SA09-X (50Hz)	SA09-X (60Hz)
Voltage	230V AC	24V AC/DC	230V AC	230V AC	24V AC/DC	230V AC
Torque (Nm)	50		50	90		90
Manoeuvring time (s)	17	10	14	36	17	30
ISO 5211	F03/F05/F07 star 14					

Information given as an indication only, and subject to possible modifications

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		Rev.	09
		Date	10/2024

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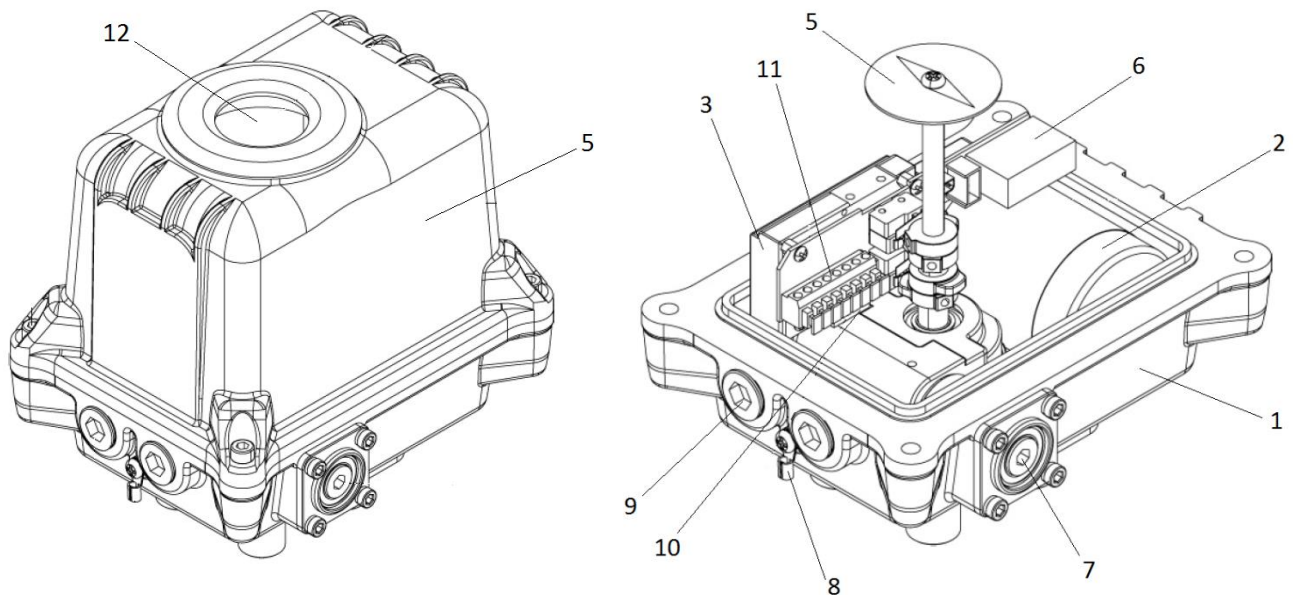
ELECTRICAL FEATURES

Motor protection	Thermal switch	Anti-condensation	5W heater
Limit switches	2 adjustable switches	Electrical connection	2 x C.G. M20x1.5 ATEX (NOT SUPPLIED on option)
Auxiliary switches	2 adjustable dry switches		

Actuator	SA05 X		SA09 X	
Voltage	230V AC	24V AC/DC	230V AC	24V AC/DC
Power (W)	6 W	15 W	6 W	15 W
Current (A)	0.23	1.8	0.19	1.8

CONSTRUCTION

1	Housing	Polyester-coated aluminium
2	Electrical motor	
3	Gear box	Treated steel pinions
4	Cover	Polyester-coated aluminium
5	Position indicator	Polycarbonate plastic
6	Condenser	
7	Handle override	
8	Earthing	
9	Cable inlet	
10	Anti-condensation heater	
11	Terminal box	
12	Indicator light	Toughened glass



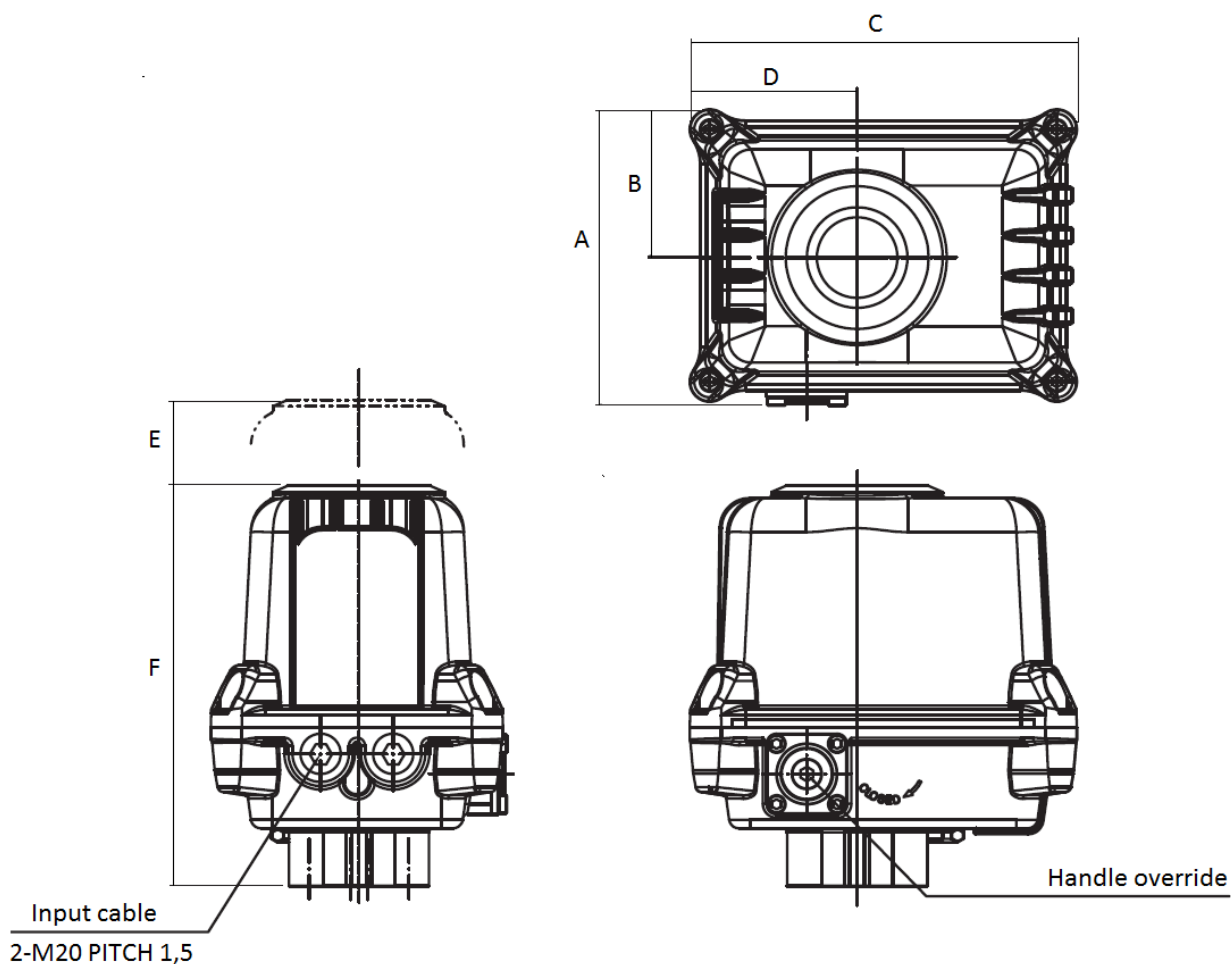
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DIMENSIONS (mm) AND WEIGHT (kg)

Dimensions (mm)	A	B	C	D	E	F	Weight (kg)
SA05-X / SA09-X	147	73	193	83	100	199	5

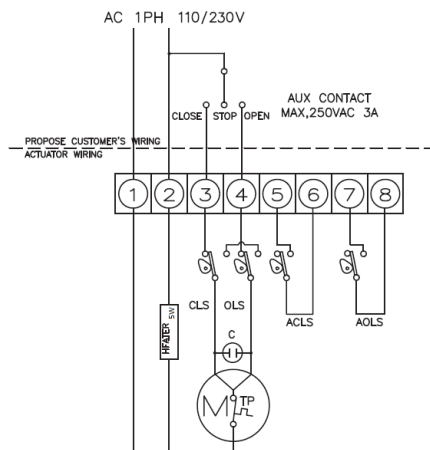


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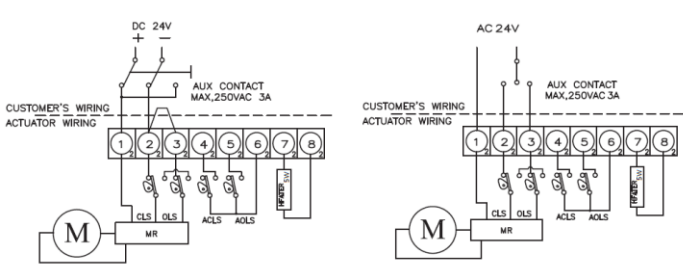
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WIRING DIAGRAM 230V AC 50Hz/60Hz

1	common	CLS : Close Limit Switch (250VAC 3A) OLS : Open Limit Switch (250VAC 3A) ACLS : Aux Close Limit Switch (250VAC 3A) AOLS : Aux Open Limit Switch (250VAC 3A) TP : Thermal Protector (250VAC 3A) RM : Motor Regulation 
2	anti-condensation heater	
3	closing command	
4	opening command	
5	closing auxiliary	
6	closing auxiliary	
7	opening auxiliary	
8	opening auxiliary	

WIRING DIAGRAM 24V AC/DC

1	common or +	CLS : Close Limit Switch (250VAC 3A) OLS : Open Limit Switch (250VAC 3A) ACLS : Aux Close Limit Switch (250VAC 3A) AOLS : Aux Open Limit Switch (250VAC 3A) TP : Thermal Protector (250VAC 3A) RM : Motor Regulation 
2	closing command	
3	opening command	
4	closing auxiliary	
5	opening auxiliary	
6	auxiliaries common	
7	anti-condensation heater power supply	
8	anti-condensation heater power supply	

OPTIONS

1	SA 05 X / SA 09 PIU : version with feedback potentiometer
2	SA 05 X / SA 09 X CPT : version with position transmitter 4-20 mA
3	SA 05 X / SA 09 PCU : version with adjustment card 0-10, 2-10V, 2-20 mA, 4-20 mA

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SPARE PARTS

SA05-X / SA09-X Electric actuator	
Gear box	
Printed circuit board	
Pinion (SA05-X)	
Electrical motor	
https://www.sectoriel.com/fr/sa05x-servomoteur-electrique-atex-1-4-tour-50-nm-on-off-ip67.html	

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ASSEMBLING AND MAINTENANCE INSTRUCTIONS



SA05 - SA05S - SA09



SA05X - SA09X

1. DESCRIPTION

- 1.1 Electric actuator for motorising 90° turn valves.
- 1.2 The full features of this device are given in sheet FT23010 / FT23310.
- 1.3 Before operating this device, read the present instructions carefully.

2. GUARANTEE

- 2.1 Before any contact with our services, identify the type of actuator.
- 2.2 SECTORIEL actuators have a 12-month guarantee from the delivery date. Parts recognized as defective by an assessment at our facility, will be replaced at our expense. Complaints generated by incorrect use or a modification of the actuator cannot be taken into account.

3. VERIFICATIONS AND ACCEPTANCE

- 3.1 At acceptance, check that:
 - the packaging is in good condition;
 - the actuator is as ordered;
 - the equipment is not damaged.
- 3.2 It is recommended to install the actuator as soon as accepted and not to leave it unused. If the equipment has to be stored, it has to be in a dry place protected from weather.

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4. PRECAUTIONS FOR OPERATION

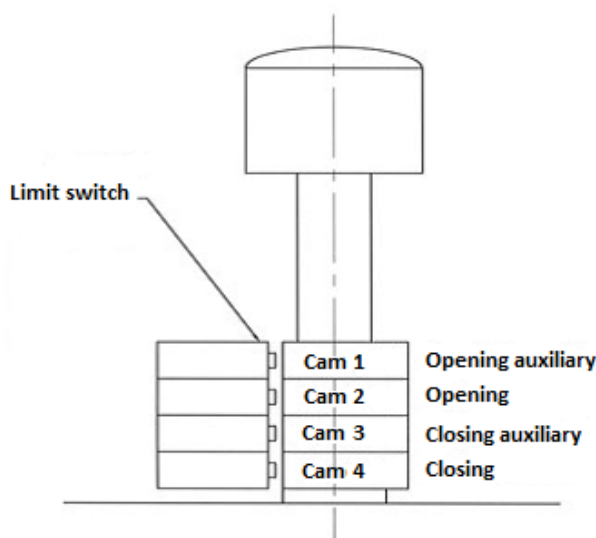
- 4.1 Before installing, make sure that the installation is completely depressurized and brought to ambient temperature.
- 4.2 In a zone classified as explosive, install only model SA05X / SA09X.
- 4.3 The protection class of the actuator is IP67 for indoors or outdoors installation. Do not install this actuator in a marine environment and do not immerse it.
- 4.4 The actuator must not be electrically powered during the installation and maintenance of the valve on the pipework, and of the actuator on the valve
- 4.5 Before proceeding to the electrical connection, check the supply voltage of the actuator.
- 4.6 Do not mount the actuator in series or in parallel with other electrical motors. If need be, use relays.
- 4.7 Do not mount the actuator on valves with higher torque than the nominal torque of the actuator.
- 4.8 The anti-condensation heater must be wired, indoors and outdoors, on special applications.

5. INSTALLATION AND OPERATION

- 5.1 Install the actuator on the valve (already done for units assembled in our workshops)
- 5.2 Perform the electrical wiring as shown in the diagram below.
- 5.3 Adjust the switch stops (already done for units assembled in our workshops).
- 5.4 View the valve's movement using the indicator light on the cover.
- 5.5 SA05 / SA09 and SA05X / SA09X actuator: to actuate the handle override, first disconnect the electrical power supply, then turn the hollow hex-head screw with an Allen key.
No handle override for SA05S.
- 5.6 SA05X actuator: the electrical connection must be carried out using an ATEX approved cable gland (CG) CG M20x1.5 which corresponds to the same operation zones as SA05X / SA09X.
SA05X has 2 connections M20x1.5. If using only one CG ATEX cable gland, the 2nd connection must be provided with an ATEX-approved plug which corresponds to the same operation zones as SA05X / SA09X.
CG and ATEX plug are not provided as standard. Option when ordering.

6. SWITCH SETTING

- 6.1 The cams are attached to the drive stem.
- 6.2 Clockwise rotation = valve closing. The micro-switch stops the actuator.
- 6.3 Anti-clockwise rotation = valve opening. The micro-switch stops the actuator.



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