

702-703 XS-F VALVE WITH SA 05-09 ELECTRIC ACTUATOR

FEATURES

The 702-703 XS-F + SA valve is a ball valve dedicated to the automatic opening/shut off of industrial uncharged fluids below 137 bar and 220 °C. Its 3-piece, full bore, double sealed (body and stem), antistatic and firesafe construction make it possible for use in the oil and gas industry. This valve has the Firesafe, EC and ATEX certifications. The ISO 5211 pad allows a simple mounting of the SA actuator. It is perfectly suitable for an indoor or outdoor industrial use.

AVAILABLE MODELS

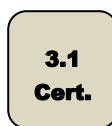
702 XS-F : Carbon steel body.

703 XS-F : Stainless steel body.

Diameters : 1/4 " to 2".

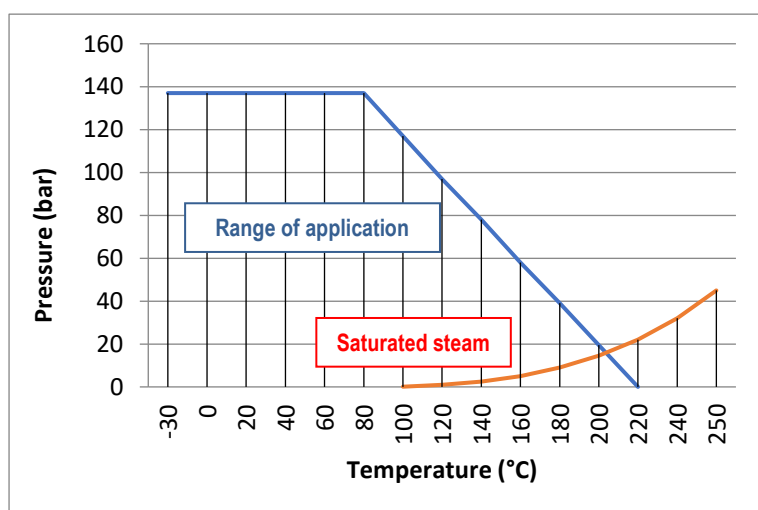
Connections : BSP and NPT threaded connections, weldable SW and BW.

Supply voltages : 12Vdc, 24Vac-dc and 230Vac.



LIMITS OF USE

Fluid pressure : PS	137 bar
Fluid temperature : WT	Carbon Steel : -20°C / +220°C Stainless steel : -30°C / +220°C
Saturated steam use	15 bar / +200°C
Ambiant temperature	- 20°C / + 70°C
Service factor	S2 : 15mn - S4 : 50% (SA 05)
	S2 : 15mn - S4 : 30% (SA 09)



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



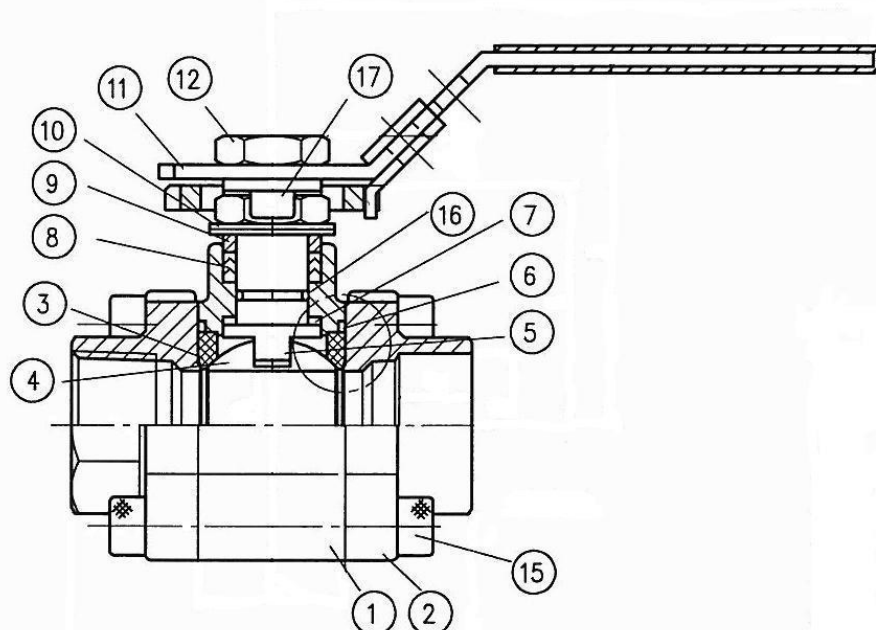
SECTORIEL S.A.
45 rue du Ruisseau
38290 SAINT QUENTIN-FALLAVIER – FRANCE
Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95
www.sectoriel.com / courrier : sectoriel@sectoriel.fr

Pages	1/8
Ref.	TDS702XSf+SA
Rev.	05
Date	01/2026

702-703 XS-F VALVE WITH SA 05-09 ELECTRIC ACTUATOR

DIRECTIVES AND MANUFACTURING STANDARDS

OBJET	Standard	ON	OBJET	Standard
Pressure Equipment Directive 2014/68/EC	1/4" to 1" : not subject		Final test	API 598
	1"1/4 to 2" : category III	TÜV 0035	Material certificate	EN 10204
Conception	ANSI B16.34		Fire safety	API 607/4
Size	EN 12516-1		Motorisation connection	ISO 5211
Steel grades	EN 1503-2			
BSP threaded standard	ISO 228-1			
ATEX Directive	II 2G/D Tx areas 1,2,21 and 22	SIRA 0518		
	EN 13463-1			



CONSTRUCTION

No.	Name	Carbon steel	Stainless steel	No.	Name	Carbon steel	Stainless steel
1	Body	Carbon steel 1.0619	Stainless steel 1.4408	10	Belleville washer	301 SS	
2	Ends	Carbon steel 1.0619	Stainless steel 1.4408	11	Lever	304 SS	
3	Seats	PTFE + 50% Stainless steel		12	Lever nut	304 SS	
4	Ball	316 SS		13	End stop	304 SS	
5	Stem	316 SS		14	Sleeve	PVC	
6	Body gasket	Graphite		15	Screw	ISO 898 12.9	
7	Washer	PTFE + 50% stainless steel		16	O-ring	FPM	
8	Gland packing	Graphite		17	Lock out device	304 SS	
9	Washer	304 SS		18	Antistatic ball	316 SS	
				19	Spring	316 SS	

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

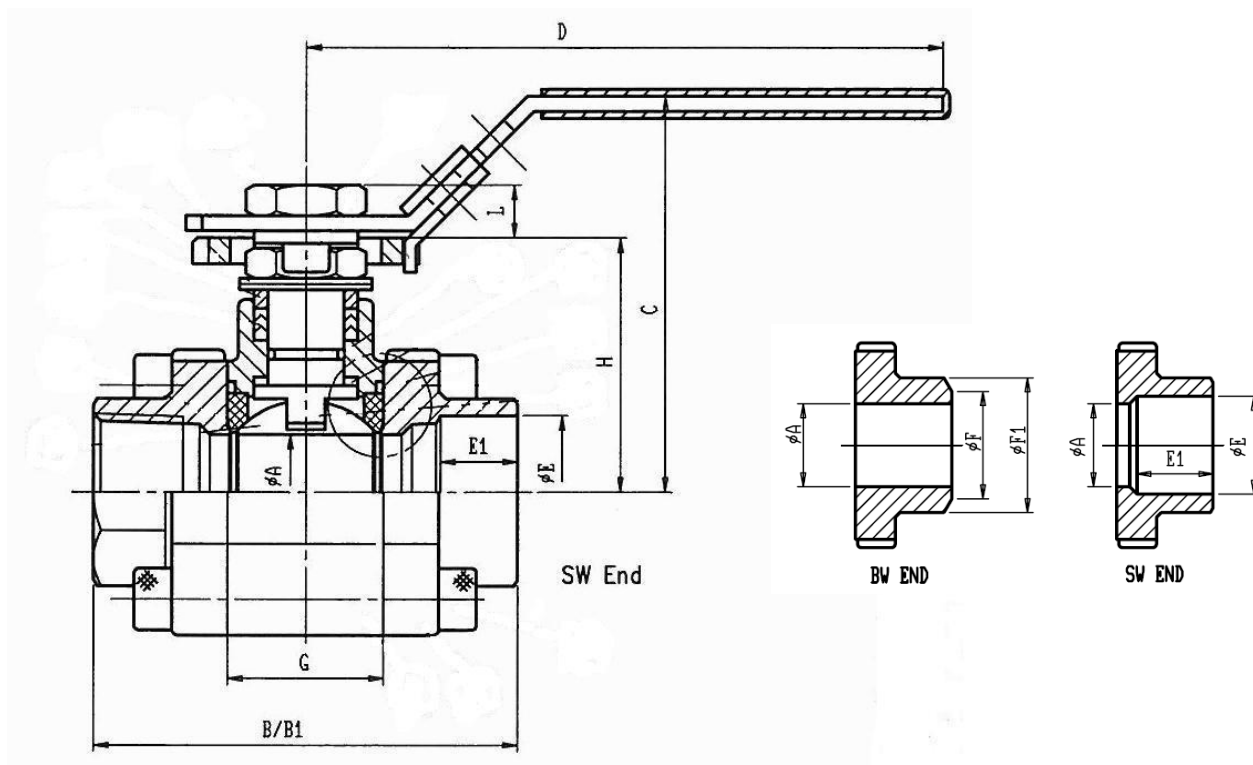


SECTORIEL S.A.
45 rue du Ruisseau
38290 SAINT QUENTIN-FALLAVIER – FRANCE
Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95
www.sectoriel.com / courrier : sectoriel@sectoriel.fr

Pages	2/8
Ref.	TDS702XSF+SA
Rev.	05
Date	01/2026

702-703 XS-F VALVE WITH SA 05-09 ELECTRIC ACTUATOR

DIMENSIONS (mm)



DN	1/2"	3/4"	1"	1"1/4	1"1/2	2"
A	16	20	24,5	32	38	50
B (SW)	75	80	90	110	120	140
B1 (BW)	75	90	100	110	125	150
C	70.9	73.4	84.1	89.3	109.5	118.9
D	110	110	135	135	165	165
E	21.8	27.2	33.9	42.7	48.8	61.2
E1	11.2	14.3	15.8	17.5	19.1	21.3
F (BW)	17	22	28	37	43	54
F1 (BW)	21.3	26.9	33.7	42.4	48.3	60.3
G	25.2	27.7	33	41.2	49.3	63.6
H	42.3	44.8	54	59.2	73.5	82.9
L	8	8	10	10	14.8	14.8

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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER – FRANCE Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95 www.sectoriel.com / courrier : sectoriel@sectoriel.fr	Pages	3/8
		Ref.	TDS702XSF+SA
		Rev.	05
		Date	01/2026

702-703 XS-F VALVE WITH SA 05-09 ELECTRIC ACTUATOR

SA ELECTRICAL MOTORISATION

Suggested standard SA actuation under the following conditions :

- Electric actuator with an IP 67 epoxy coated aluminium enclosure and steel gears,
- A minimum 1.3 safety factor compared with the valve nominal torque rating,
- A maximum pressure differential up/downstream of 10 bar ($=\Delta P$),

Direct mounting of the electric actuator.

DN	Actuator	Power (W)	Intensity 230V AC	Time (s)*	Intensity 24V AC-DC	Time (s)*	Equipements standards du servomoteur
1/2"	SA 05	6 W	23 mA	17 s	1,8 mA	10 s	2 adjustable limit switches. 2 dry auxiliary switches. 5 W anti-condensation heater. Actuator thermal cut-out Manual override by key. Backlit position indicator (except for the SA-X version) Electrical connection: 2 gland packs. M20x1.5
3/4"	SA 05	6 W	23 mA	17 s	1,8 mA	10 s	
1"	SA 05	6 W	23 mA	17 s	1,8 mA	10 s	
1"1/4	SA 05	6 W	23 mA	17 s	1,8 mA	10 s	
1"1/2	SA 05	6 W	23 mA	17 s	1,8 mA	10 s	
2"	SA 09	6 W	25 mA	32 S	2,1 mA	22 S	

For any other operating conditions, please contact us.

* indicative time for actuator running empty

MOTORISATION OPTIONS

There are many options, so please contact our sales service for more information on these:

1	2	3	4	5
SA 05 S : Low speed electric actuator 100 s	SA 05 PCU : Regulation actuator 4-20 mA or 0-10 V	SA 05 SCP : Safety actuator with an integrated battery emergency shutdown	SA 05 X : zone ATEX 1 and 2 actuator	SR 05 : spring return fail safe actuator
				
6	SAPUI electric actuator with feedback potentiometer			
7	Thermal dispersion bracket for high temperature fluids			
8	100 mm high stem extension for pipe insulation			
9	Electric actuator sized for a maximum pressure differential up/downstream over 10 bar ($=\Delta P$)			
10	NA electric actuator with a declutchable manual override by handwheel			

ATEX ZONE INSTALLATION

It is compulsory to specify if the installation of the automatic valve 702-703XS+SA-X will take place in ATEX zones 1 or 2 while making the order. Our services will proceed to the mounting check, to a grounding strip installation and will edit a mounting certificate. Those operations are performed by our proper engineers.

Please contact us for further details. It is also compulsory to follow the ATEX zone motorized valves mounting and maintenance special instructions. The ATEX gland packs and sealing plugs are not provided. Please use the following codes:

ATEX aluminium gland pack M20x1.5	Code 980179	ATEX aluminium sealing plugs M20x1.5	Code 980180
-----------------------------------	-------------	--------------------------------------	-------------

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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER – FRANCE Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95 www.sectoriel.com / courrier : sectoriel@sectoriel.fr	Pages	4/8
		Ref.	TDS702XSf+SA
		Rev.	05
		Date	01/2026

ASSEMBLY AND MAINTAINANCE INSTRUCTIONS

1 - Installation

1.1 - Checks

- Check that the material of the valve body is chemically compatible with the fluid.
- Check that the pressure and service conditions are compatible with the (P, T) diagram of the valve. See § "Service limits"
- Check that the fluid is clean and free of particles. The latter could scratch the ball and damage the seats, hence causing the valve to leak. If need be, install an upstream filter.
- Check that the upstream and downstream pipes are correctly aligned and that the supports are suitable for the weight of the valve. Do not rely on the valve to compensate for pipe misalignment. For heat transfer fluids, provide for expansion compensation. All these piping defects may lead to leaks, blockages and even mechanical failure.
- Check that there is no risk of thermal expansion of the fluid, which could damage the seats. In the open position, a hole at the top of the ball balances the pressures between the body cavity and the flow of the fluid. As an option, we recommend a relief hole upstream of the valve for equalising the pressures for fluids such as ammonia, LPG, chlorine, etc.
- On a cold service, check that there is no risk of ice forming and blocking the tap spindle. If necessary, provide a spindle extension with suitable insulation or permanent spindle heating. Please consult us for a special model.
- Check that the valve is not used for flow or pressure control since it is not intended for this use and there is a risk of premature wear of the seats, in particular in the event of high pressure and/or temperature. For this special application, preferably use our "V-port" version with a V-shaped hole in the ball. Please contact us.
- Check that the valve is not used on a gas which might condense at certain times during the process. In such a case, the pressure within the body cavity could become negative, which could lead to a significant deformation of the seats. Please contact us.
- Static electricity: the valve will be supplied with a ball-stem-body internal electrical continuity tester. If the service conditions require the electrical continuity of the installation, check its earthing.
- If the valve is installed in an explosive zone, you must follow the additional "IMEVMATEX" instructions.

1.2 - Storage before installation

- Follow our general "IMESTOCK" instructions for storage.

1.3 - Installation

- Before any installation, isolate the piping upstream and downstream, depressurize the piping and bring the installation to ambient temperature. Carefully clean the piping of any particle (foreign body, dust, rust, etc.) or shavings by water rinsing or air blowing.
- Remove the protective tips from the valve ends.
- Check the cleanliness of the internal surfaces of the valve and if need be, clean them.
- Direction of mounting: the valves do not have a preferred direction of mounting, unless a relief hole was drilled into the ball.
- Check the perfect alignment and the proper support of the pipe installation upstream and downstream of the valve. Alignment defects cause mechanical deformations which can block the valve or lead to leaks at the body gaskets.

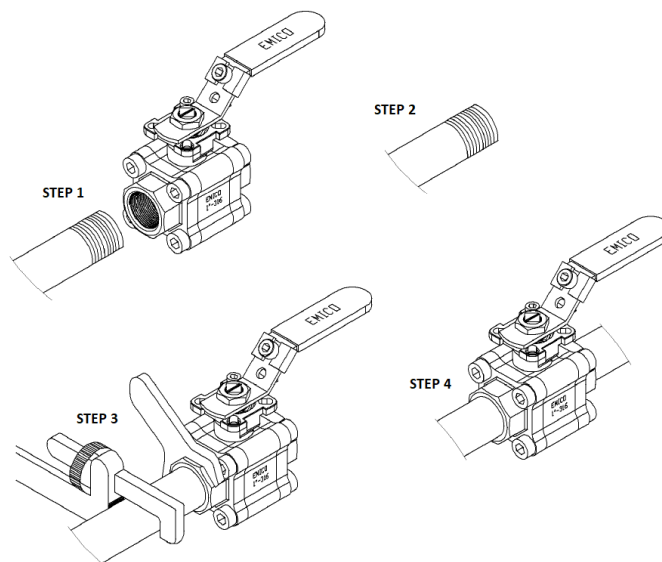
Information given as an indication only, and subject to possible modifications

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER – FRANCE Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95 www.sectoriel.com / courrier : sectoriel@sectoriel.fr	Pages	5/8
		Ref.	TDS702XSF+SA
		Rev.	05
		Date	01/2026

702-703 XS-F VALVE WITH SA 05-09 ELECTRIC ACTUATOR

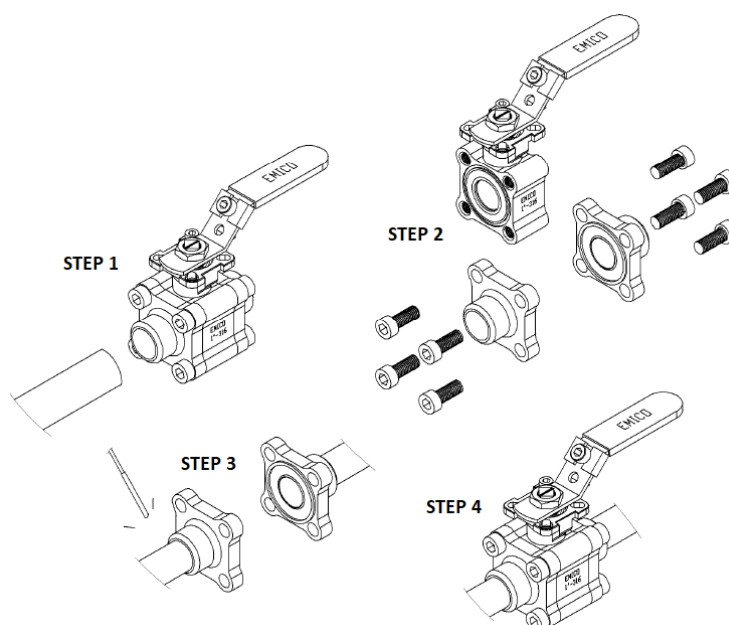
○ **Threaded valve connection:**

- Check that the standards for the valve internal thread and pipe thread are the same.
- Cover the pipe threads using a sealing material (tow, PTFE tape, sealing glue, etc.) which is suitable for the fluids.
- Screw the tube into the valve end clockwise, as shown in the diagram below.
- Check the sealing of the connection using a suitable test (hydrostatic test or leak detection spray).



○ **Connection of weld-on valves:**

- Remove the end (items 2) by unscrewing the tie-bolts, and remove the central body.
- Weld each end onto the upstream or downstream pipe, following the alignment of the tie-bolt holes.
- Cool down to the room temperature the welded ends, then put back the central body complying with the tightening torques shown in the table below.
- Check the sealing of the connection using a suitable test (hydrostatic test or leak detection spray).



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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER – FRANCE Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95 www.sectoriel.com / courrier : sectoriel@sectoriel.fr	Pages	6/8
		Ref.	TDS702XSf+SA
		Rev.	05
		Date	01/2026

702-703 XS-F VALVE WITH SA 05-09 ELECTRIC ACTUATOR

- Hydraulic test of the installation
 - Valves were tested at the factory at 1.5 x WP.
 - If a hydrostatic test is carried out on the installation, do not exceed the authorised pressure.

2 - Service

- If a hot fluid flows across the valve, do not touch the valve surface.
- Always operate the valve slowly and smoothly.
- Opening clockwise, closing anti-clockwise.

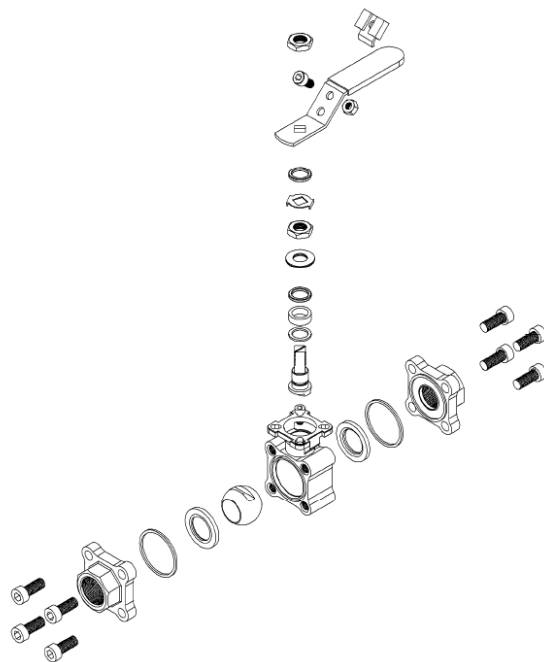
3 - Servicing

3.1 - Frequency of servicing

- The servicing frequency depends upon the use of the valve, of the type of fluid, of its velocity, of its frequency of operation, of the cycles of rise and fall in pressure and temperature.
- Before any intervention, isolate the upstream and downstream pipe installation using the valves provided for this purpose. Depressurize the pipe installation and bring it to ambient temperature.
- If the lever has to be removed, do that before disassembling the body.
- To remove the central body, unscrew the tie-bolts symmetrically. Then gently remove the central part avoiding to drop the ball.
- To remove the ball from the body, turn the stem by a quarter turn.

3.2 – Inspecting the state of the valve and possible repair

- Check the state of the ball (Item 4): it has to be clean and unscratched. If the cleaning or polishing is not possible, replace it (see the § on spare parts).
- Check the state of the seats (3.1 and 3.2): they must not be deformed, nor scratched, nor worn, or dirty. Otherwise, replace them with parts from the gasket kit.
- Check the state of the packing gland (7, 8, 9 and 16): no leak at the stem should be found, and the rings should not be excessively worn. If need be, replace the gaskets.
- Check the state of the body gaskets (6.1 and 6.2). Replace them if necessary.
- Reassemble the different parts of the valve, following the tightening torques shown in the table below.
- Check that the stem manoeuvring is smooth. Perform about ten manoeuvres.



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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER – FRANCE Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95 www.sectoriel.com / courrier : sectoriel@sectoriel.fr	Pages	7/8
		Ref.	TDS702XSF+SA
		Rev.	05
		Date	01/2026

702-703 XS-F VALVE WITH SA 05-09 ELECTRIC ACTUATOR

TABLE OF THE TIGHTENING TORQUES OF THE TIE-BOLTS AND OF THE LEVER NUT

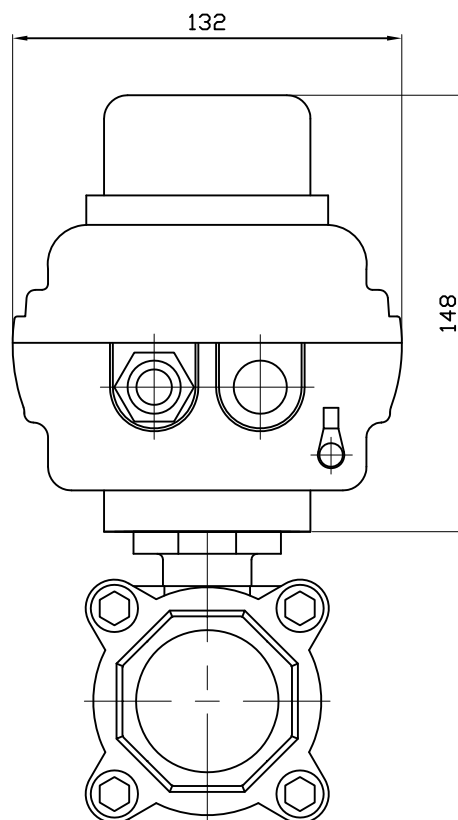
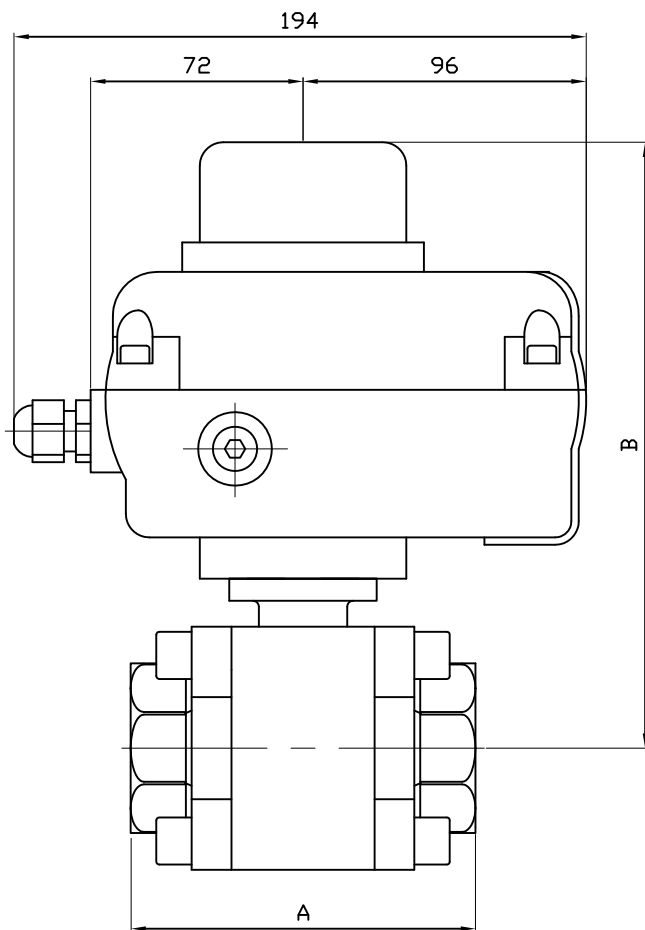
DN	Thread	Torque (Nm)	Lever nut (Nm)
1/2" - 15	M8	22	4
3/4" - 20	M8	22	4
1" - 25	M10	40	4.5
1 1/4" - 32	M12	100	4.5
1 1/2" - 40	M12	100	5.5
2" - 50	M12	100	5.5

SPARE PARTS

DN	PTFE-STAINLESS STEEL gasket kit	PEEK gasket kit	Ball	V30° ball	V60° ball	Lever
Reference mark	3-6-7-8-16	3-6-7-8-16	4	4	4	11
1/2" - 15	982712	982722	980032	980042	980052	982802
3/4" - 20	982713	982723	980033	980043	980053	982802
1" - 25	982714	982724	980034	980044	980054	982804
1 1/4" - 32	982715	982725	980035	980045	980055	982804
1 1/2" - 40	982716	982726	980036	980046	980056	982806
2" - 50	982717	982727	980037	980047	980057	982806

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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER – FRANCE Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95 www.sectoriel.com / courrier : sectoriel@sectoriel.fr		Pages	8/8
			Ref.	TDS702XSF+SA
			Rev.	05
			Date	01/2026



DN	1/2"	3/4"	1"	1 1/4"	1 1/2"
A	75	80	90	110	120
B	190.3	192.8	202	207.2	221.5
KG	3.7	3.8	4.48	5.38	6.46

Informations données à titre indicatif et sous réserve de modifications éventuelles
data subject to alteration

Ech: /	Date :20/09/2012	Dessiné par : E.D.	Tolérances générales : +/- 0.2	Modifications	Date	REV.
ROBINET A TOURNANT SPHERIQUE 702XS-703XS "F"/BALL VALVE 702XS-703XS "F" + SERVOMOTEUR SA05/ELECTRIC ACTUATOR SA05				Matière :		
				Poids (Kg) :		
				Traitement : SANS		
 45, Rue du Ruisseau 38297 SAINT QUENTIN FALLAVIER				Plan n° Ens 1145		

SA 05 - SA 09 ELECTRIC ACTUATOR

FEATURES

The SA 05 / SA 09 electric actuator are intended for motorising industrial 1/4 turn valves. The torques are 50 Nm and 90 Nm. With a compact, robust construction and IP67 epoxy-coated aluminium housing, the SA actuator is especially well suited for motorising ball valves and butterfly valves installed in workshops or outdoors. The SA has a manual key control and a 3D visual position indicator. Compliant with the EN 15714-2 standard.

AVAILABLE MODELS

Supply voltages: 230 Vac (50-60Hz), 24 Vac/dc and 12 Vdc.

Options: 110 Vac, feedback potentiometer, local command.



LIMITS OF USE

IP rating	IP 67
Ambient temperature	- 20°C / +70°C
Service factor	S2: 15mn - S4: 50% (SA 05)
	S2: 15mn - S4: 30% (SA 09)



MECHANICAL FEATURES

Gear box	treated steel pinions
Torque	50 Nm / 90 Nm
Angle of rotation	90° +/- 5°
Declutching	Without
Override control	by key (except for SA 05 S)

Actuator	SA 05 / SA 09			SA 05 S	
Voltage	230V AC	24V AC/DC	12V DC	230V AC	24V AC/DC
Torque (Nm)	50 / 90			50	
Manoeuvring time (s)	17 / 32	10 / 22	11 / 25	100	100
ISO 5211	F03/F05/F07 star 14				

ELECTRICAL FEATURES

Motor protection	Thermal switch	Anti-condensation	5W heater
Limit switches	2 adjustable switches	Electrical connection	2 x P.E. M20x1.5
Auxiliary switches	2 adjustable dry switches		

Actuator	SA 05 / SA 09			SA 05 S	
Voltage	230V AC	24V AC/DC	12V DC	230V AC	24V AC/DC
Power (W)	6 W	15 W	6 W	6 W	6 W
Current (A)	0,23 / 0,25	1,8 / 2,1	3,2 / 3,4	0,23	1,8

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



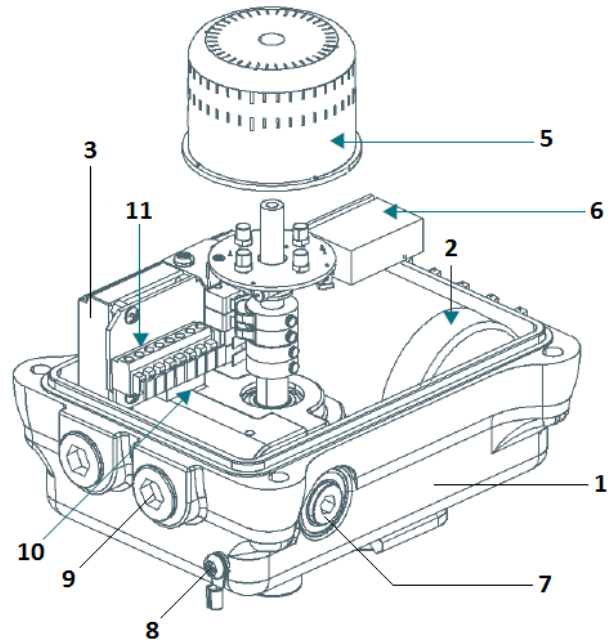
SECTORIEL S.A.
45 rue du Ruisseau
38290 SAINT QUENTIN-FALLAVIER - FRANCE
Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95
www.sectoriel.com / Email: sectoriel@sectoriel.fr

Pages	1/6
Ref.	TDS23010
Rev.	15
Date	10/2024

SA 05 - SA 09 ELECTRIC ACTUATOR

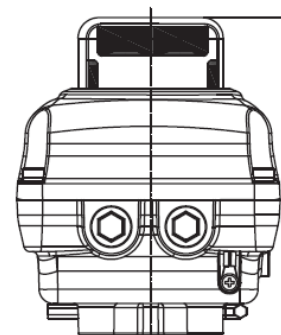
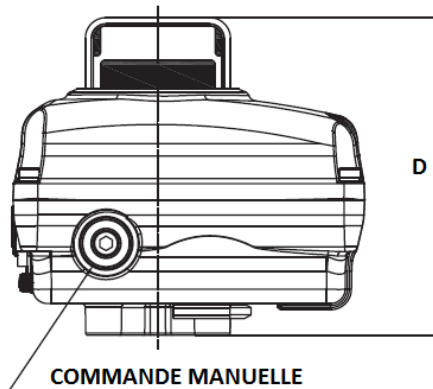
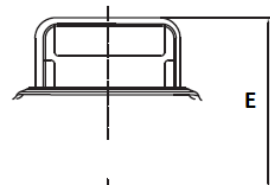
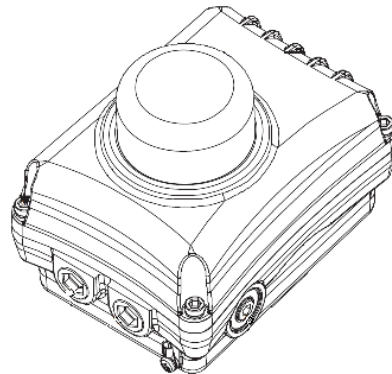
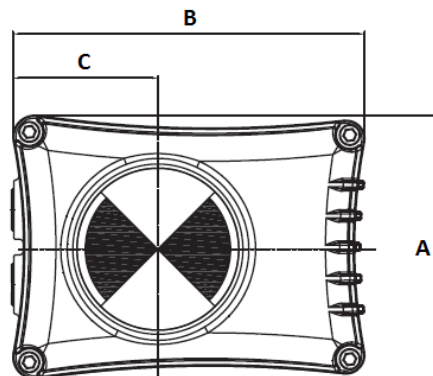
CONSTRUCTION

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	



DIMENSIONS (mm) AND WEIGHT (kg)

Dimensions (mm)	A	B	C	D	E	Weight (kg)
SA 05 / SA 09	127	170	70	153	80	3.2



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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email: sectoriel@sectoriel.fr	Pages	2/6
		Ref.	TDS23010
		Rev.	15
		Date	10/2024

SA 05 - SA 09 ELECTRIC ACTUATOR

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-12V 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 / SA 09 X: version for ATEX zone
2	SA 05 / SA 09 PIU: version with feedback potentiometer
3	SA 05 / SA 09 CPT: version with position transmitter 4-20 mA
4	SA 05 / SA 09 PCU: version with adjustment card 0-10, 2-10V, 2-20 mA, 4-20 mA
5	SA 05 / SA 09 LCU: version with local control
6	SA 05 / SA 09 SCP: version with super capacitor safety

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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email: sectoriel@sectoriel.fr	Pages	3/6
		Ref.	TDS23010
		Rev.	15
		Date	10/2024

SA 05 - SA 09 ELECTRIC ACTUATOR

SPARE PARTS

SA05 Electric actuator	
Gear box	
Printed circuit board	
Electrical motor	
Pinion	
https://www.sectoriel.com/fr/sa05-servomoteur-electrique-aluminium-1-4-tour-50-nm-on-off-ip67.html	

SA09 Electrical actuator	
Gear box	
Printed circuit board	
Electrical motor	
https://www.sectoriel.com/fr/sa09-servomoteur-electrique-aluminium-1-4-tour-90-nm-on-off-ip67.html	

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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email: sectoriel@sectoriel.fr	Pages	4/6
		Ref.	TDS23010
		Rev.	15
		Date	10/2024

SA 05 - SA 09 ELECTRIC ACTUATOR

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.

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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email: sectoriel@sectoriel.fr	Pages	5/6
		Ref.	TDS23010
		Rev.	15
		Date	10/2024

SA 05 - SA 09 ELECTRIC ACTUATOR

4. PRECAUTIONS FOR OPERATION

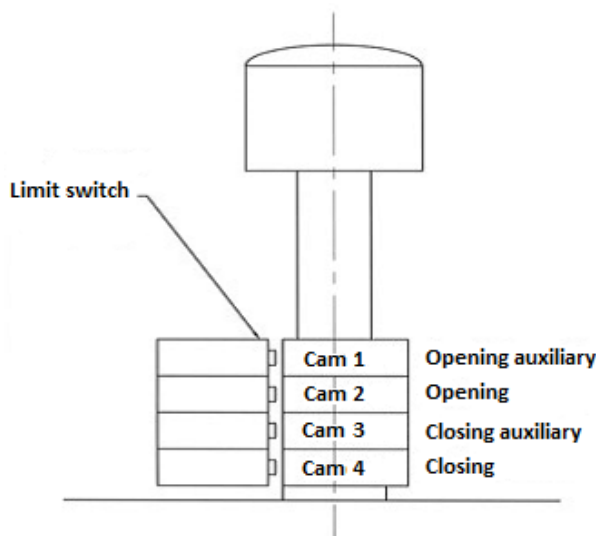
- 4.1 Before installing, make sure that the installation is completely depressurized and brought to ambient temperature.
- 4.2 In a zone classified as explosive, install only model SA05X / SA09X.
- 4.3 The protection class of the actuator is IP67 for indoors or outdoors installation. Do not install this 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.



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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email: sectoriel@sectoriel.fr	Pages	6/6
		Ref.	TDS23010
		Rev.	15
		Date	10/2024

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



SECTORIEL S.A.
45 rue du Ruisseau
38290 SAINT QUENTIN-FALLAVIER - FRANCE
Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95
www.sectoriel.com / Email : sectoriel@sectoriel.fr

Pages	1/7
Ref.	TDS23310
Rev.	09
Date	10/2024

SA 05-X - SA 09-X ELECTRIC ACTUATOR

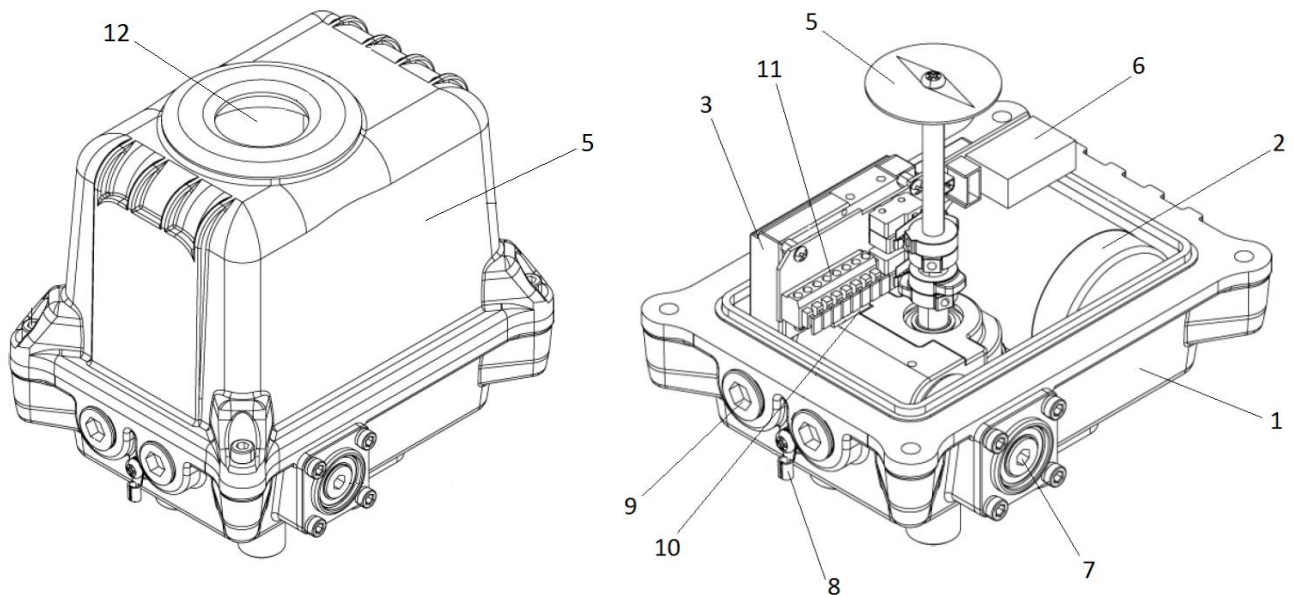
ELECTRICAL FEATURES

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



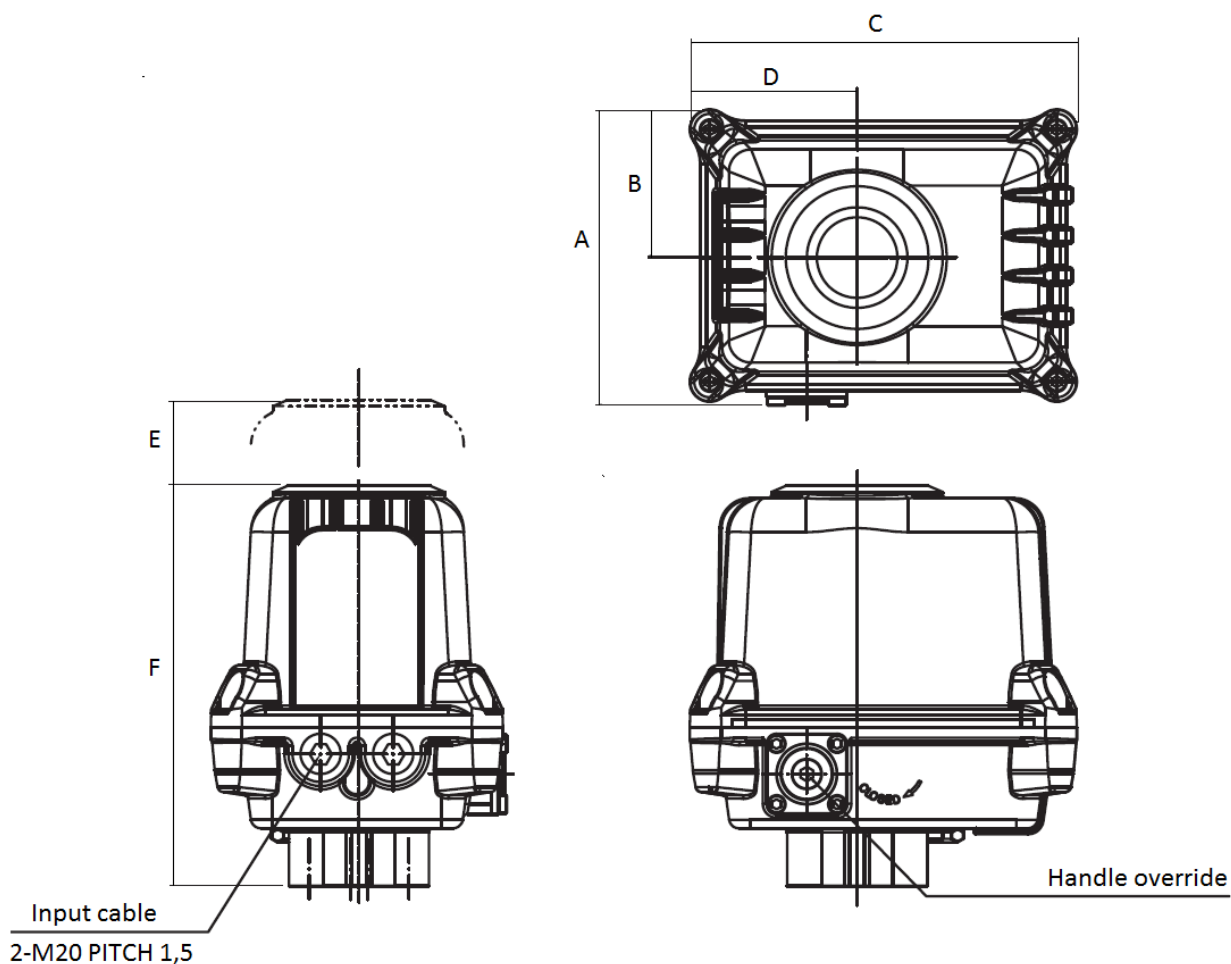
Information given as an indication only, and subject to possible modifications

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	2/7
		Ref.	TDS23310
		Rev.	09
		Date	10/2024

SA 05-X - SA 09-X ELECTRIC ACTUATOR

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

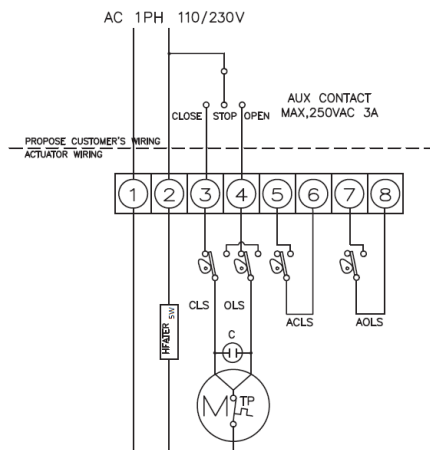


Information given as an indication only, and subject to possible modifications

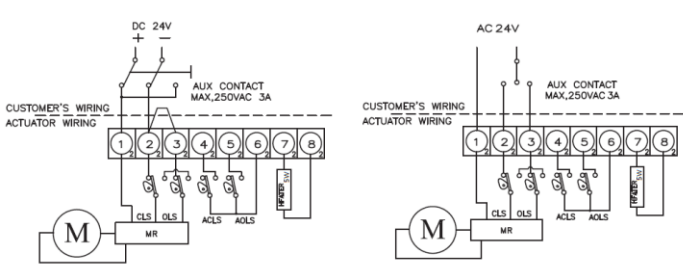
	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	3/7
		Ref.	TDS23310
		Rev.	09
		Date	10/2024

SA 05-X - SA 09-X ELECTRIC ACTUATOR

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

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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	4/7
		Ref.	TDS23310
		Rev.	09
		Date	10/2024

SA 05-X - SA 09-X ELECTRIC ACTUATOR

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	

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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	5/7
		Ref.	TDS23310
		Rev.	09
		Date	10/2024

SA 05-X - SA 09-X ELECTRIC ACTUATOR

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.

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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	6/7
		Ref.	TDS23310
		Rev.	09
		Date	10/2024

SA 05-X - SA 09-X ELECTRIC ACTUATOR

4. PRECAUTIONS FOR OPERATION

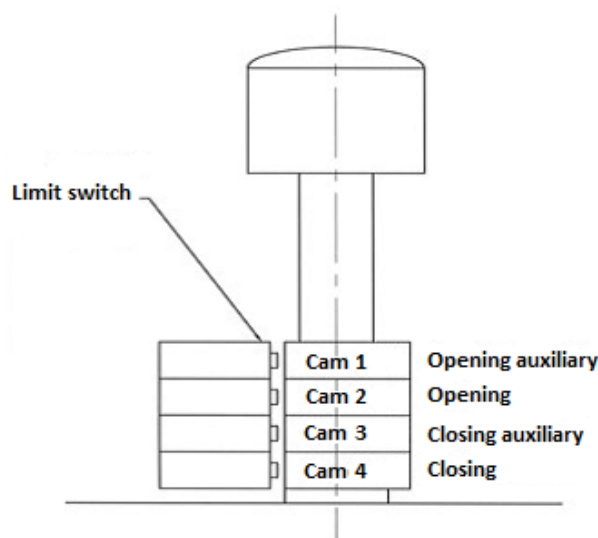
- 4.1 Before installing, make sure that the installation is completely depressurized and brought to ambient temperature.
- 4.2 In a zone classified as explosive, install only model SA05X / SA09X.
- 4.3 The protection class of the actuator is IP67 for indoors or outdoors installation. Do not install this 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.



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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	7/7
		Ref.	TDS23310
		Rev.	09
		Date	10/2024