

736-746 XS VALVE WITH SA / SA-X 05-09 ELECTRIC ACTUATOR

FEATURES

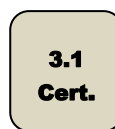
The 736XS (steel) and 746XS (stainless steel) + SA 2-way ball valves are dedicated to the automatic shut-off of industrial fluids. With their 3-piece and external bolts construction, they are easy to dismantle for maintenance. This full-bore ball valve has an antistatic device, a gland pack double tightness and is certified according to the ATEX and the EC standards (with SA-X). The ISO 5211 pad enables the direct mounting of the SA05 electric actuator. It is perfectly adapted for an indoor or outdoor industrial use.

AVAILABLE MODELS

Diameters 1/4" to 3".

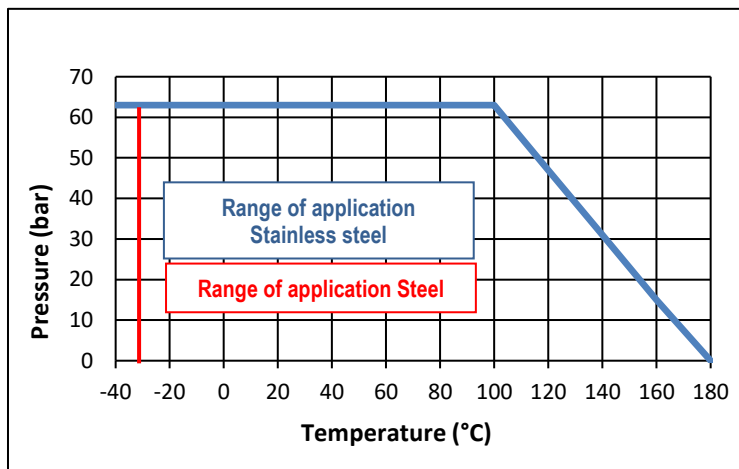
Supply voltages : 24 Vdc, 24 Vac and 230 Vac.

Connection	G	SW	BW
Steel	736 XS	735 XS	734 XS
Stainless steel	746 XS	743 XS	745 XS



LIMITS OF USE

Material	Carbon steel	Stainless steel
Fluid pressure : PS	63 bar (20°C)	
Fluid temperature : WT°	-25°C / +180°C	- 40°C / +180°C
Ambiant temperature	- 20°C / + 70°C	
Service factor	<u>S2</u> : 15mn - <u>S4</u> : 50% (SA 05)	
	<u>S2</u> : 15mn - <u>S4</u> : 30% (SA 09)	



DIRECTIVES AND MANUFACTURING STANDARDS

OBJET	Standard	ON	OBJET	Standard
Pressure Equipment Directive 2014/68/EC	<u>1/4" to 1"</u> : not subject		Final test	EN 12266
	<u>1"1/4 to 2"</u> : category III	TÜV 0035	Material certificate	EN 10204
Size	EN 12516-1		Motorisation connection	ISO 5211
Steel grade	EN 1503-1			
ATEX directives	Valve	SIRA 0518	II 2G/D Tx for zones 1,2,21 and 22	
	Actuator (option SA-X)	KEMA 0344	II 2G EEx d II B T4 for zones 1 and 2	

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



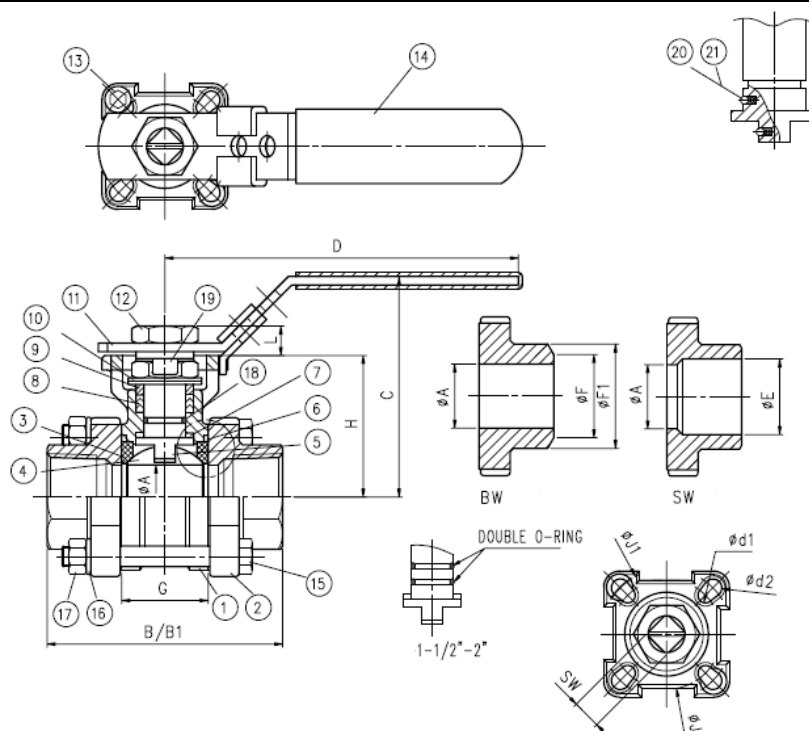
SECTORIEL S.A.
45 rue du Ruisseau
38290 SAINT QUENTIN-FALLAVIER – FRA NCE
Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95
www.sectoriel.com / Email : sectoriel@sectoriel.fr

Pages	1/7
Ref.	TDS746XS+SA05
Rev.	05
Date	12/2025

736-746 XS VALVE WITH SA / SA-X 05-09 ELECTRIC ACTUATOR

CONSTRUCTION

No.	Name	Carbon steel	Stainless steel	No.	Name	Carbon steel	Stainless steel
1	Body	1.0619	1.4408	12	Nut	304 SS	304 SS
2	Ends	1.0619	1.4408	13	End stop	304 SS	304 SS
3*	Seats	PTFE+15%GF	PTFE+15%GF	14	Sleeve	PVC	PVC
4	Ball	CF8M / 316	CF8M / 316	15	Bolts	304 SS	304 SS
5	Stem	316 SS	316 SS	16	Washer	304 SS	304 SS
6*	Body gasket	PTFE	PTFE	17	Nuts	304 SS	304 SS
7*	Washer	PTFE+15%GF	PTFE+15%GF	18*	O-ring	FPM	FPM
8*	Packing	PTFE	PTFE	19	Retaining ring	304 SS	304 SS
9	Spacer	304 SS	304 SS	20	Antistatic	316 SS	316 SS
10	B washer	301 SS	301 SS	21	Spring	304 SS	304 Ss
11	Lever	Inox 304	304 SS	*Items provided in the maintenance kit			



DIMENSIONS (mm)

DN	A	B (G)	B (SW)	B1 (BW)	C	D	E	F	F1	G	H	J1	SW
1/4"	10	65	65	70	46,5	110	14	13	17,0	26,0	41,0	42	9
3/8"	12,5	65	65	70	46,5	110	14	13	17,0	24,5	42,3	42	9
1/2"	16	75	75	75	70,9	110	21,9	17	22,4	25,2	42,3	42	9
3/4"	20	80	80	90	73,4	110	27,2	22	28,2	27,7	44,8	42	9
1"	24,5	90	90	100	84,1	135	34,0	28	33,7	33,0	54,0	50	11
1 1/4"	32	110	110	110	89,3	135	42,7	37	44,0	41,2	59,2	50	11
1 1/2"	38	120	120	125	109,5	165	48,8	43	50,8	49,3	73,5	70	14
2"	50	140	140	150	118,9	165	61,3	54	62,6	63,6	82,9	70	14
2 1/2"	65	185	185	190	155,0	300	77,0	74	76,1	82,1	107,0	102	17
3"	80	205	205	220	165,0	335	90,0	83	88,9	95,8	117,3	102	17
4"	100	240	240	270	180,0	335	115,5	110	114,3	117,8	132,3	102	17

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



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

Pages	2/7
Ref.	TDS746XS+SA05
Rev.	05
Date	12/2025

736-746 XS VALVE WITH SA / SA-X 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	Intensity 230V AC	Time*	Intensity 24V AC-DC	Time*	Standard equipment of the actuator
1/4"	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 SA-X). Electrical connection: 2 gland packs 20x1,5
3/8"	SA 05	6W	23 mA	17 s	1,8 mA	10 s	
1/2"	SA 05	6 W	23 mA	17 s	1,8 mA	10 s	
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 05	6 W	23 mA	17 s	1,8 mA	10 s	
1"1/2	SA 09	6 W	25 mA	32 s	2,1 mA	22 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 for which you are invited to contact our sales service:

1	2	3	4	5
SA 05 S : Slow closing 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 : Actuator for use in ATEX zones 1 and 2	SR 05 : Safety spring return actuator
				
6	SAPUI electric actuator with feedback potentiometer			
7	Thermal dispersion bracket for high temperature fluids			
8	100 mm stem extension for pipe insulation (see 500HC model)			
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 ZONES INSTALLATION

It is compulsory to specify if the installation of the automatic valve 736-746XS+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 mounting and maintenance special instructions for motorized valves. 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 – FRA NCE Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	3/7
		Ref.	TDS746XS+SA05
		Rev.	05
		Date	12/2025

736-746 XS VALVE WITH SA / SA-X 05-09 ELECTRIC ACTUATOR

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 balancing 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.
- Check that the tie-bolts of the valves were not loosen during transport.

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.
- For valves with a size above DN50, plan to use a hoist.
- 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.

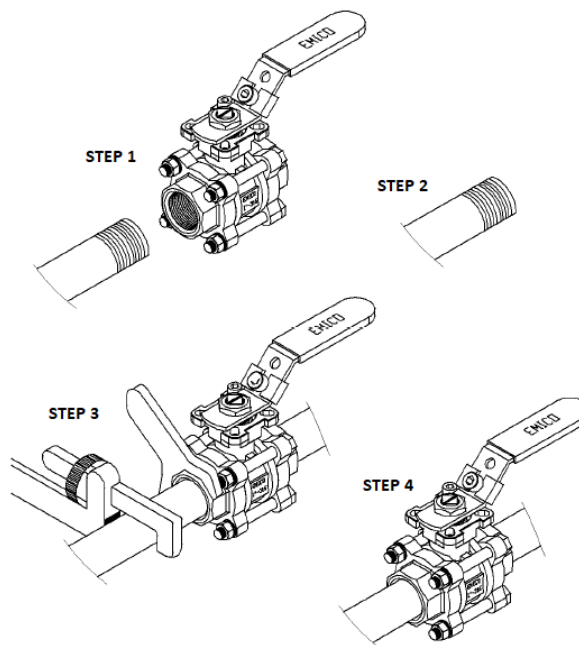
Information given as an indication only, and subject to possible modifications

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER – FRA NCE Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	4/7
		Ref.	TDS746XS+SA05
		Rev.	05
		Date	12/2025

736-746 XS VALVE WITH SA / SA-X 05-09 ELECTRIC ACTUATOR

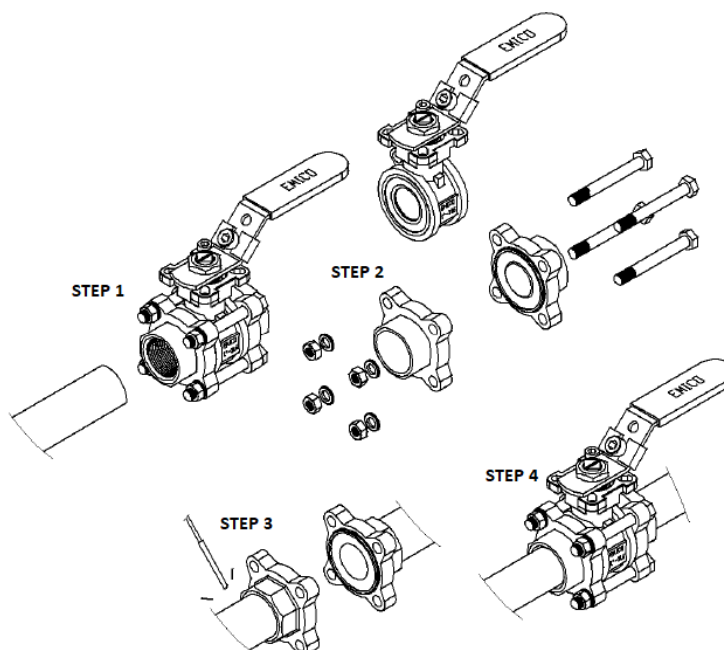
○ Threaded valve connection:

- 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 fluid.
- 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 – FRA NCE Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	5/7
		Ref.	TDS746XS+SA05
		Rev.	05
		Date	12/2025

736-746 XS VALVE WITH SA / SA-X 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.

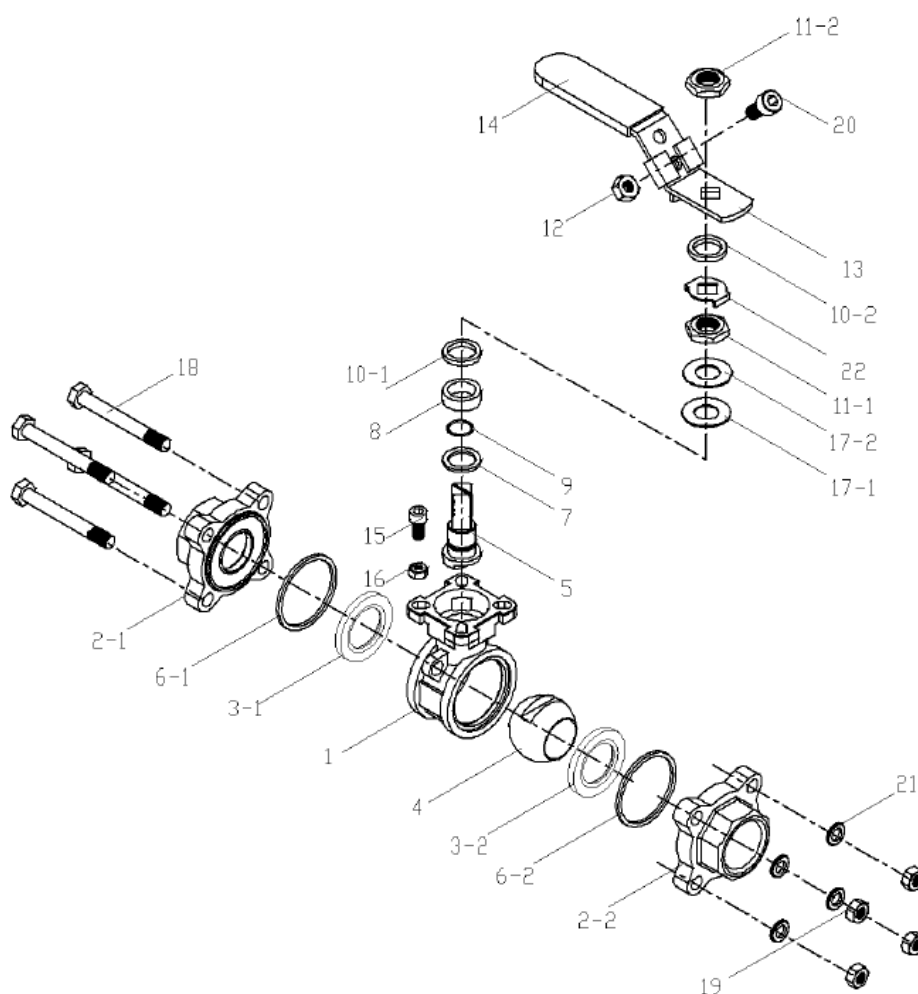
2 - Service

- 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.



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

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER – FRA NCE Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	6/7
		Ref.	TDS746XS+SA05
		Rev.	05
		Date	12/2025

736-746 XS VALVE WITH SA / SA-X 05-09 ELECTRIC ACTUATOR

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 and 9): no leak should be found at the stem 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.

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

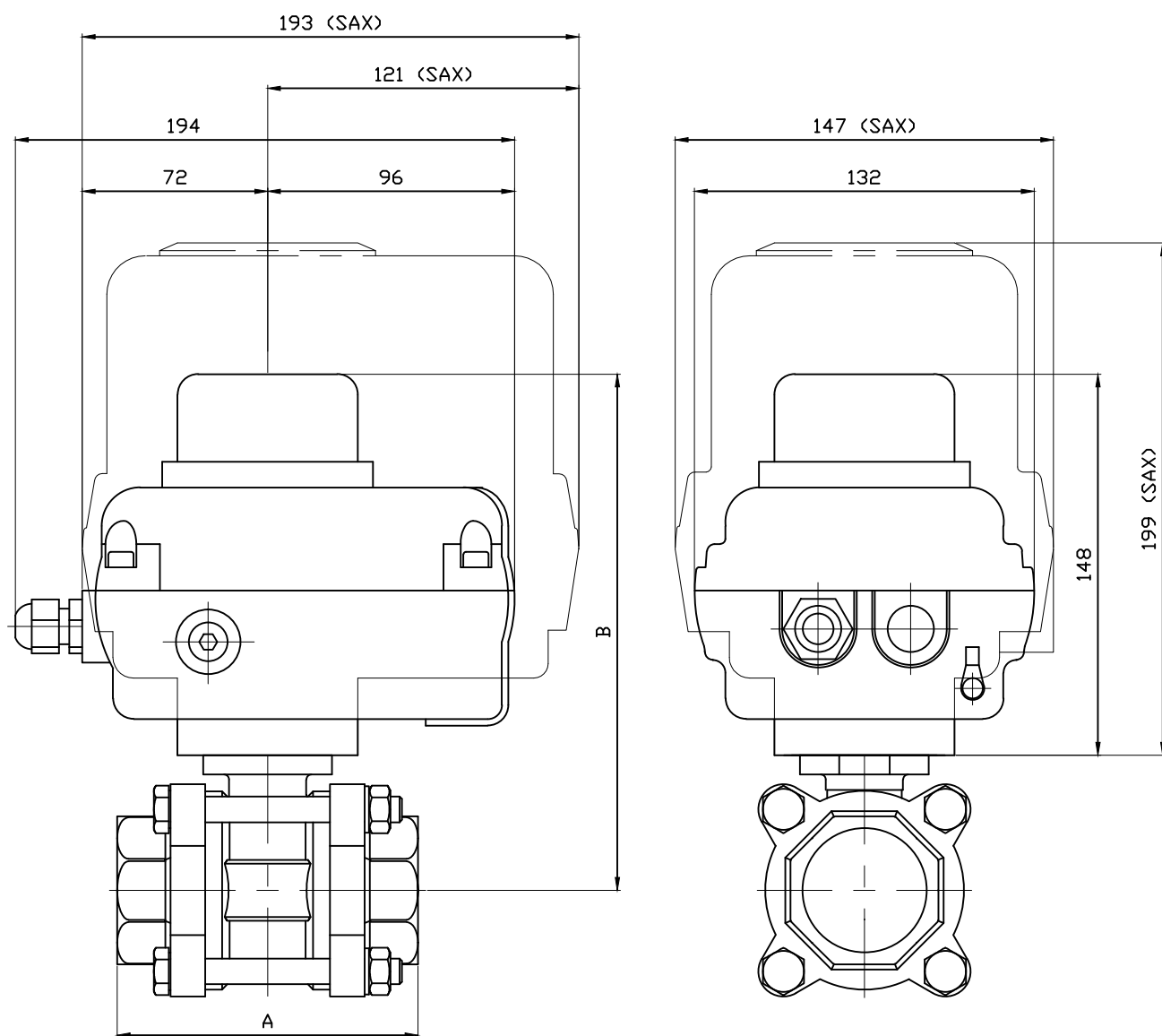
DN	Tie-bolts	Torque (Nm)	Lever nut (Nm)
1/4" - 6	M6	10	4
3/8" - 10	M6	10	4
1/2" - 15	M6	10	4
3/4" - 20	M8	20	4
1" - 25	M8	20	4.5
1"1/4 - 32	M10	35	4.5
1"1/2 - 40	M10	35	5.5
2" - 50	M10	40	5.5
2"1/2 - 65	M12	70	7
3" - 80	M16	120	7
4" - 100	M16	120	7

SPARE PARTS

DN	Gasket kit	Ball	V30° ball	V60° ball	Tie-bolt kit	Lever
Reference mark	3-6-7-8-18	4	4	4	15-16-17	11
1/4" - 6	Please contact us.	Please contact us.	Please contact us.	Please contact us.	Please contact us.	Please contact us.
3/8" - 10	Please contact us.	Please contact us.	Please contact us.	Please contact us.	Please contact us.	Please contact us.
1/2" - 15	982852	980032	980042	980052	982832	982802
3/4" - 20	982853	980033	980043	980053	982833	982802
1" - 25	982854	980034	980044	980054	982834	982804
1"1/4 - 32	982855	980035	980045	980055	982835	982804
1"1/2 - 40	982856	980036	980046	980056	982836	982806
2" - 50	982857	980037	980047	980057	982837	982806
2"1/2 - 65	982858	Please contact us.	Please contact us.	Please contact us.	982838	982808
3" - 80	982859	Please contact us.	Please contact us.	Please contact us.	Please contact us.	982808
4" - 100	982860	Please contact us.	Please contact us.	Please contact us.	Please contact us.	982808

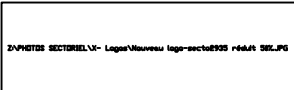
Information given as an indication only, and subject to possible modifications

	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER – FRA NCE Tél : +33 4 74 94 90 70 - Fax : +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	7/7
		Ref.	TDS746XS+SA05
		Rev.	05
		Date	12/2025



DN	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	75	80	90	110	120	140
B	190.3	193	202	207	221.5	231
B(SAX)	241.9	243.8	253	258.2	272.9	281.9
KG	3.42	3.72	4.19	4.92	5.91	7.52
KG(SAX)	5.62	5.92	6.39	7.12	8.1	9.72

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

				Ajout SA05X et poids	21/02/2012	A
Ech: /	Date :29/09/2006	Dessiné par : L.L	Tolérances générales : +/- 0.2	Modifications	Date	REV.
ROBINET A TOURNANT SPHERIQUE 736XS-746XS / BALL VALVE 736XS-746XS + SERVOMOTEUR SA05-SA05X / ELECTRIC ACTUATOR SA05-SA05X				Matériau :		
				Poids (Kg) :		
				Traitement : SANS		
				45, Rue du Ruisseau		
				38297 SAINT QUENTIN FALLAVIER		
				Plan n° Ens 977A		

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



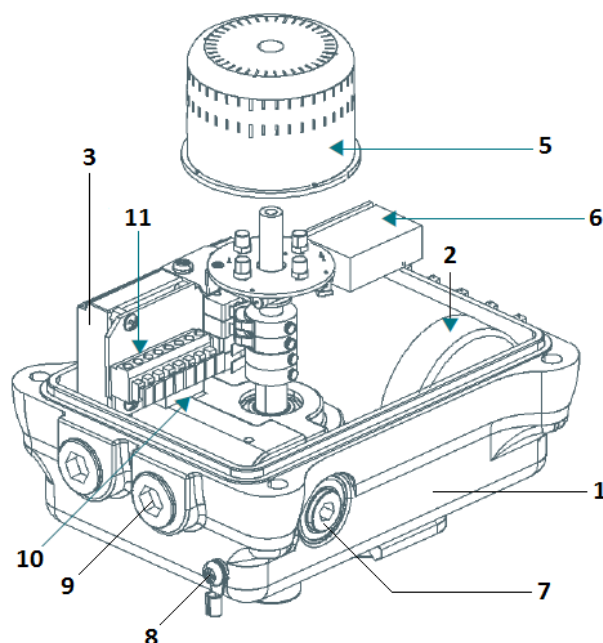
SECTORIEL S.A.
45 rue du Ruisseau
38290 SAINT QUENTIN-FALLAVIER - FRANCE
Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95
www.sectoriel.com / Email: sectoriel@sectoriel.fr

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

SA 05 - SA 09 ELECTRIC ACTUATOR

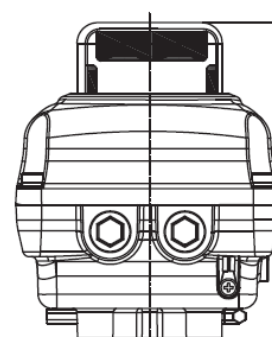
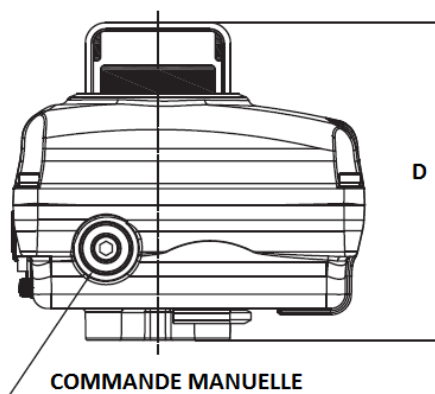
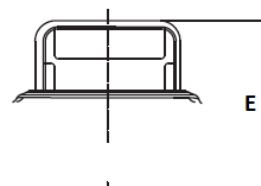
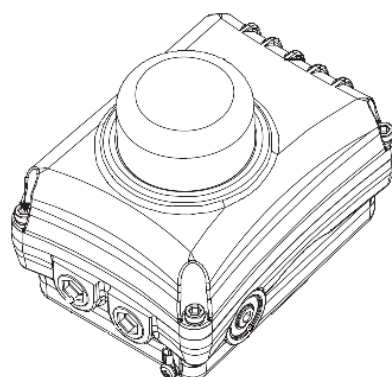
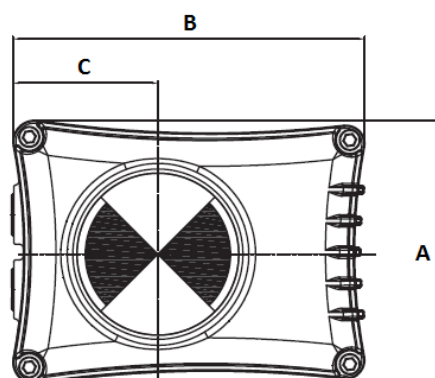
CONSTRUCTION

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

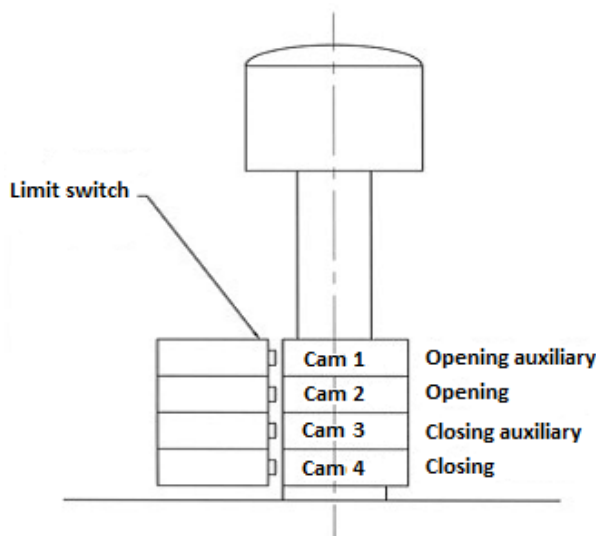
- 4.1 Before installing, make sure that the installation is completely depressurized and brought to ambient temperature.
- 4.2 In a zone classified as explosive, install only model SA05X / SA09X.
- 4.3 The protection class of the actuator is IP67 for indoors or outdoors installation. Do not install this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

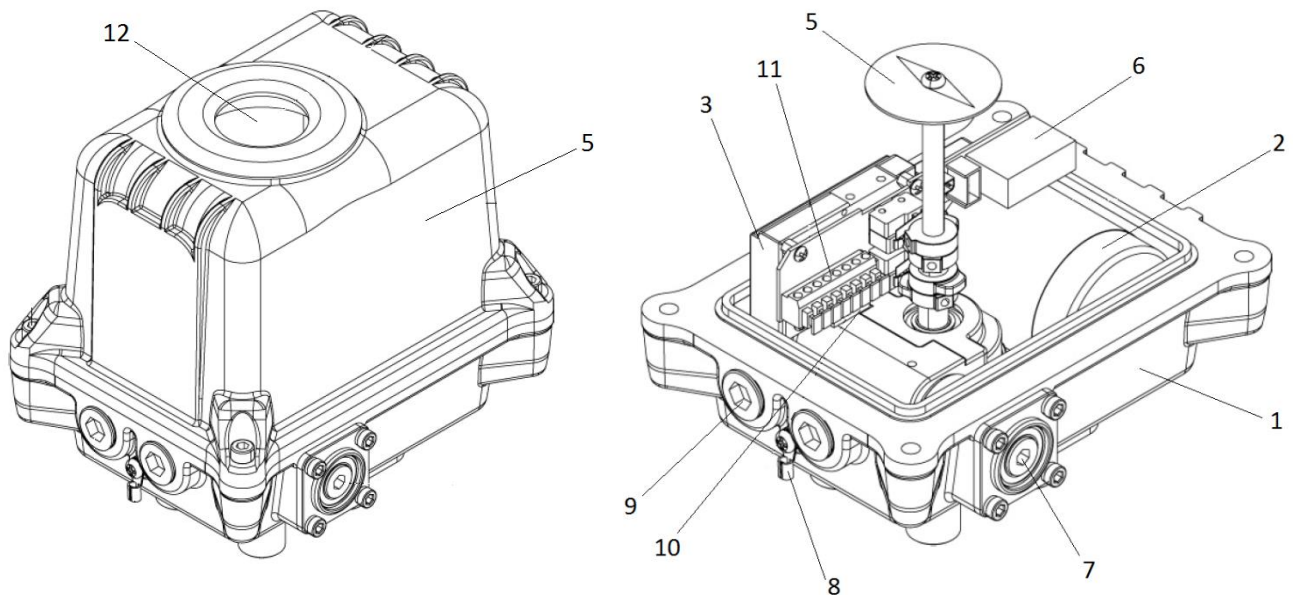
ELECTRICAL FEATURES

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



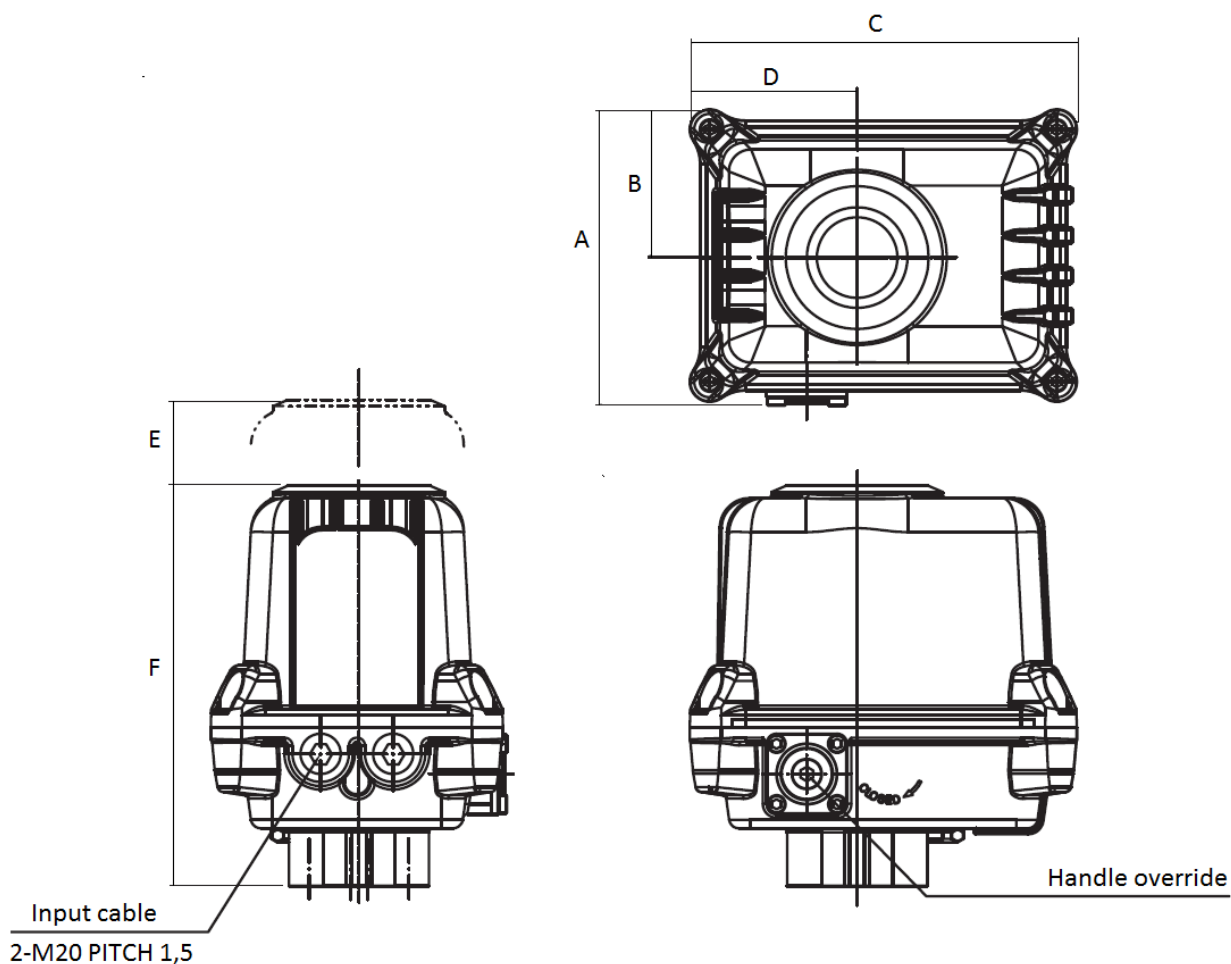
Information given as an indication only, and subject to possible modifications

	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

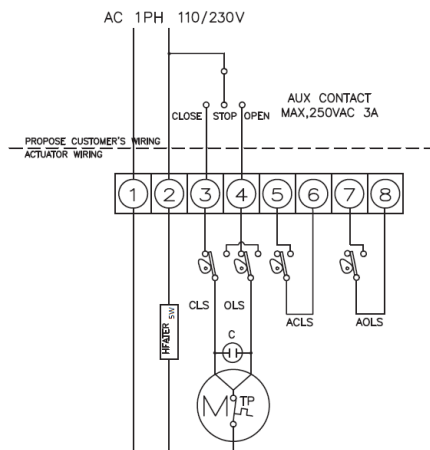


Information given as an indication only, and subject to possible modifications

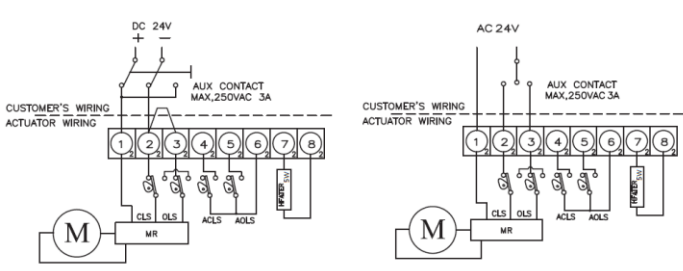
	SECTORIEL S.A. 45 rue du Ruisseau 38290 SAINT QUENTIN-FALLAVIER - FRANCE Telephone: +33 4 74 94 90 70 - Fax: +33 4 74 94 13 95 www.sectoriel.com / Email : sectoriel@sectoriel.fr	Pages	3/7
		Ref.	TDS23310
		Rev.	09
		Date	10/2024

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

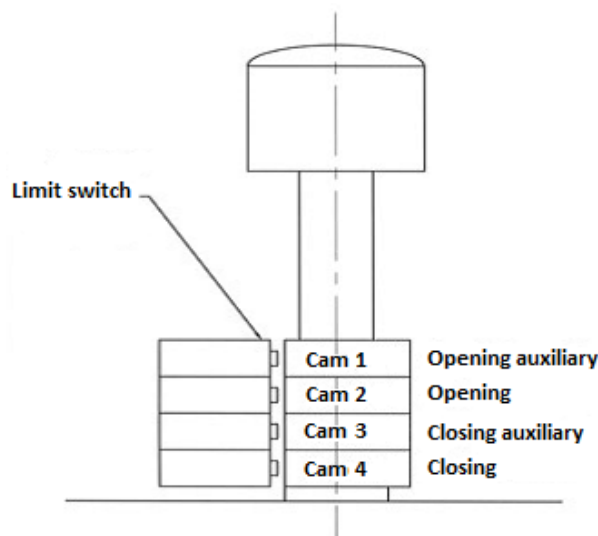
- 4.1 Before installing, make sure that the installation is completely depressurized and brought to ambient temperature.
- 4.2 In a zone classified as explosive, install only model SA05X / SA09X.
- 4.3 The protection class of the actuator is IP67 for indoors or outdoors installation. Do not install this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