



**780-781XS VALVES WITH SA ELECTRIC  
ACTUATOR**

Model/Ref: 275400023010



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Without Limits.*

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## 780-781XS VALVES WITH SA ELECTRIC ACTUATOR

### CHARACTERISTICS

The 780XS+SA L-port and 781 XS+SA T-port stainless steel 3-way ball valves are dedicated to the mixing, diverting or automatic discharging of industrial unloaded fluids. This reduced bore ball valve has an antistatic device and complies with the EC and ATEX standards. The ISO 5211 pad allows a direct mounting of the SA actuator. It is perfectly suitable for an indoor or outdoor industrial use.

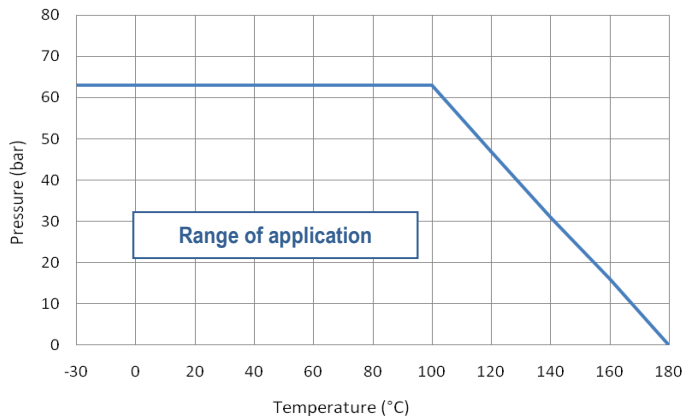
### AVAILABLE ITEMS

780XS: L-port / 781XS: T-port  
 1.4408 stainless steel (A351 CF8M) body  
 Size ¼" to 2"  
 BSP threaded connections  
 Voltages: 12 V CC, 24 V AC/DC and 230 V AC



### LIMITS OF USE

<b>Max. allowable pressure (PS)</b>	63 bar (20 °C)
<b>Min./max. allowable temperature (TS)</b>	-30 °C / +180 °C
<b>Room temperature</b>	-20 °C / +70 °C
<b>Service</b>	S2 – 70%



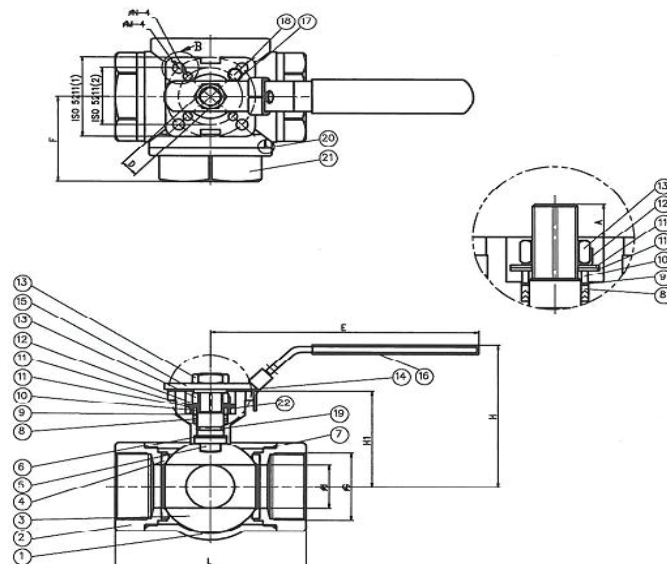
### DIRECTIVES AND DEVELOPMENT STANDARDS APPLICABLE

	Standard	Notified bodies		Standard
97/23/EC Pressure Equipment Directive	¼" to 1" : excluded		Valve testing	EN 12266
	1" ¼ to 2" : category III	TÜV #0035	Material certificate	EN 10204
Shell design	EN 12516-1		Actuator attachment	ISO 5211
Alloy grade	EN 1503-1			
ATEX Directive	Valve	SIRA #0518	II 2G/D Tx for zones 1,2,21 and 22	
	Actuator (SA-X option)	KEMA #0344	II 2G EEx d II C T4 for zones 1 and 2	

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**CONSTRUCTION**

#	Item	Material	#	Item	Material
1	Body	Stainless steel A351 CF8M / 1.4408	12	Locking washer	Stainless steel 304
2	End caps	Stainless steel A351 CF8M / 1.4408	13	Lever nut	Stainless steel 304
3	Ball	Stainless steel A351 CF8M / 1.4408	14	Washer	Stainless steel 304
4	Seats	PTFE	15	Lever	Stainless steel 304
5	Stem	Stainless steel 316	16	Sleeve	PVC
6	Stem O ring	PTFE	17	End stop	Stainless steel 304
7	Body gasket	PTFE	18	Nut	Stainless steel 304
8	Gland packing	PTFE	19	O-ring	FKM
9	Washer	TFM 1600	20	Body gasket	PTFE
10	Spacer	Stainless steel 304	21	Centre cap	Stainless steel A351 CF8M / 1.4408
11	Belleville spring washer	Stainless steel 304	22	Spring	Stainless steel 304


**DIMENSIONS (mm)**

DN	¼"	3/8"	½"	¾"	1"	1" ¼	1" ½	2"
D	11	11	12.5	16	20	25	32	38
L	75.7	75.7	75.7	86.6	103	118.2	125.8	149
H	64.9	64.9	64.9	71.6	94.3	100	115.7	124.9
F	38.3	38.3	38.3	44.7	50.8	57.7	62.6	74.3
A	8.2	8.2	8.2	9.0	11.5	11.5	15.1	15.1
E	132	132	132	132	180	180	225	225
H1	36.8	36.8	36.8	44.1	55.1	60.7	75.2	84.4
D	9	9	9	9	11	11	14	14
ISO	F03/F04	F03/F04	F03/F04	F03/F04	F04/F05	F04/F05	F05/F07	F05/F07
Weight (kg)	0.33	0.33	0.33	0.5	0.9	1.7	2.2	3.8

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**780-781XS VALVES WITH SA ELECTRIC ACTUATOR**

**ELECTRIC ACTUATION WITH SA**

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 (=ΔP)

Direct mounting of the electric actuator






DN	Actuator	Power	Intensity 230 V AC	Intensity 24 V AC/DC	Operating Time*	Standard equipment of the actuator
¼"	SA05	6 W	28 mA	1.8 mA	17 s	2 adjustable limit switches 2 dry auxiliary switches 2 W anti-condensation heater Actuator thermal cut-out Manual override by key Backlit position indicator (except for SA-X) Electrical connection: 2 gland packs. M20x1.5
3/8"	SA05	6 W	28 mA	1.8 mA	17 s	
½ "	SA05	6 W	28 mA	1.8 mA	17 s	
¾ "	SA05	6 W	28 mA	1.8 mA	17 s	
1"	SA05	6 W	28 mA	1.8 mA	17 s	
1" ¼	SA05	6 W	28 mA	1.8 mA	17 s	
1" ½	SA05	6 W	28 mA	1.8 mA	17 s	
2"	SA05	6 W	28 mA	1.8 mA	17 s	

\*Unloaded operating time given for information purpose only. May vary depending on the medium

For any other working conditions, please contact us.

**ACTUATION OPTIONS**

There are many different options, please contact our commercial department.

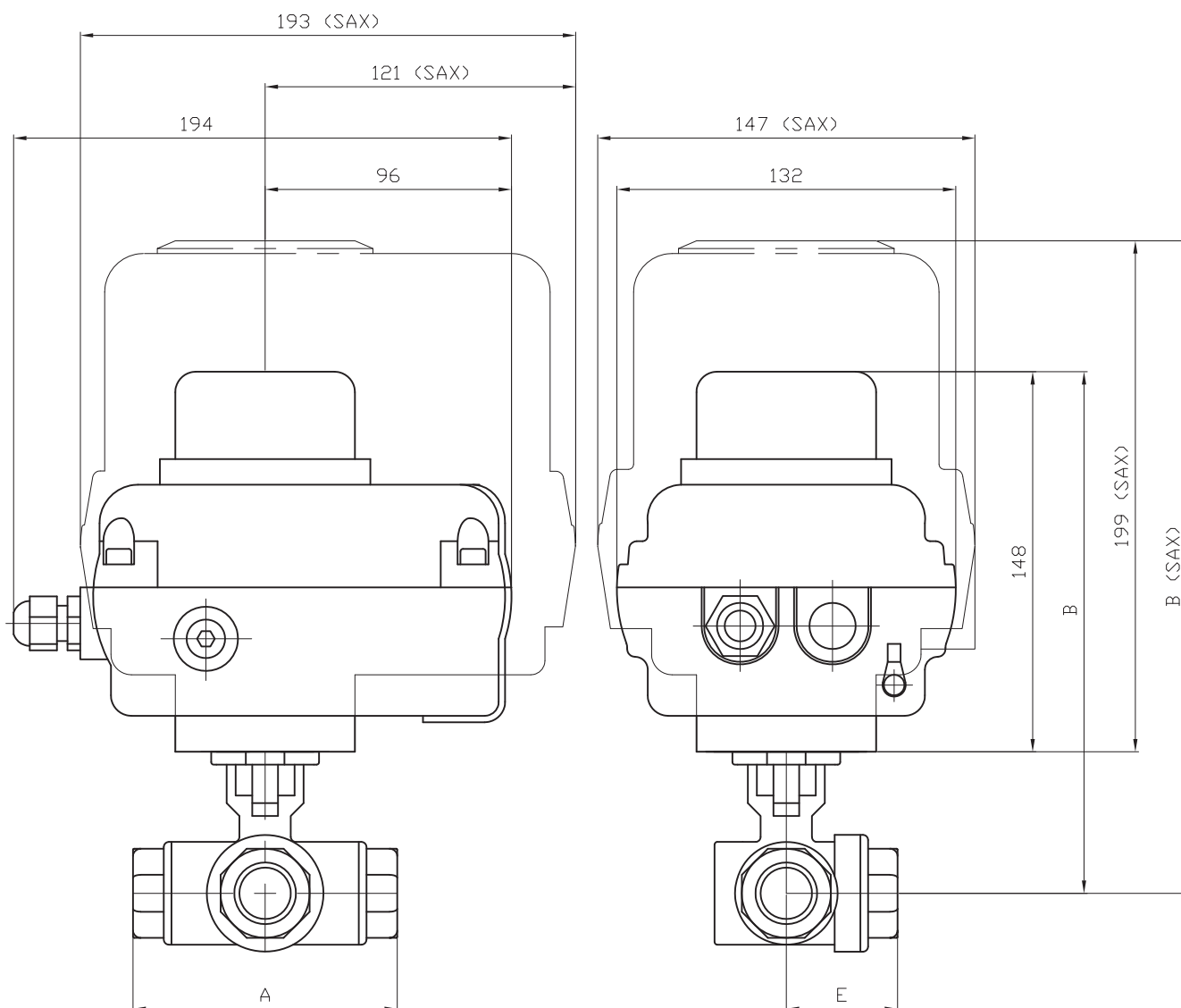
1	2	3	4	5
SA05S: Slow closing electric actuator 70 s	SA05PCU: Regulation actuator 4-20 mA or 0-10 V	SA05RBP: Safety actuator with an integrated battery emergency shutdown	SA05X: Actuator for use in ATEX zones 1 and 2	SR05: Safety spring return actuator
				
6	SAPUI electric actuator with feedback potentiometer			
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 (=ΔP)			
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 780XS+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
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**780-781XS VALVES WITH SA ELECTRIC ACTUATOR**


DN	08	10	15	20	25	32	40	50
A	75.7	75.7	75.7	86.6	103	118.2	125.8	149
B	184.8	184.8	184.8	192.1	203.1	208.7	223.2	232.4
B(SAX)	235.8	235.8	235.8	243.1	254.1	259.7	274.2	282.4
E	38.3	38.3	38.3	44.7	50.8	57.7	62.6	74.3

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## 780-781XS VALVES WITH SA ELECTRIC ACTUATOR

### GENERAL DESCRIPTION

The SA05 electric actuator is dedicated to the actuation of industrial ¼ turn valve. The torque value is 50 Nm. With a compact design, an IP 67 cast aluminium enclosure and an epoxy protection, the SA electric actuator is especially adapted to the actuation of ball valves and butterfly valves in outdoor or indoor areas. The SA05 is equipped with a visual 3D position indicator and a manual override driven by an Allen key. It complies with the EN 15714-2 standard.

### AVAILABLE ITEMS

Voltage: 230 V AC (50-60 Hz), 24 V AC/DC and 12 V DC

IP 67

ISO  
9001

CE

### LIMITS OF USE

Protection rating	IP 67
Temperature range	-20 °C / +70 °C
Service	S2 - 70%

### MECHANICAL CHARACTERISTICS

Gears	Treated steel pinions
Torque	50 Nm
Rotation angle	90° +/-5°
Declutching	N/A
Manual override	Allen key (except for SA05S)



Electric actuator	SA05			SA05S	
	Voltage	230 V AC	24 V AC/DC	12 V DC	230 V AC
Torque	50 Nm				
Operating time	17 s	17 s	17 s	100 s	100 s
ISO 5211 pad	F03/F05/F17 star 14				

### ELECTRICAL CHARACTERISTICS

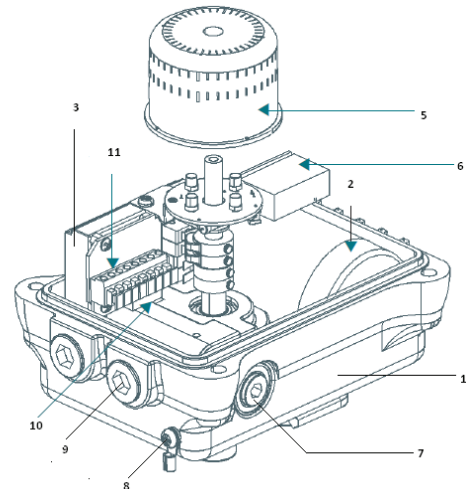
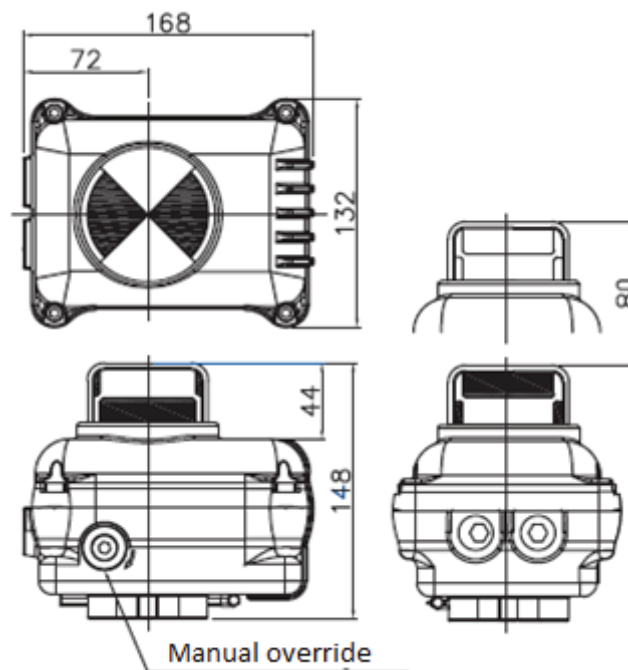
Motor protection	Thermal cut-out	Anti-condensation	2 W heater
Limit switches	2 adjustable switches	Electrical connection	2 gland packs M20x1.5
Auxiliary switches	2 adjustable dry switches		

Electric actuator	SA05			SA05S	
	Voltage	230 V AC	24 V AC/DC	12 V DC	230 V AC
Power	6 W	15 W	15 W	6 W	6 W
Intensity	0.24 A	1.8 A	3.6 A	0.24 A	1.8 A

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**CONSTRUCTION**

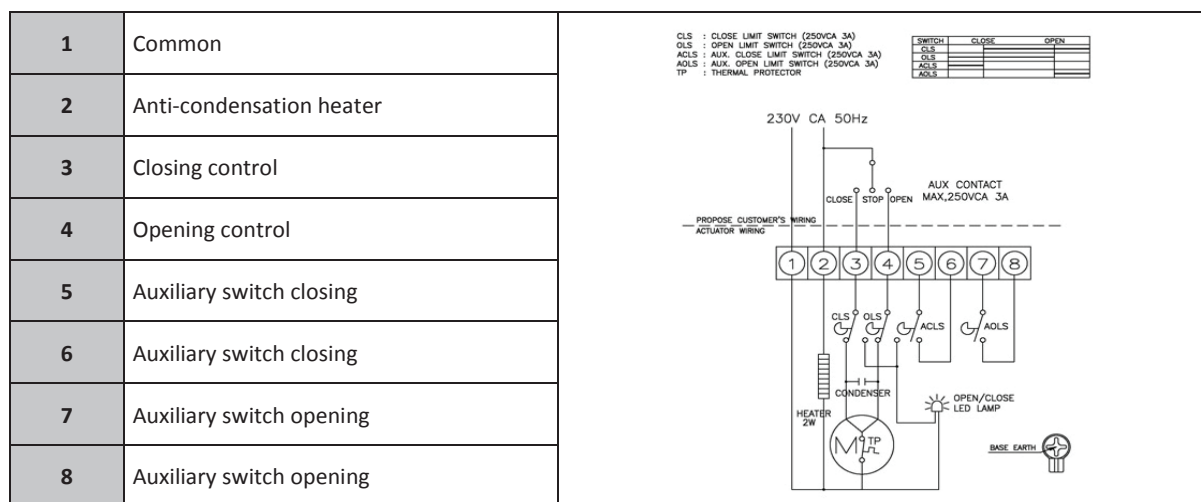
1	Enclosure	Polyester coated aluminium
2	Electric motor	
3	Gear	Treated steel pinions
4	Cover	Polyester coated aluminium
5	Position indicator	Polycarbonate plastic
6	Condenser	
7	Manual override	
8	Connection to ground	
9	Cable inlet	
10	Anti-condensation heater	
11	Terminal block	


**DIMENSIONS (mm)**


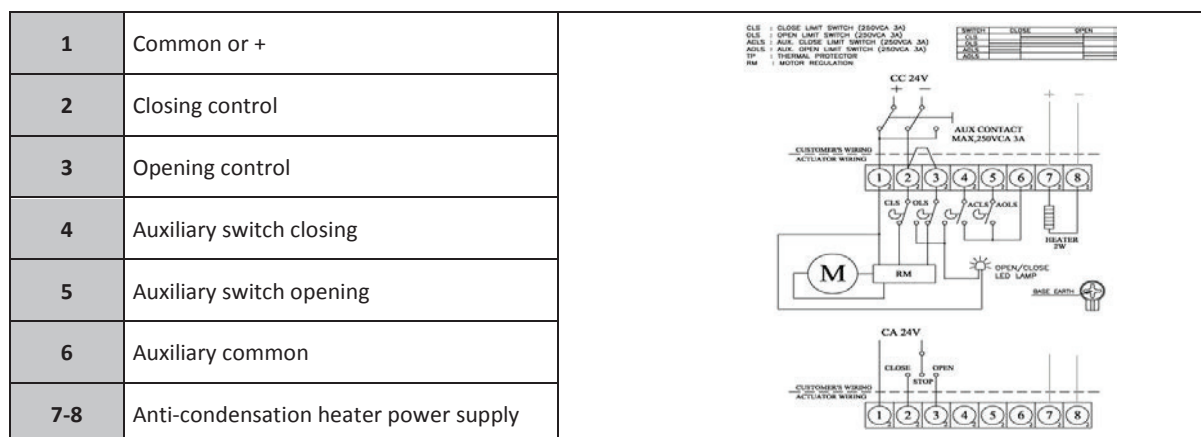
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## 780-781XS VALVES WITH SA ELECTRIC ACTUATOR

### WIRING SCHEME 230 V AC



### WIRING SCHEME 24 V AC/DC



### OPTIONS

1	SA05X: ATEX area version
2	SA05PIU: feedback potentiometer version
3	SA05CPT: 4-20 mA position transmitter version
4	SA05PCU: 0-10, 2-10 V, 2-20 mA, 4-20 mA regulation card version
5	SA05LCU: local control version
6	SA05RBP: integrated battery emergency shutdown device version

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