

702-703 VALVE WITH SA05 ELECTRIC ACTUATOR

FEATURES

The 702+SA ball valve is designed for the automatic opening / closing of pipes with non-loaded industrial fluids, up to a pressure of 100 bar, and up to 40 bar for the flanged 703. The 3-part tie-bolt or embedded pin construction with double-sealing, antistatic device and fire safety device enables it to be used in the oil and gas industries. It is a full-bore, fire safe, EC- and ATEX-certified valve. The ISO 5211 mounting pad enables the SA actuator to be easily assembled. This is perfectly adapted to both indoor and outdoor industrial use.

AVAILABLE MODELS

702: carbon steel body.

703: stainless steel body.

1/4" to 2" diameters.

Connections: G threaded, and NPT, SW and BW to be welded.

Flanged 703: DN15 to DN50, R.F. flanges PN40.

Supply voltages: 12 V CC, 24V AC-DC and 230V AC.



SA 05



SA-X 05

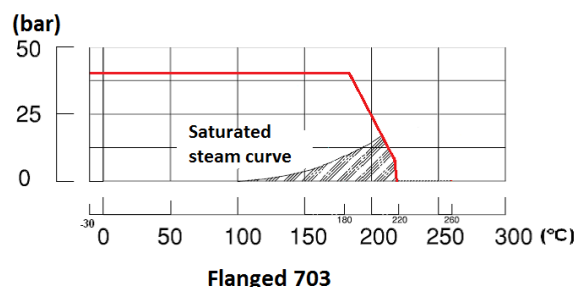
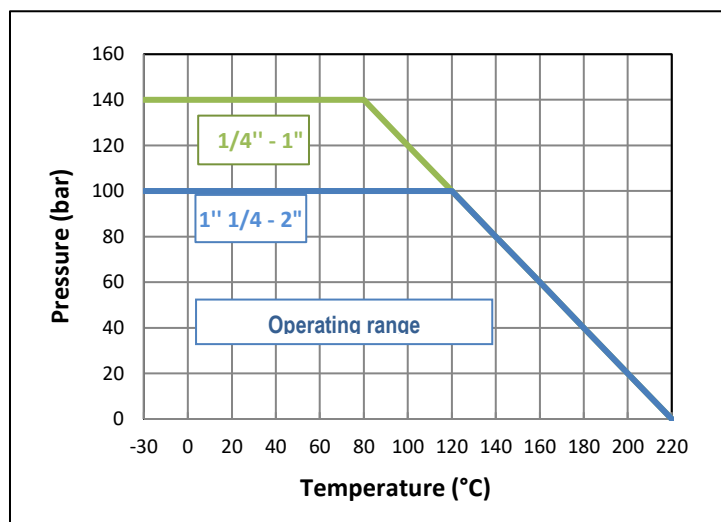


with SA-X 05



LIMITS OF USE

Fluid pressure: PS	1/4" to 1": 140 bar (20°C) 1" 1/4 to 2": 100 bar DN15 to DN50: 40 bar
Fluid temperature: WT	Steel: -20°C / +218°C Stainless steel: -30°C / +218°C
Ambient temperature	- 20°C / + 70°C
Service factor	S2 – 70%



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



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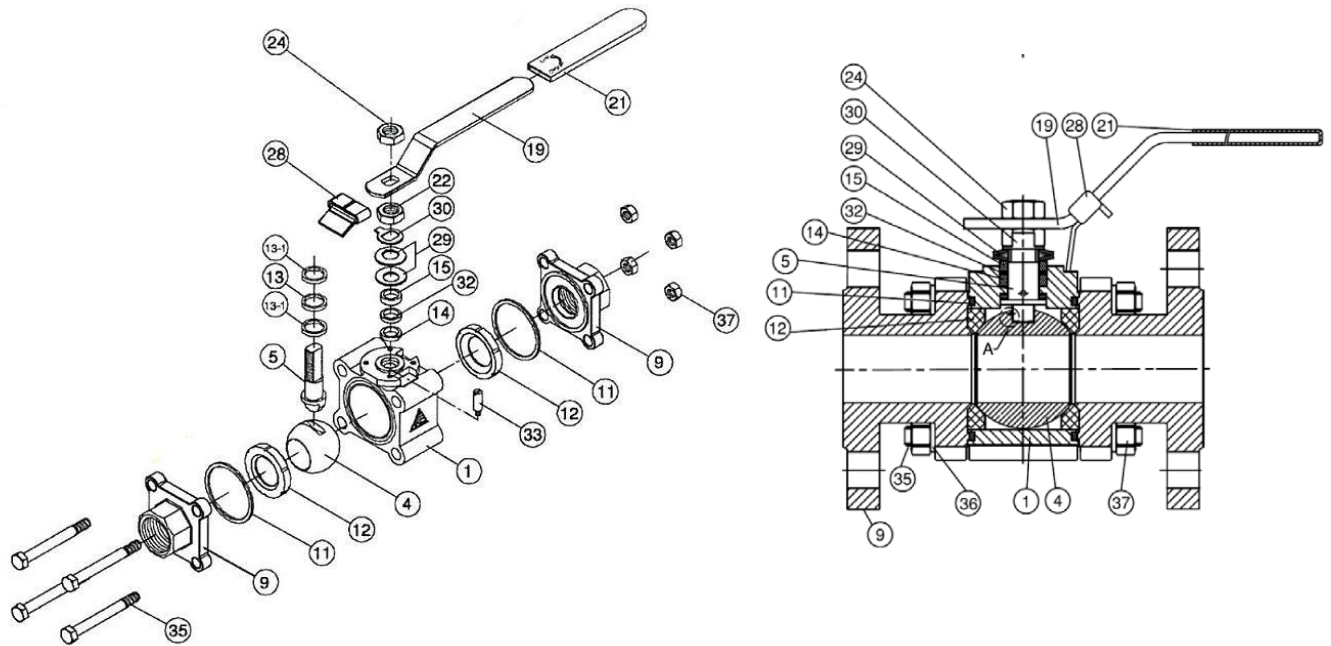
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702-703 VALVE WITH SA05 ELECTRIC ACTUATOR

DIRECTIVES AND MANUFACTURING STANDARDS

OBJECT	Standard	ON	OBJECT	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	NKS 10204
Design	ANSI B16.34		Fire safe	API 607
Size	EN 12516-1		Connection Motorisation	ISO 5211
Steel grades	EN 1503-2			
G Connection	ISO 228-1		NPT connection	ANSI B1.20
ATEX Directive	Valve	TÜV 0035	II 2G/D Tx for zones 1,2,21 and 22	
	Actuator (option SA-X)	KEMA 0344	II 2G EEx d II C T4 for zones 1 and 2	

CONSTRUCTION



No.	Name	Steel	Stainless steel	No.	Name	Steel	Stainless steel
1	Body	ASTM A216 WCB	ASTM A351 CF8M	21	Handle sheath	PVC	
4	Ball	ASTM A351 CF8M		22	CG nut	304 SS	
5	Stem	A182 F 316 SS		24	Grip nut	304 SS	
9	Ends	ASTM A216 WCB	ASTM A351 CF8M	28	Padlocking	304 SS	
11	Body gasket	Graphite		29	Belleville spring	301 SS	
12	Seat	Loaded PTFE 15% graphoil		30	Lock washer	304 SS	
13	Ring	Graphite		32	CG gasket	Loaded PTFE 15% graphoil	
13.1	Ring	Loaded PTFE 15% graphoil		33	Pointer	304 SS	
14	Packing gland	Graphite		35	Tie-bolt or pin	304 SS	
15	Spacer	304 SS		37	Tie-bolt nut	304 SS	
19	Handle	304 SS					

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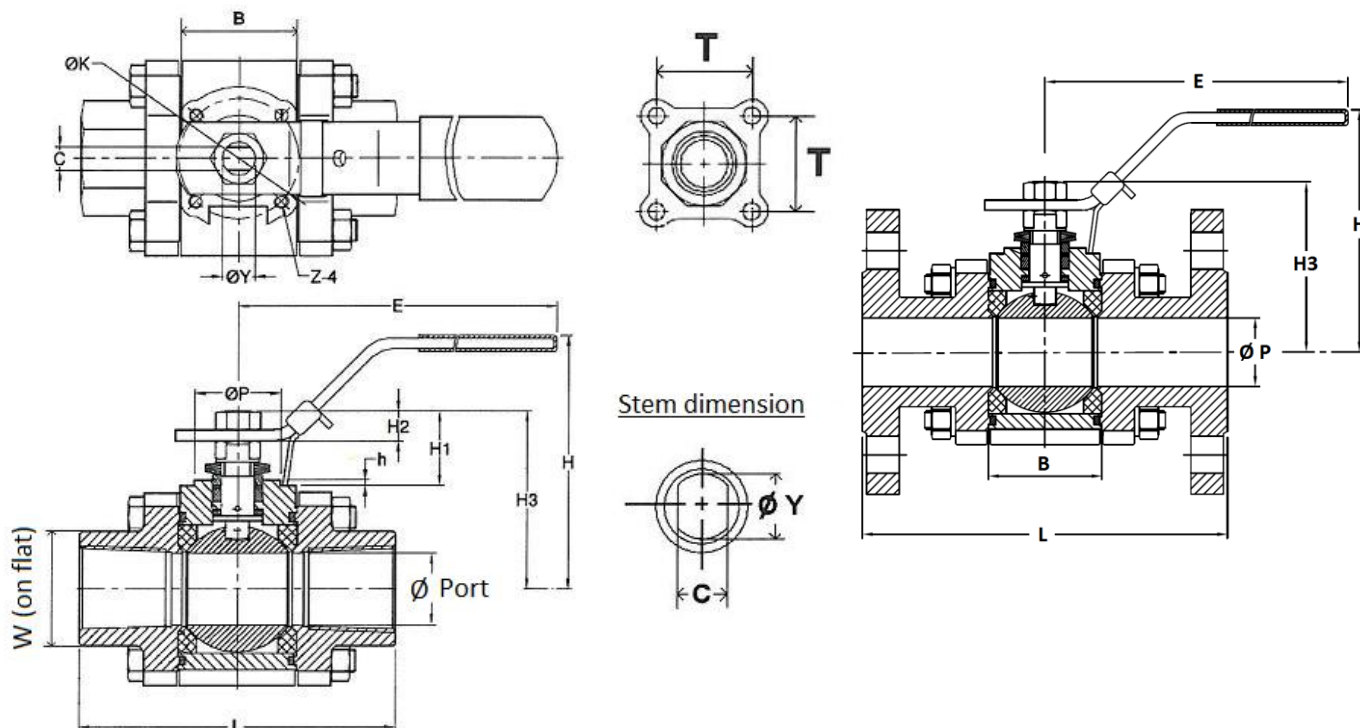


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DIMENSIONS (mm)



DN	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
ØD	10	10	15	20	25	32	38	50
L	64.8	64.8	72.5	85.4	105.3	111	127.3	145
L (BW)	64.8	64.8	75	90	110	115	130	145
L Flanges	/	/	130	150	160	180	200	230
B	19.6	19.6	24	31	40.7	47.7	55.6	70
E	134	134	134	134	170	170	207	215
H	64	64	72	77	83	88	104	133
H1	7.4	7.4	16.1	18.4	25.2	24.2	33.4	28.1
H2	6.1	6.1	7.3	9.1	11.6	9.6	15	16
H3	37.2	37.2	45.1	51.4	61.4	64.2	79	99.4
h	0.5	0.5	2	2	2	2	2.2	1.5
C	6.5	6.5	6.5	6.5	8	8	9.7	12
ØY	9.5	9.5	9.5	9.5	11.1	11.1	14.3	19
T	32	32	39	45	50	58	68	82
W	29.5	29.5	30	36	44.5	54	60	73.2
ØK	36	36	36	36	42	42	50	70
ØP	25	25	25	25	30	30	35	55
Z-4	M5	M5	M5	M5	M5	M5	M6	M8
Weight (kg)	0.7	0.7	0.85	01:37	2	2.78	04:08	6.80
Flange weight	/	/	2.2	3.3	4.5	6.5	8.1	13

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702-703 VALVE WITH SA05 ELECTRIC ACTUATOR

SA ELECTRICAL MOTORISATION

The SA motorisation proposed as standard comprises:

- IP67 epoxy coated aluminium housing for actuator and steel gear box,
- a safety coefficient of 1.3 minimum compared to the nominal torque of the valve,
- an upstream / downstream pressure difference $\Delta P=10$ bar max,

The actuator mount is a yoke + stainless steel driver according to the EN 15081 standard.

DN	Actuator	Power	Intensity 230V AC	Current 24V AC-DC	Time	Standard equipment of the actuator
1/4"	SA 05	6 W	28 mA	1.8 A	17 s	2 adjustable limit switches 2 dry auxiliary contacts Anti-condensation heater 5W Thermal protection of the motor Stand-by manual control with key Backlit position indicator (apart from SA-X) Electrical connection: 2 C.G. M20x1.5
3/8"	SA 05	6 W	28 mA	1.8 A	17 s	
1/2"	SA 05	6 W	28 mA	1.8 A	17 s	
3/4"	SA 05	6 W	28 mA	1.8 A	17 s	
1"	SA 05	6 W	28 mA	1.8 A	17 s	
1" 1/4	SA 05	6 W	28 mA	1.8 A	17 s	
1" 1/2	SA 05	6 W	28 mA	1.8 A	17 s	
2"	SA 05	6 W	28 mA	1.8 A	17 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: 70 s slow actuator	SA 05 PCU: 4-20mA or 0-10V proportional control unit actuator	SA 05 RBP: fail safe/security electric actuator	SA 05 X: zone ATEX 1 and 2 actuator	SR 05: spring return fail safe actuator
				
6	SA PUI actuator with feedback potentiometer			
7	thermal dispersion yoke for high temperature fluids			
8	100mm high steel height adjustment for installing heat-insulation			
9	actuator dimensioned for an upstream / downstream pressure difference ΔP greater than 10 bar			
10	NA actuator with handwheel override			

INSTALLATION IN AN ATEX ZONE

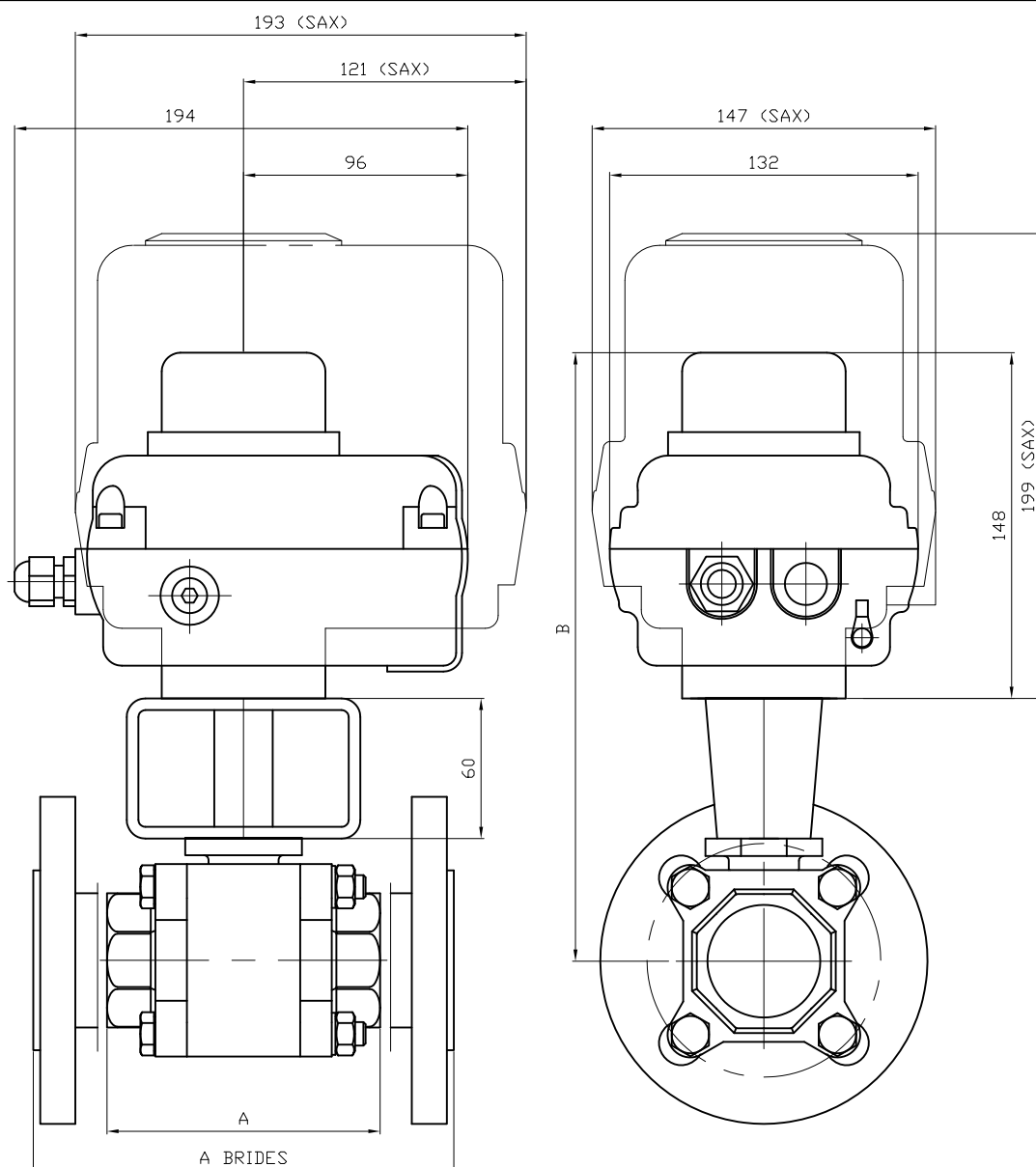
For the automatic valve 702-703+SA-X to be installed in ATEX 1 or 2 zones, this has to be specified when ordering. Our services will check of the assembly, the installation of an earthing braid, and will issue an assembly certificate. Our authorised technicians carry out these operations in the workshop. Please contact us.

The special assembly and maintenance instructions for motorised valves in the ATEX zones must be followed. The ATEX glands and plug are not included in the supply. Use the following codes:

Aluminium gland M20x1.5 ATEX	Code 980179	Aluminium plug M20x1.5 ATEX	Code 980180
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DN	1/4"-3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
A	65	72	86	105	111	127	145
A Brides	/	130	150	160	180	200	230
B	237.8	237	241	244.2	248	253.6	279.3
KG	3.87	4.02	4.54	5.17	5.95	7.2	9.97
KG Brides	/	5.9	7	8.2	10.2	11.9	16.9
KG(SAX)	6.07	6.22	6.74	7.37	8.15	9.4	12.17
KG(SAX) Brides	/	7.96	8.74	9.11	9.89	11.14	13.91

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

				Ajout 703 BRIDES	09/03/2017	B
				Modif.cote B ajout SAX	04/10/2011	A
Ech:	Date :25/09/2006	Dessiné par : LL	Tolérances générales : +/- 0.2	Modifications	Date	REV.
ROBINET A TOURNANT 702-703 + SERVOMOTEUR SA05-SAX05 BALL VALVE 702-703 + SA05-SAX05 ELECTRIC ACTUATOR  45, Rue du Ruisseau 38297 SAINT QUENTIN FALLAVIER				Matière :		
				Poids (Kg) :		
				Traitement : SANS		
				Plan n° Ens 958B		

SA 05 ELECTRIC ACTUATOR

FEATURES

The SA 05 electric actuator is intended for motorising industrial 1/4" turn valves. The torque is of 50 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 05 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 Code	IP 67
Ambient temperature	- 20°C / +70°C
Service factor	S2 : 15mn - S4 : 50%

MECHANICAL FEATURES

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



Actuator	SA 05			SA 05 S	
Voltage	230V AC	24V AC/DC	12V DC	230V AC	24V AC/DC
Torque (Nm)	50				
Manoeuvring time (s)	17	10	11	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 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	1.8	3.2	0.23	1.8

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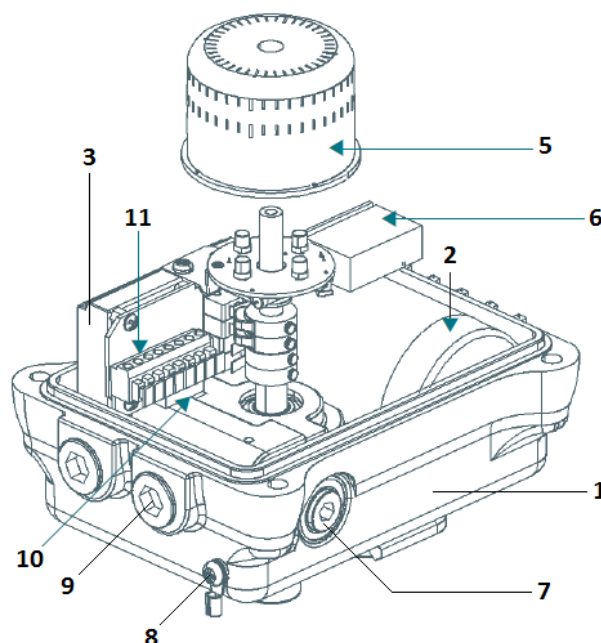
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SA 05 ELECTRIC ACTUATOR

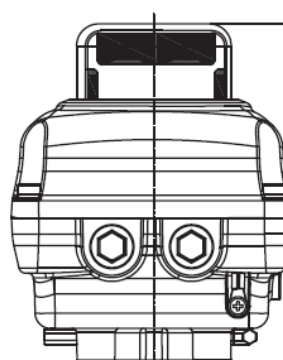
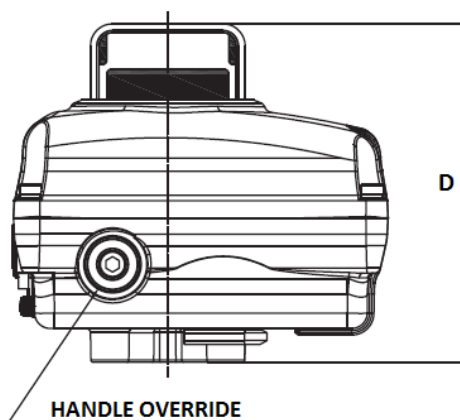
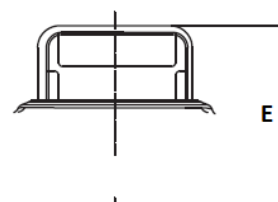
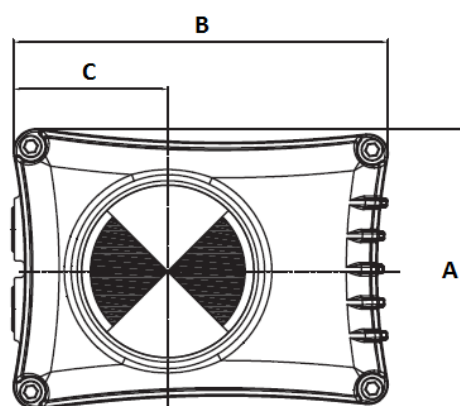
CONSTRUCTION

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	127	170	70	153	80	3.2

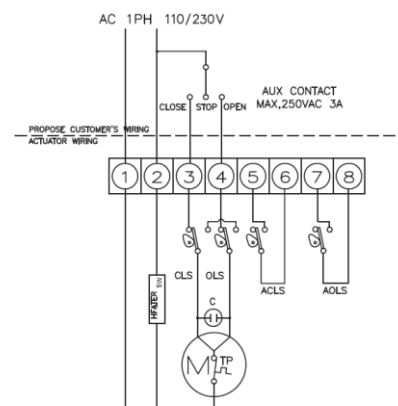


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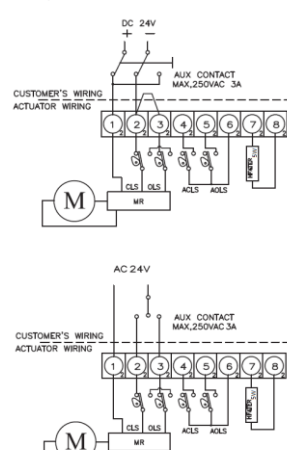
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SA 05 ELECTRIC ACTUATOR

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 X: version for ATEX zone
2	SA 05 PIU: version with feedback potentiometer
3	SA 05 CPT: version with position transmitter 4-20 mA
4	SA 05 PCU: version with adjustment card 0-10, 2-10V, 2-20 mA, 4-20 mA
5	SA 05 LCU: version with local control
6	SA 05 RBP: version with in-built fail safe/security

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SA 05-X ELECTRIC ACTUATOR

FEATURES

SA05-X electric actuators are intended for motorising 1/4" turn valves in explosive zones. The torque is of 50 Nm. The protection mode is a "d" explosion-proof. With a compact, robust construction and IP67 epoxy-coated aluminium housing, the SA05-X actuator is especially well suited for motorising ball valves and butterfly valves installed in difficult atmospheres. The SA05-X has a manual key control and a 3D visual position indicator. 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
Angle of rotation	90° +/- 5°
Declutching	Without
Override control	By key

Actuator	SA 05-X (50Hz)		SA 05-X (60Hz)
Voltage	230V AC	24V AC/DC	230V AC
Torque (Nm)	50		50
Manoeuvring time (s)	17	10	14
ISO 5211	F03/F05/F07 star 14		

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SA 05-X ELECTRIC ACTUATOR

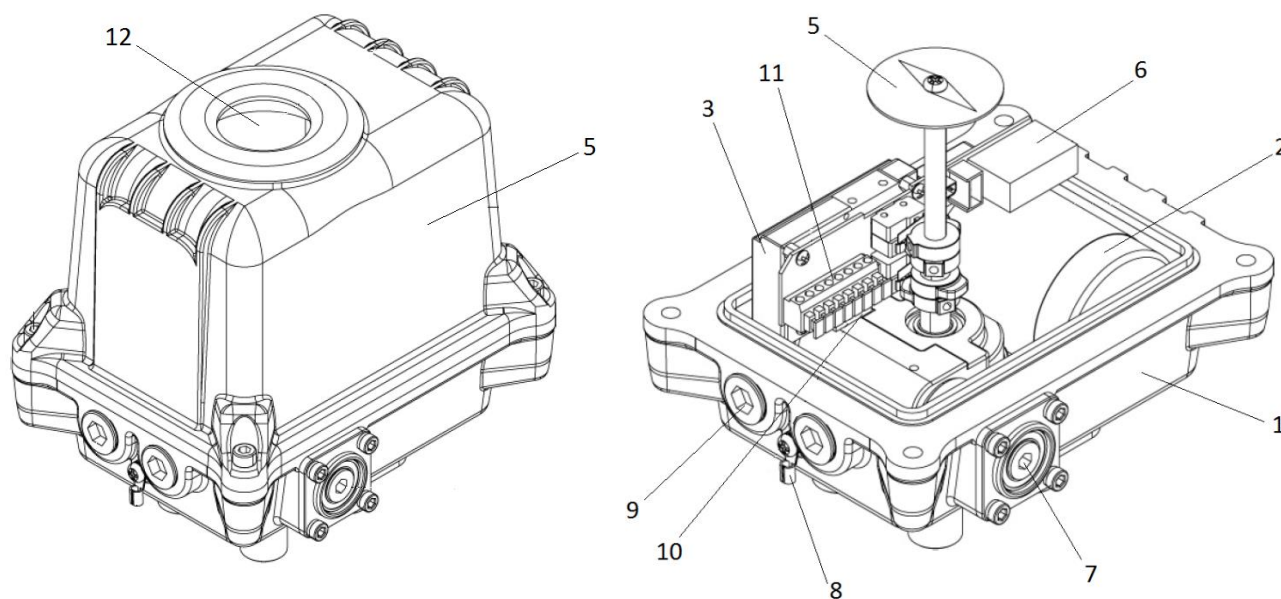
ELECTRICAL FEATURES

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	SA 05 X	
Voltage	230V AC	24V AC/DC
Power (W)	6 W	6 W
Current (A)	0.23	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



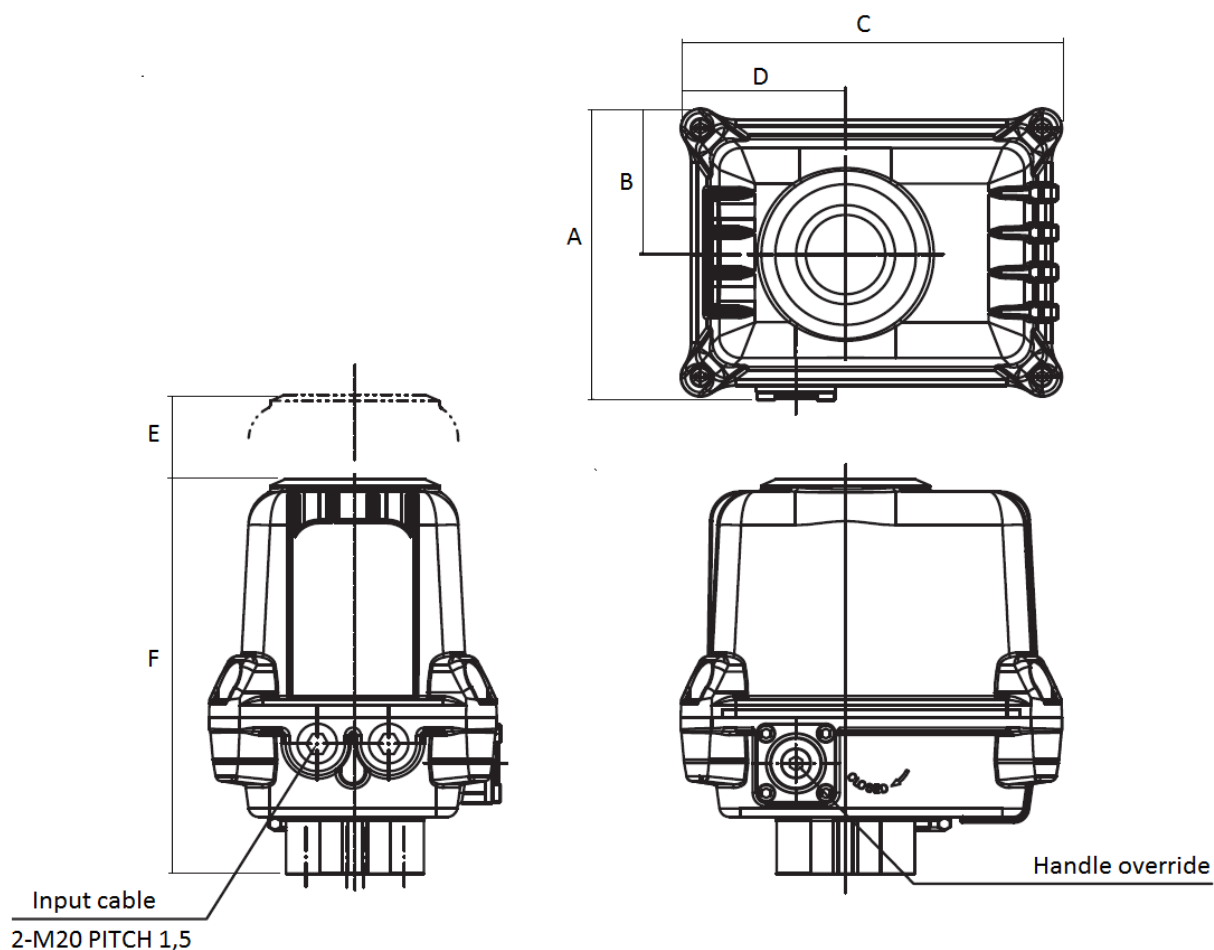
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SA 05-X ELECTRIC ACTUATOR

DIMENSIONS (mm) AND WEIGHT (kg)

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



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SA 05-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	

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