

# 752-753 VALVE WITH SA ELECTRIC ACTUATOR

## CHARACTERISTICS

The 752-753+SA ball valve is dedicated to the automatic opening/shut-off of pipes carrying unloaded industrial fluids with a 16 bar maximum pressure. This full bore split body ball valve is certified according to the following standards: 97/23/EC, ATEX, Firesafe and ISO 15848-1 (for fugitive emissions). The valve complies with the EN 558-1 series 27 face-to-face. The ISO 5211 pad allows a direct mounting of the SA actuator. It is perfectly suitable for an indoor or outdoor industrial use.

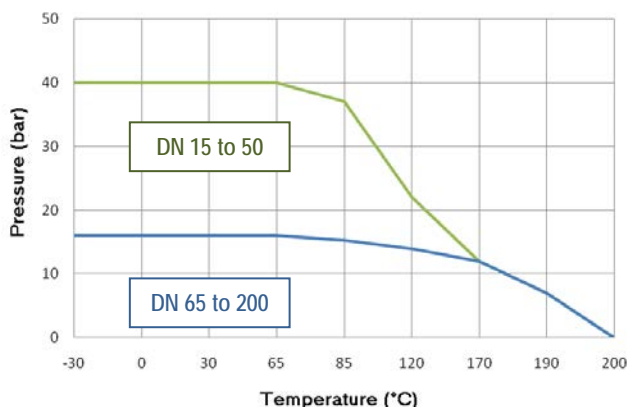
## AVAILABLE ITEMS

752: 1.0619 carbon steel (A216 WCB) body  
 753: 1.4408 stainless steel (A351 CF8M) body  
 DN 15 to DN 200  
 Flanged connections RF PN10/16  
 Voltages: 12 V DC, 24 V AC/DC and 230 V AC



## LIMITS OF USE

<b>Max. allowable pressure (PS)</b>	DN 15 to 50: 40 bar (20 °C) DN 65 to 200 : 16 bar (20 °C)
<b>Min./max. allowable temperature (TS)</b>	Steel: -20 °C / +200 °C Stainless steel : -30 °C / +200 °C
<b>Room temperature</b>	-20 °C / +70 °C
<b>Service</b>	S2 – 70%



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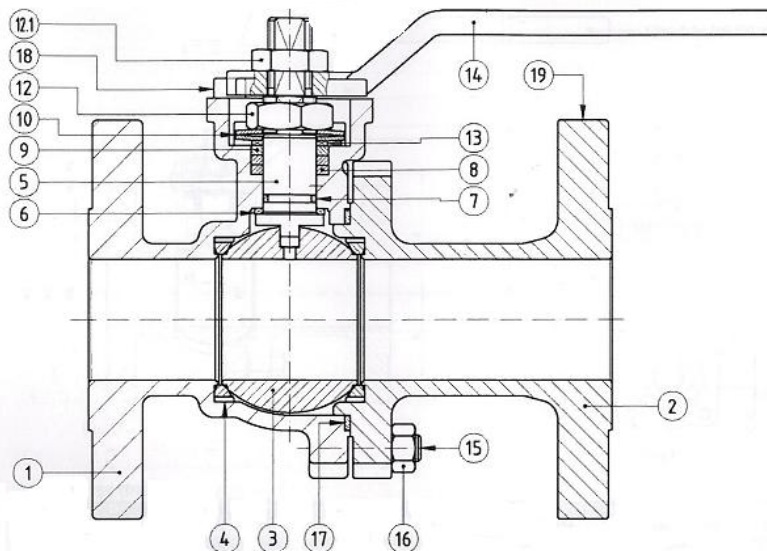
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## DIRECTIVES AND DEVELOPMENT STANDARDS APPLICABLE

	Standard	Notified bodies		Standard
97/23/EC Pressure Equipment Directive	DN 15 and 20 : excluded		Valve testing	EN 12266
	DN 25 to 100 : category III	BV 0062	Material certificate	EN 10204
Conception	EN 1983 and ISO 17292			
Shell design	EN 12516-1		Alloy grade	EN 1503-1
Flanges dimension	EN 1092-1		Face-to-face dimension	EN 558-1 series 27
Fire testing	ISO 10497 (2004)		Fugitive emissions	EN 15848-1
Actuator attachment	ISO 5211		Actuator coupling	EN 15081
ATEX Directive	Valve		II 2 G D EEx c for zones 1,2,21 and 22	
	Actuator (NA-X option)	NEMKO 0470	II 2G EEx d II B T4 for zones 1 and 2	

## CONSTRUCTION



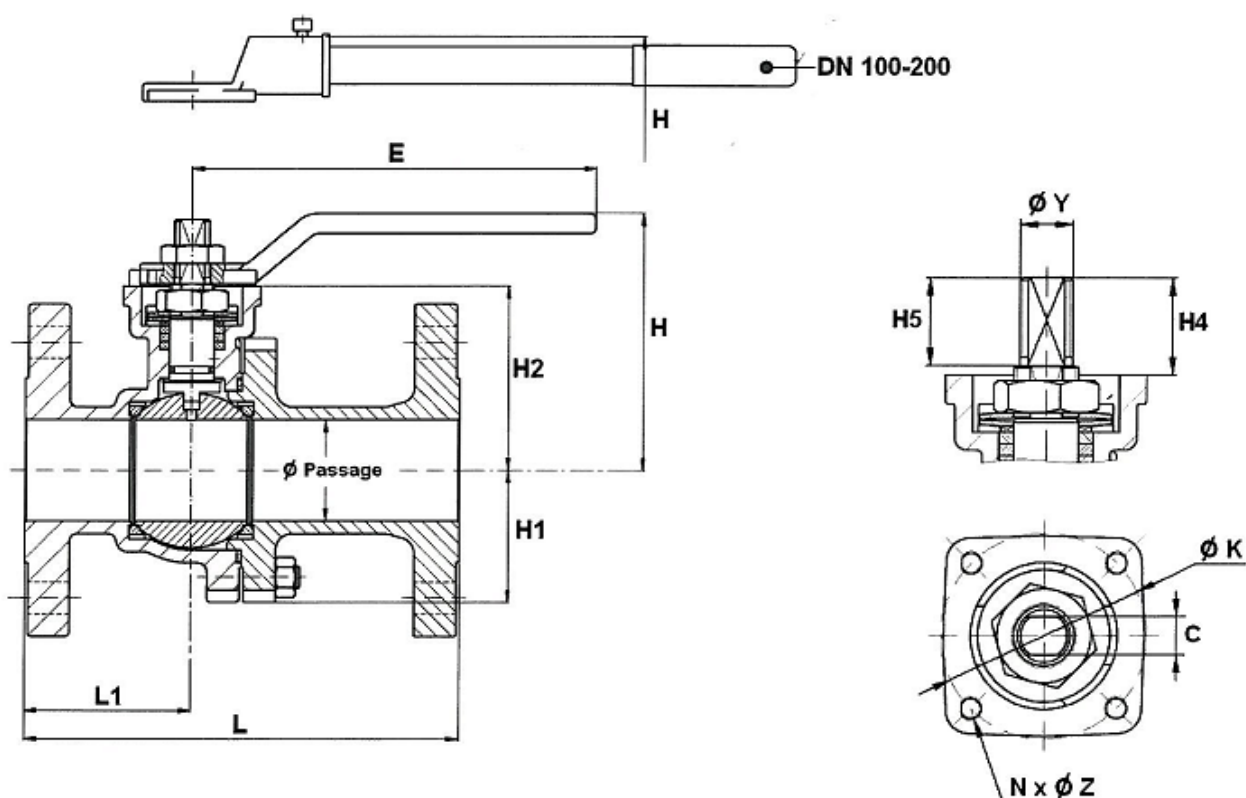
#	Item	752 CS	753 SS	#	Item	752 CS	753 SS
1	Body	Carbon steel A216WCB	Stainless steel A351 CF8M	12	Gland pack nut	SS 303	
2	Ends	Carbon steel A216WCB	Stainless steel A351 CF8M	12.1	Lever nut	SS 303	
3	Ball	Stainless steel A351 CF8M		13	Anti-friction ring	PTFE+25% Graphite	
4	Seat	PTFE / TFM 1600		14	Lever	Ductile iron	
5	Stem	SS 316		15	Bolts	A193 B7M	A193 B8M
6	Washer	PTFE+25% Graphite		16	Bolt nuts	A193 2HM	A194 8M
7	Stem O-ring	FKM		17	Body gaskets	SS + PTFE + Graphite	
8	Gland pack	Graphite		18	End stop screw	A2	
9	Gland follower.	SS 303		19	Plate	SS	
10	Belleville spring washer	Inconel 718					

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## DIMENSIONS (mm)



DN	15	20	25	32	40	50	65	80	100	125	150	200
Ø	15	20	25	32	40	50	65	78	100	125	151	203
L	115	120	125	130	140	150	170	180	190	325	350	400
L1	53	52	52	54	55	61	72	73	83	120	135	200
E	170	170	170	170	215	215	350	450	466	775	775	845
H	68	70	86	89.5	122.5	127.5	140	190	192.5	240	259	319
H1	31	33	39	43	48	63	78	87	108	134	152	202
H2	41	43	58.5	63.5	86.5	91.5	104	118.5	144	184	203	250
H4	18	18	22	22	33	33	34	34	45	56	56	69
H5	11	11	21	21	32	32	33	33	43.5	54.5	54.5	67
Ø Y	M10	M10	M12	M12	M18	M18	M22	M22	M28	M36	M36	M48
Ø K	50	50	50	50	70	70	70	102	102	125	125	140
ISO	F05	F05	F05	F05	F07	F07	F07	F10	F10	F12	F12	F14
N x Ø Z	4xM6	4xM6	4xM6	4xM6	4xM8	4xM8	4xM8	4xM10	4xM10	4xM12	4xM12	4xM16
Weight (kg)	2.4	3.2	4.1	5.8	8.1	10.6	13.3	19.1	25.6	47.6	63.5	115.3

## FLOW FACTOR Kv (m<sup>3</sup>/h)

DN	15	20	25	32	40	50	65	80	100	125	150	200
Kv	20	40	75	130	170	270	550	1000	1650	3000	4200	9000

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# 752-753 VALVE WITH SA ELECTRIC ACTUATOR

## 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)






Electric actuator mounted with stainless steel bracket and coupler according to the EN 15081 standard

DN	Actuator	Power	Intensity 230 V AC	Intensity 24 V AC/DC	Operating Time*	Standard equipment of the actuator	
15	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 M20 x 1.5	
20	SA05	6 W	28 mA	1.8 mA	17 s		
25	SA05	6 W	28 mA	1.8 mA	17 s		
32	SA05	6 W	28 mA	1.8 mA	17 s		
40	SA05	6 W	28 mA	1.8 mA	17 s		
50	Refer to 752 + NA						
65							
80							
100							

\*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	SA05 X: Actuator for use in ATEX zones 1 and 2	SR 05: Safety spring return actuator
				
6	SAPUI electric actuator with a feedback potentiometer			
7	Electric actuator sized for a maximum pressure differential up/downstream over 10 bar (=ΔP)			
8	NA electric actuator with a declutchable manual override by handwheel			

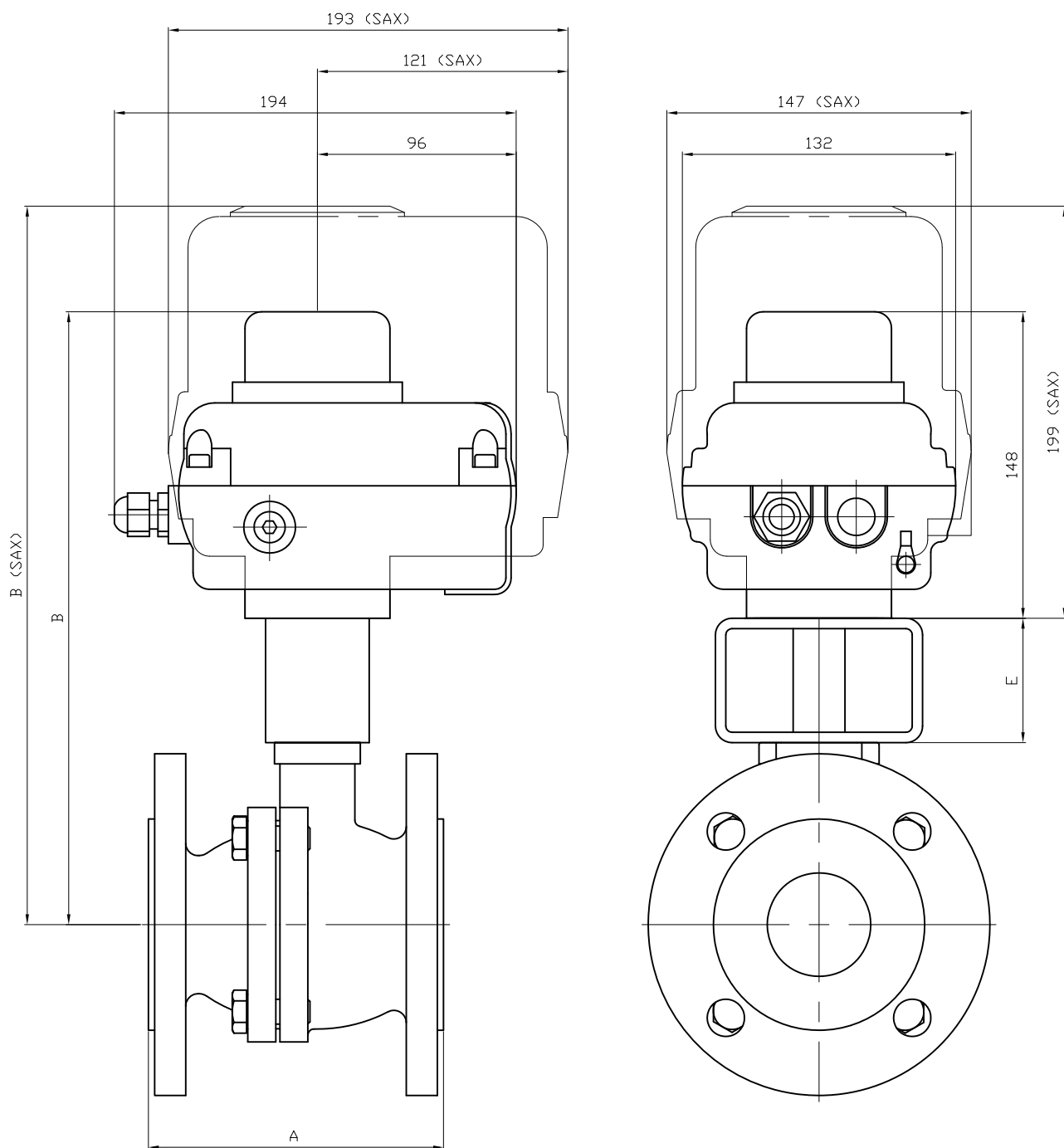
## ATEX ZONES INSTALLATION

It is compulsory to specify if the installation of the automatic valve 752-753+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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DN	15	20	25	32	40
A	115	120	125	130	140
B	249	251	266.5	271.5	294.5
B(SAX)	300	302	317.5	322.5	345.5
E	60	60	60	60	60

Informations données à titre indicatif et sous réserve de modifications éventuelles

Ech: /	Date :07/03/2011	Dessiné par : E.D.	Tolérances générales : +/- 0.2	Modifications	Date	REV.
ROBINET A TOURNANT SPHERIQUE 752-753 + SERVOMOTEUR SA05-SAX05				Matière :		
				Poids (Kg) :		
 45, Rue du Ruisseau 38297 SAINT QUENTIN FALLAVIER				Traitement : SANS		
				Plan n° Ens 1089		

# ELECTRIC ACTUATOR SA05

## 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



## 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°
Decutching	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	24 V AC/DC
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	24 V AC/DC
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

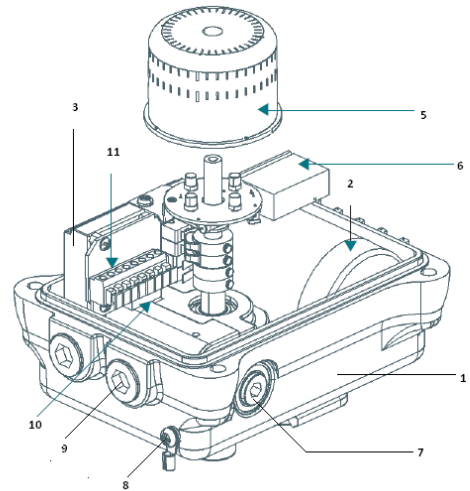
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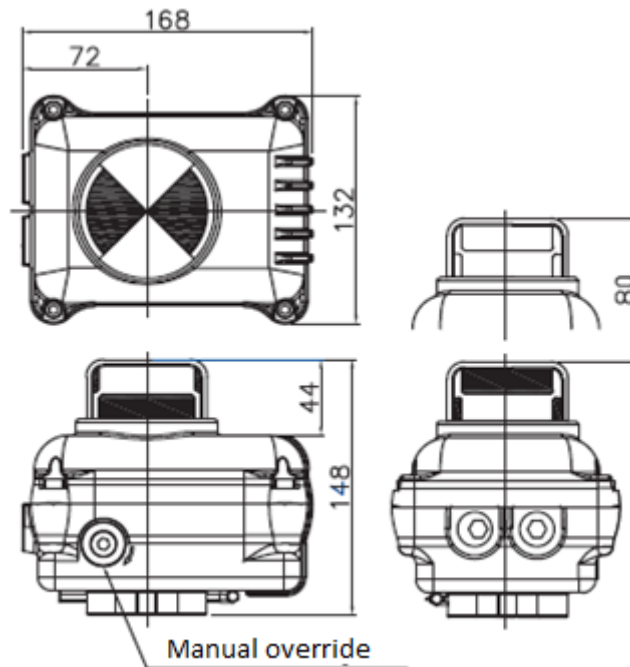
# ELECTRIC ACTUATOR SA05

## 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	



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# ELECTRIC ACTUATOR SA05

## WIRING SCHEME 230 V AC

1	Common	<p>CLS : CLOSE LIMIT SWITCH (250VCA 3A)                  OLS : OPEN LIMIT SWITCH (250VCA 3A)                  ACLS : AUX. CLOSE LIMIT SWITCH (250VCA 3A)                  AOLS : AUX. OPEN LIMIT SWITCH (250VCA 3A)                  TP : THERMAL PROTECTOR</p> <table border="1"> <thead> <tr> <th>SWITCH</th> <th>CLOSE</th> <th>OPEN</th> </tr> </thead> <tbody> <tr> <td>CLS</td> <td></td> <td></td> </tr> <tr> <td>OLS</td> <td></td> <td></td> </tr> <tr> <td>ACLS</td> <td></td> <td></td> </tr> <tr> <td>AOLS</td> <td></td> <td></td> </tr> </tbody> </table>	SWITCH	CLOSE	OPEN	CLS			OLS			ACLS			AOLS		
SWITCH	CLOSE		OPEN														
CLS																	
OLS																	
ACLS																	
AOLS																	
2	Anti-condensation heater																
3	Closing control																
4	Opening control																
5	Auxiliary switch closing																
6	Auxiliary switch closing																
7	Auxiliary switch opening																
8	Auxiliary switch opening																

## WIRING SCHEME 24 V AC/DC

1	Common or +	<p>CLS : CLOSE LIMIT SWITCH (250VCA 3A)                  OLS : OPEN LIMIT SWITCH (250VCA 3A)                  ACLS : AUX. CLOSE LIMIT SWITCH (250VCA 3A)                  AOLS : AUX. OPEN LIMIT SWITCH (250VCA 3A)                  TP : THERMAL PROTECTOR                  RM : MOTOR REGULATION</p> <table border="1"> <thead> <tr> <th>SWITCH</th> <th>CLOSE</th> <th>OPEN</th> </tr> </thead> <tbody> <tr> <td>CLS</td> <td></td> <td></td> </tr> <tr> <td>OLS</td> <td></td> <td></td> </tr> <tr> <td>ACLS</td> <td></td> <td></td> </tr> <tr> <td>AOLS</td> <td></td> <td></td> </tr> </tbody> </table>	SWITCH	CLOSE	OPEN	CLS			OLS			ACLS			AOLS		
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ACLS																	
AOLS																	
2	Closing control																
3	Opening control																
4	Auxiliary switch closing																
5	Auxiliary switch opening																
6	Auxiliary common																
7-8	Anti-condensation heater power supply																

## 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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