



**1150-1158 BUTTERFLY VALVES + SA ELECTRIC
ACTUATOR**

Model/Ref: 260303023010



*Partnership.
Without Limits.*

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1150-1158 BUTTERFLY VALVES + SA ELECTRIC ACTUATOR

CHARACTERISTICS

The butterfly valves 1150 to 1158 are dedicated to the automatic opening/shut-off of various fluid pipes. It has a ductile iron body. Thanks to various material possibilities for both the butterfly and the sleeve, it can be used in different applications. The wafer type body enables the mounting between PN10/16 or ANSI 150 flanges. The ISO 5211 pad enables the direct mounting of the SA electric actuator. It is perfectly adapted for an indoor or outdoor industrial use.



AVAILABLE ITEMS

DN 32-40 to DN 100

Flanged connections RF PN10/16 and ANSI 150

Voltages: 12 V DC, 24 V AC/DC and 230 V AC

Ref.	Butterfly	Sleeve	Application examples	Min. TS	Max. TS
1141	Ductile iron	NBR	Natural gas –NF-ROB GAZ 5 bar Certification	-10 °C	+60 °C
1147	Stainless steel 316	Carboxylated NBR.	Powdery – abrasive material	-10 °C	+80 °C
1150	Ductile iron	EPDM	Cold water – warm water (max 110 °C) - ACS	-10 °C	+90 °C
1151	Stainless steel 316	NBR	Hydrocarbons, natural gas, compressed air	-10 °C	+80 °C
1152	Ductile iron	NBR	Hydrocarbons, natural gas, compressed air	-10 °C	+80 °C
1153	Stainless steel 316	EPDM	Demineralised water – Alkaline materials (max 110 °C) - ACS	-10 °C	+90 °C
1154	Stainless steel 316	FKM	Compatible aggressive fluids, oil	-5 °C	+150 °C
1156	Stainless steel 316	White NBR	Compatible aggressive fluids	-10 °C	+80 °C
1157	Stainless steel 316	SILICONE	Oils and greases	-15 °C	+150 °C
1157A	Polished Stainless steel	Food grade silicone	Food fluids (FDA certification)	-15 °C	+150 °C
1158	Aluminium bronze	NBR	Sea water	-10 °C	+80 °C

LIMITS OF USE

Max. allowable pressure (PS)	16 bar until DN200 10 bar until DN 400
Min./max. allowable temperature (TS)	According to the upper chart
Room temperature	-15 °C / +70 °C
Service	S2 - 70%

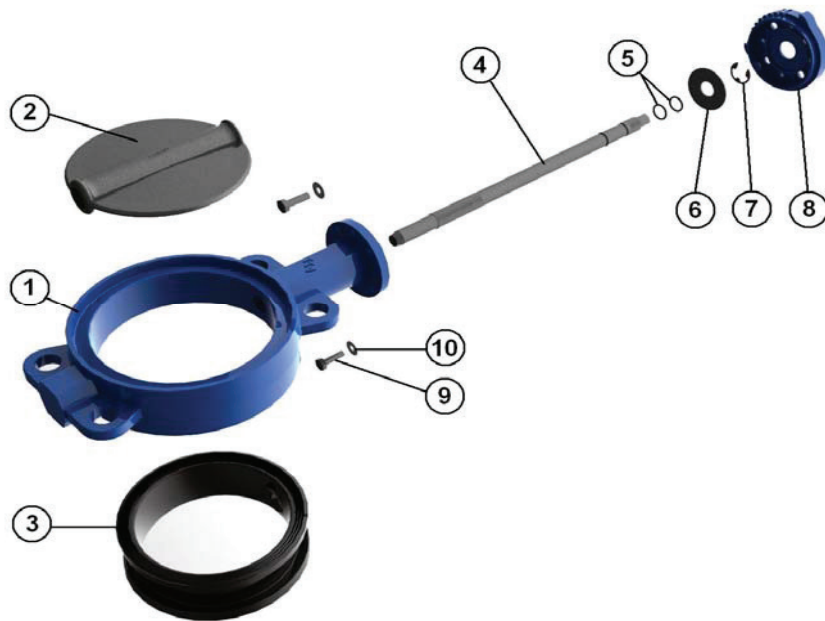


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DIRECTIVES AND DEVELOPMENT STANDARDS APPLICABLE

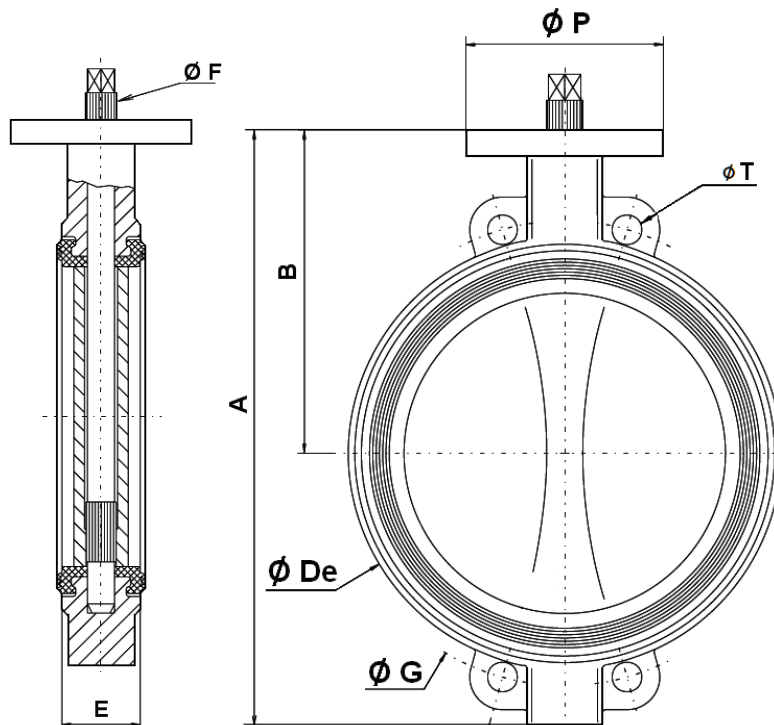
	Standard	Notified bodies		Standard
97/23/EC Pressure Equipment Directive	Cat. III modules B+C1	#0409	Valve testing	ISO 5208
ATEX Directive	II 2G/D Tx zones 1,2,21 and 22	#0038	Face-to-face dimension	ISO 5752 series 20
Flange dimension	EN 1092-1		Pilot actuator attachment	NAMUR
Actuator attachment	ISO 5211		Limit switch box attachment	VDI/VDE 3845
Sanitary compliance	ACS N° 07 ACC LY 504		SIL 3 Level (actuator only)	EN 61508



CONSTRUCTION

#	Item	1147	1150	1151	1152	1153	1154	1156	1157	1158
1	Body	Ductile iron GS EN GJS-500-7								
2	Butterfly DN32-100	Stainless steel A351 CF8M /1.4408								Aluminium bronze
3	Butterfly DN125-400	Ductile iron GS EN GJS-500-7				Stainless steel A351 CF8M /1.4408				
3	Sleeve	NBR C.	EPDM	NBR	NBR	EPDM	FKM	White NBR	Silicone	NBR
4	Stem	SS 420		SS 304	SS 420	SS 304	SS 304	SS 304	SS 304	SS 304
5	O-ring	NBR	EPDM	NBR	NBR	EPDM	FKM	NBR	EPDM	NBR
6	Ring	Steel								
7	Securing rings / circlips	Steel								
8	ISO pad	Aluminium								
9	Screw	Steel 5.6								
10	Washer	Steel								

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DIMENSIONS (mm)


DN	32-40	50	65	80	100	125	150	200	250	300	350	400
A	206	228	243	266	294	324	349	438	461	523	582	645
B	140	156	162	170	185	207	216	256	248	280	300	340
Ø De	82	102	119	135	155	185	208	270	328	381	437	486
E	33	43	46	46	52	56	56	60	68	78	78	102
Ø F	10.5	10.5	14.5	16.5	16.5	18.5	18.5	22.5	25.5	30.5	30.5	35.5
Ø G	110	125	145	160	180	210	240	295	350	400	460	515
Ø P	88	88	88	88	88	105	105	105	150	150	170	170
Ø T	18	18	18	18	18	18	23	23	23	23	23	17
Weight (kg)	2.46	3.66	4.40	4.60	6	7.60	9.20	14.7	24.7	33	39	52

FLOW FACTOR Kv (m³/h)

DN	32-40	50	65	80	100	125	150	200	250	300	350	400
Kv	70	109	200	334	551	901	1427	2383	3825	5659	8177	10659

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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 ($=\Delta P$)






The actuator is directly mounted with an aluminium actuation pad

DN	Actuator	Power	Intensity 230 V AC	Intensity 24 V AC/DC	Operating Time*	Standard equipment of the actuator
32-40	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
50	SA05	6 W	28 mA	1.8 mA	17 s	
65	SA05	6 W	28 mA	1.8 mA	17 s	
80	SA05	6 W	28 mA	1.8 mA	17 s	
100	SA05	6 W	28 mA	1.8 mA	17 s	
125	Refer to 1150 + NA					
150						

*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.

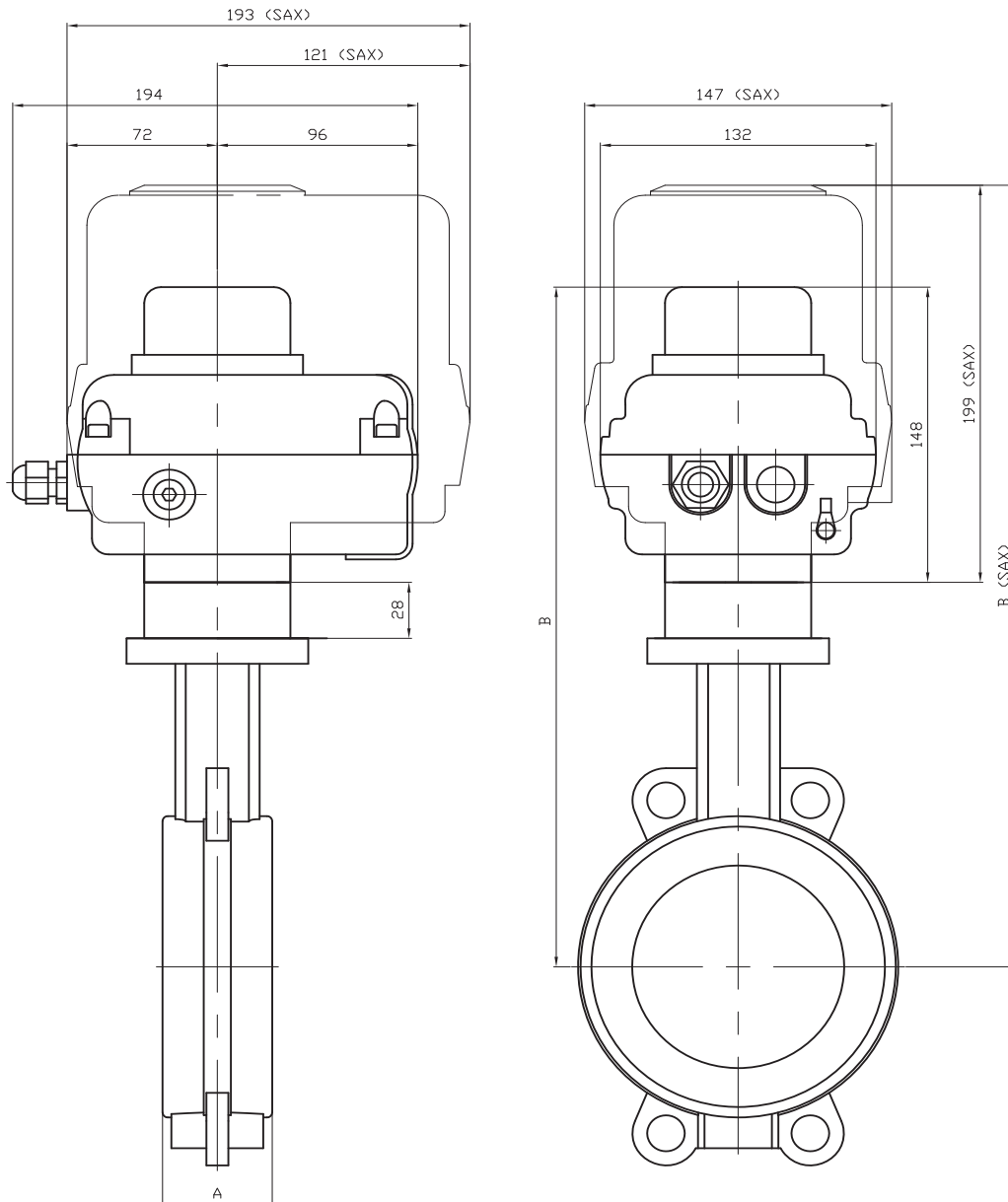
1	2	3	4	5
SA05S: Slow closing electric actuator 100 s	SA05PCU: Regulation actuator 4-20 mA or 0-10 V	SA05RBP: Safety actuator with an integrated battery emergency shutdown	SA05 X: Actuator for use in ATEX zones 1 and 2	SR 05: Safety spring return actuator
				
6	SAPUI electric actuator with a feedback potentiometer			
7	Electric actuator sized for a maximum pressure differential up/downstream over 10 bar ($=\Delta P$)			
8	NA electric actuator with a declutchable manual override by handwheel			
VALVE OPTIONS				
1	Carbon steel body, stainless steel 304 and 316, bronze and aluminium			
2	Carbon steel butterfly, stainless steel 304 and 316, bronze aluminium, uranium, hastelloy			
3	Hypalon seats, steam silicone, white EPDM, natural rubber, vulcanized neoprene			
4	Stainless steel 420, 304, 316 stems, hastelloy			

ATEX ZONES INSTALLATION

It is compulsory to specify if the installation of the automatic valve 1150+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	40	50	65	80	100
A	33	43	46	46	52
B	301	317	323	331	346
B(SAX)	352	368	374	382	397
KG	5.6	6.5	7.2	7.7	9.1
KG(SAX)	7.8	8.7	9.4	9.9	11.3

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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

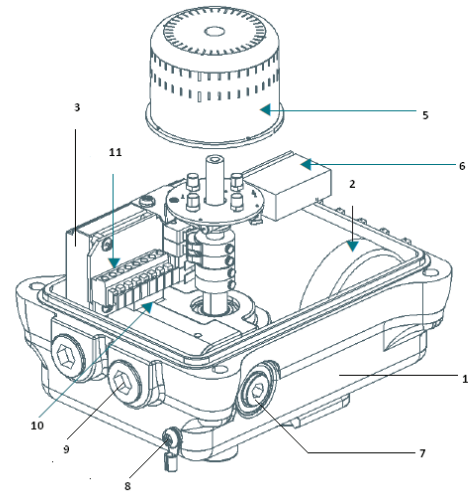
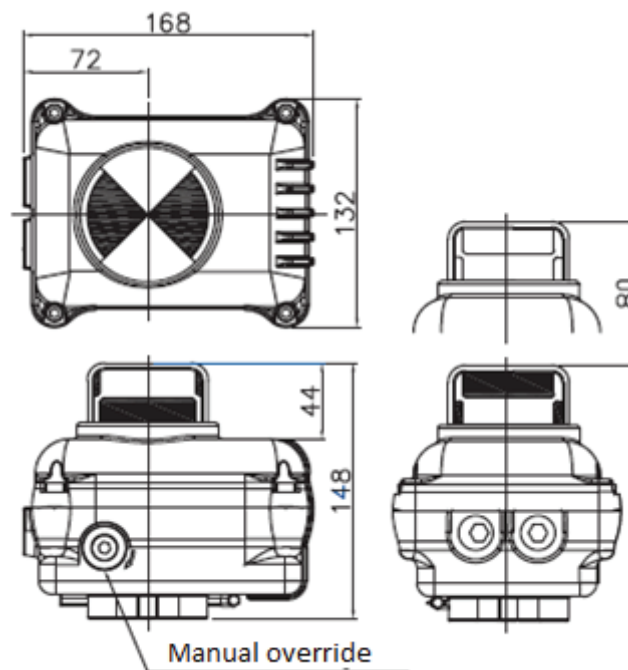
Motor protection	Thermal cut-out	Anti-condensation	2 W heater
Limit switches	2 adjustable switches	Electrical connection	2 gland packs M20x1.5
Auxiliary switches	2 adjustable dry switches		

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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CONSTRUCTION

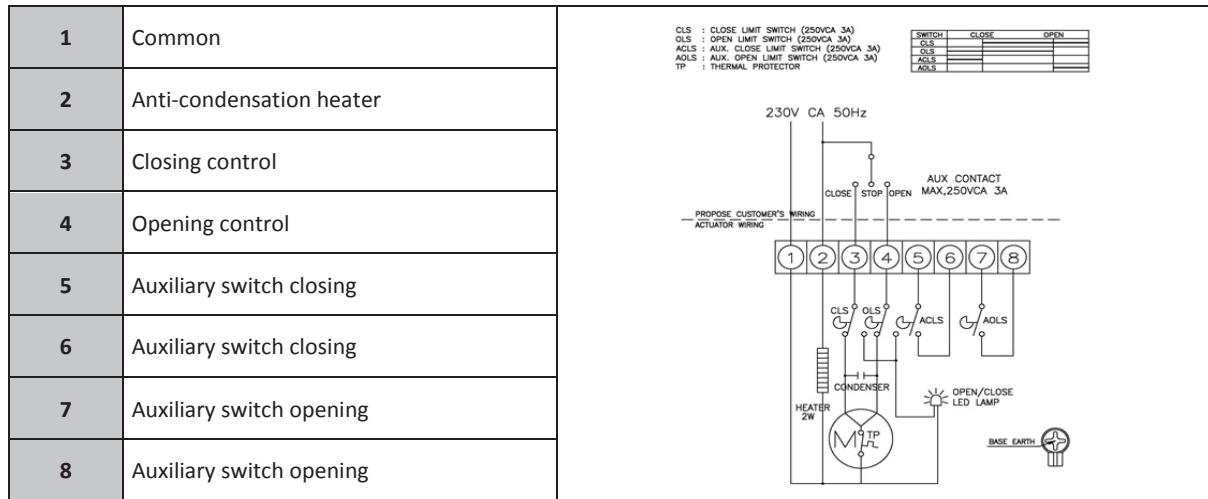
1	Enclosure	Polyester coated aluminium
2	Electric motor	
3	Gear	Treated steel pinions
4	Cover	Polyester coated aluminium
5	Position indicator	Polycarbonate plastic
6	Condenser	
7	Manual override	
8	Connection to ground	
9	Cable inlet	
10	Anti-condensation heater	
11	Terminal block	


DIMENSIONS (mm)


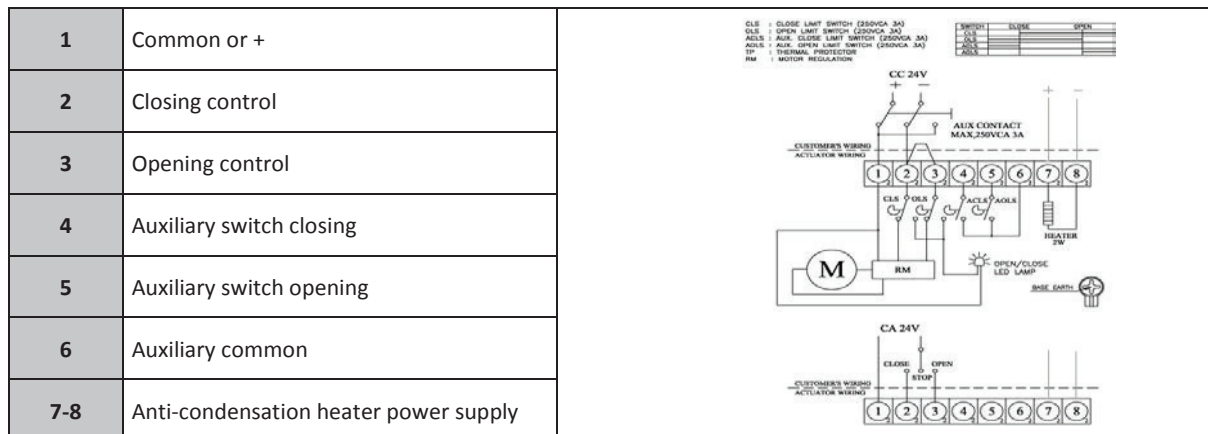
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WIRING SCHEME 230 V AC



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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