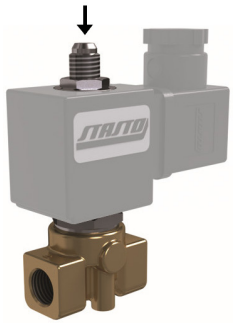
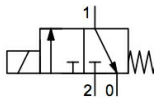
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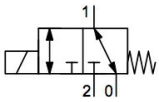
3/2-Way solenoid valve - direct-acting
Series 31A

Connection "0"





de-energized closed



Universal valve
(Pressure port as required)

Design type	3/2-way solenoid valve with elastic seal, direct-acting, normally closed or Universal valve (Pressure port as required)
Connection	G1/8"...G1/4" according to ISO228/1
Materials	Body Brass, Guide tube Stainless steel, Internal parts stainless steel similar 1.4104, Seal FKM or Rubin
Mounting type	Installation in rigid piping system or via mounting thread
Mounting position	any
Application range	gaseous and liquid media that do not attack the materials used
Viscosity	max. 12mm^2/s (cst)
Switching time	10...30ms
Medium temperature	depending on the sealing material and Solenoid coil
Ambient temperature	see table "Solenoid coils"

Electrical data:

Coil type	Type BDA, Connector width 32mm (Standard coil) Type BDV, Connector width 32mm (Coil for humid environment)
Electrical connection	connector according to EN175301-803 form A (see separate data sheet)
Voltage type	AC and DC voltage
Standard voltage	230V/50-60Hz, 24V/50-60Hz, 24VDC
Special voltages	12...380V/50Hz or 60Hz, 12...220VDC
Permissible voltage fluctuation	AC +10%/-15% DC +10%/-5%
Power consumption	see table "Power consumption of the solenoid coils"
Duty cycle	100% Duty cycle (continuous operation)
Degree of protection	IP65 according to EN 60529 with properly mounted device connector (protection against dust ingress and water jets)
Application note	When ordering, please specify voltage and type of current. We recommend always installing a strainer upstream to prevent malfunctions in the event of contamination of the medium. These valves can also be used for rough vacuum applications. ATEX: The valves may only be used for media that are not explosive.

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Type code

		31A	3	A	V	25	-	U	-	M	-	BDA	-	230V/50-60Hz
		G1/8"	3											
	Connection	G1/4"	2											
		2,5mm		A										
	Nominal size Guide tube	1,5mm		F										
		FKM			V									
	Seal	Ruby			R									
		1,5mm				15								
		2,0mm				20								
	Nominal size	2,5mm				25								
		de-energized closed (Leave blank)												
	Function	Universal valve						U						
		without manual override (Leave blank)												
	Manual emergency override	mechanical manual override (only nominal diameter 2 mm and 2.5 mm)								M				
		BDA Standard coil - Approval CE										BDA		
		BDV Coil for humid environment - Approval CE-CSA-UL-VDE										BDV		
		Y1 Coil for ATEX Areas with 3 m Cable										Y1		
	Coil	Y2 Coil for ATEX Areas with 3 m Cable										Y2		
		230V/50-60Hz												230V/50-60Hz
		24V/50-60Hz												24V/50-60Hz
		24VDC												24VDC
		12...380V/50Hz or 60Hz												
	Voltage	12...220VDC												

Applications of the individual sealing materials

Material	Medium temperature	Application examples
RUBIN*	-40...+180°C	Heavy fuel oil, aggressive media
FKM	-10...+140°C	Gasoline, Diesel, Air, Oils, Water, neutral gases and liquids

*With hard sealing materials such as ruby, a normal, slight leakage of 2cm³/min at a pressure of 1bar may occur.

Solenoid coils

Type	Degree of protection	Insert	Ambient temperature	Approvals
BDA	IP65	Medium temperature up to max. 120°C	-10...+40°C	CE
BDV	IP65	Medium temperature up to max. 180°C, high humidity	-20...+60°C	CE-CSA-UL-VDE
Y1/Y2	Ex II 2G Ex mb IIC T4 Ex II 2D Ex mb tb IIIC T130°C	in hazardous area, Zones 1/2/21/22, ignition group T4, max. 80°C medium temperature	-20...+50°C	ATEX

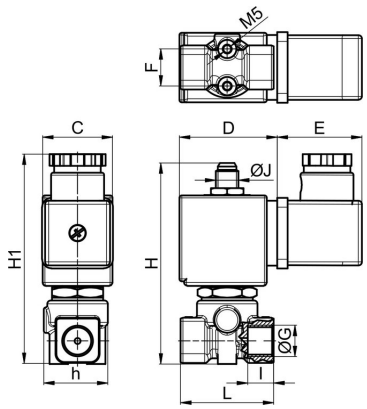
Power consumption of the solenoid coils

Voltage	Tightening torque (Alternating current) VA	Holding force (Alternating current) VA	Holding force (Direct current) operating temperature W	Type
220-230V/50-60Hz	25	14,5	-	BDA08223DS
24V/50-60Hz	25	14,5	-	BDA08024DS
24VDC	-	-	8	BDA08024CS
380V/50-60Hz	25	14,5	-	BDA08380DS
110V/50-60Hz	25	14,5	-	BDA08110DS
48V/50Hz	25	14,5	-	BDA08048AS
42V/50Hz	25	14,5	-	BDA08042AS
110VDC	-	-	8	BDA08110CS
12VDC	-	-	8	BDA08012CS
230V/50Hz 240V/60Hz	25	16	-	BDV08230AY
24V/50-60Hz	25	17	-	BDV08024DY
24VDC	-	-	11	BDV08024CY
110V/50Hz 120V/60Hz	25	15	-	BDV08110AY
220-240V/50-60Hz	-	max. 9,2	-	Y1220-240V/50-60Hz
24VDC	-	-	10,1	Y124VDC
220-240V/50-60Hz	-	max. 9,2	-	Y2220-240V/50-60Hz
24VDC	-	-	10,1	Y224VDC

Permissible pressure ranges in bar and Kv value

Nominal size Seat DN[mm]	Nominal size Guide tube DN[mm]	permissible pressure				Kv value [m^3/h Water]	Type
		Coil BD.		Coil Y1/Y2			
		AC	DC	AC	DC		
1,5	2,5	0 - 15	0 - 15	0 - 15	0 - 15	0,08	31A.A.15
2	2,5	0 - 10	0 - 10	0 - 10	0 - 10	0,12	31A.A.20
2,5	2,5	0 - 6	0 - 6	0 - 6	0 - 6	0,20	31A.A.25
1,5	1,5	0 - 10	0 - 10	0 - 10	0 - 10	0,08	31A.F.15-U
2,5	2,5	0 - 4	0 - 4	0 - 4	0 - 4	0,20	31A.A.25-U

Dimensions



Connection G	B	C	D	E	F	H	H1	L	I	J Connection "0"	Weight [approx. kg]	Coil	Type
G1/8"	28	30	42	36	16	88	91	41	7	G1/8"	0,32	BD.	31A3.
G1/8"	28	36	43	36	16	88	114	41	7	G1/8"	0,44	Y1/Y2	31A3.
G1/4"	28	30	42	36	16	88	92	41	7	G1/8"	0,32	BD.	31A2.
G1/4"	28	36	43	36	16	88	114	41	7	G1/8"	0,44	Y1/Y2	31A2.

Illustrations non-binding

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