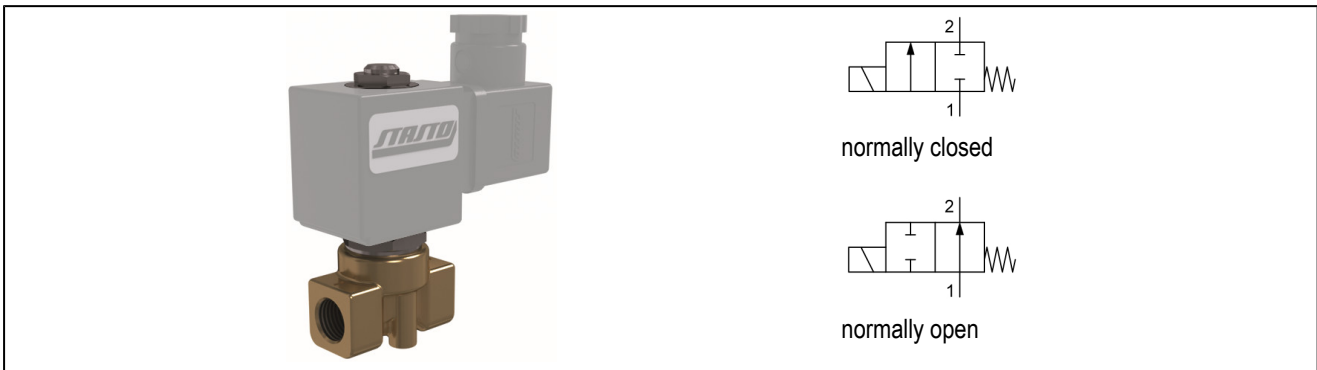


2/2 - way solenoid valve - directly operated series SL002, SL003



design	2/2-way solenoid valve with elastic seal, directly operated, normally closed or normally open
connection	G1/8"...G1/2" according to ISO228/1
materials	body brass, stainless steel tube, inner parts stainless steel similar 1.4104, seal NBR, EPDM, ruby, FKM or PTFE (only for normally closed valves)
type of fixing	installed into rigid pipework resp. via mounting thread
mounting position	any
application	gaseous and liquid fluids which do not affect the used materials
viscosity	max. 12mm ² /s (cst)
switching time	10...30ms
medium temperature	dependent on sealing material and coil
ambient temperature	see table "coils"
electrical data	
type of coil	type BDA, connector size 32mm (standard coil) type BDV, connector size 32mm (coil for humid area) type GDH/GDV, connector size 32mm (coil for higher pressures, coil for humid area)
electrical connection	connector acc. to EN175301-803-form A (see separate datasheet)
type of current	AC and DC
standard voltage	230V/50-60Hz, 24V/50-60Hz, 24VDC
special voltage	12...380V/50Hz or 60Hz, 12...220VDC
acceptable voltage tolerance	AC +10%/-15% DC +10%/-5%
power consumption	see to the table "power consumption of coils"
duty cycle	100% duty cycle (continuous operation)
protection class	IP65 according to EN 60529 for a correctly mounted connector (protection against the penetration of dust and jet water)
direction for use	<p>please specify voltage and type of current by order. we always recommend connecting a strainer in front of the valve, otherwise malfunction can occur in the event of contaminated medium. these valves can also be used for rough vacuum. the maximum housing nominal pressure can amount to 40bar. The maximum amount of pressure which can be switched is the differential pressure between valve inlet and outlet.</p> <p>with direct current the pressure differential values specified for a medium temperature of maximum 80°C and 40°C ambient air temperature apply. the amount of permissible pressure will reduce by 0.4% for every degree Celsius with higher medium temperatures.</p> <p>ATEX: The valves may only be used for media that are not explosive.</p>

type code

		SL002 - 3 - 2 - N - A S 01 - 01						
type	function NC - normally closed	SL002						
	function NO - normally open	SL003						
connection	G1/8"							18
	G1/4"							14
	G3/8"							38
	G1/2"							12
nominal diameter	1,5mm							1,5
	2,0mm							2
	2,5mm							2,5
	3,0mm							3
	4,5mm							4,5
	5,0mm							5
seal	standard seal FKM (V) - blank position							
	NBR							N
	EPDM							E
	PTFE only for normally closed valves							T
	ruby							R
coil	without coil - blank position							
	BDA standard coil - approval CE							A
	BDV coil for humid area - approval CE-CSA-UL-VDE							C
	GDV coil for higher pressures - coil for humid area - approval CE-CSA-UL-VDE							E
	GDH coil for higher pressures - coil for humid area - approval CE							D
	Y1 coil for ATEX areas with cable length of 3m (only for normally closed valves)							H
connector	without connector - blank position							
	standard							S
	with integrated LED-yellow and VDR							L
	with moulded PVC-cable (2 m)							M
voltage	220-230V/50-60Hz							01
	230V/50-240V/60Hz							02
	24VDC							03
	24V/50-60Hz							04
	12VDC							05
	48VDC							06
	110VDC							07
	220VDC							08
	42V/50Hz							10
	48V/50Hz							11
	110V/50-60Hz							13
	110V/50-120V/60Hz							14
	380V/50-60Hz							16
220-240V/50-60Hz							20	
special version	described in the article description							01

available nominal diameter depending on the thread and seat seal

connecting thread	DN 1,5 mm	DN 2 mm	DN 2,5 mm	DN 3 mm	DN 4,5 mm	DN 5,5 mm
G 1/8"	N, E, V, R, T	N, E, V, R, T	N, E, V, R, T	N, E, V, R, T		
G 1/4"		N, E, V, R, T	N, E, V, R, T	N, E, V, R, T	N, E, V, T	N, E, V, T
G 3/8"					N, E, V, T	N, E, V, T
G 1/2"					N, E, V, T	N, E, V, T

application of the individual seal materials

material	medium temperature	examples of use
NBR	-10...+90°C	air, water, neutral gases and liquids
EPDM	-10...+140°C	hot water, steam, oxygen
ruby*	-40...+180°C	heavy duty heating oil, aggressive media
PTFE*	-40...+180°C	aggressive media
FKM	-10...+140°C	petrol, diesel, air, oils, water, neutral gases and liquids

*with hard sealing materials such as ruby and PTFE, it is normal that a light amount of leakage of 2cm³/min under 1bar of pressure will occur.

coils

type	protection class	use	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
GDV.....S	IP65	medium temperature up to max. 180°C, high humidity	-20...+60°C	CE
GDV.....Y	IP65	medium temperature up to max. 180°C, high humidity	-20...+60°C	CE-CSA-UL-VDE
GDH	IP65	medium temperature up to max. 180°C, high humidity	-20...+40°C	CE
Y1	Ex II 2G Ex mb IIC T4 Ex II 2D Ex mb tb IIC T130°C	in areas where there is a risk of explosion, zone 1/2/21/22, ignition class T4, maximum medium temperature 70°C	-20...+50°C	ATEX

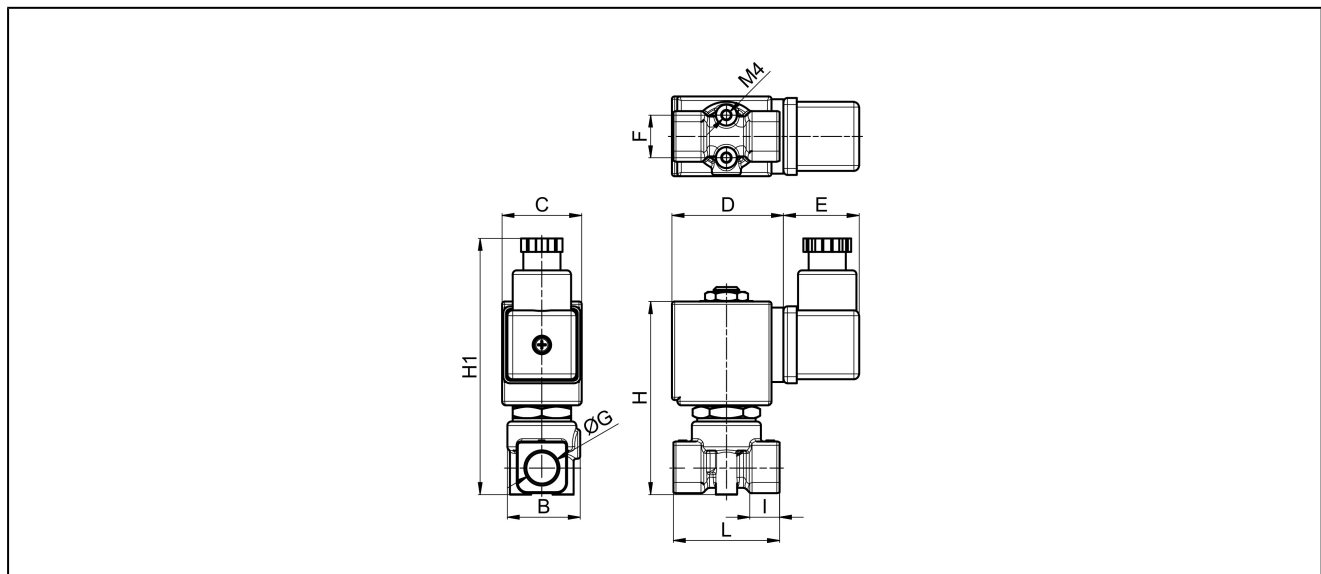
power consumptions of the coils

voltage	inrush power (AC) VA	holding power (AC) VA	holding power (direct current) at operating temperature W	type
24V/50-60Hz	25	14,5	-	BDA08024DS
42V/50Hz	25	14,5	-	BDA08042AS
48V/50Hz	25	14,5	-	BDA08048AS
110V/50-60Hz	25	14,5	-	BDA08110DS
220-230V/50-60Hz	25	14,5	-	BDA08223DS
380V/50-60Hz	25	14,5	-	BDA08380DS
12VDC	-	-	8	BDA08012CS
24VDC	-	-	8	BDA08024CS
110VDC	-	-	8	BDA08110CS
24V/50-60Hz	25	17	-	BDV08024DY
230V/50Hz 240V/60Hz	25	16	-	BDV08230AY
110V/50Hz 120V/60Hz	25	15	-	BDV08110AY
24VDC	-	-	11	BDV08024CY
24V/50-60Hz	43	26	-	GDV14024DY
110V/50Hz 120V/60Hz	43	23	-	GDV14110AY
230V/50Hz 240V/60Hz	43	27	-	GDV14230AY
12VDC	-	-	14	GDH14012CS
24VDC	-	-	14	GDV14024CY
48VDC	-	-	14	GDH14048CS
220VDC	-	-	14	GDV14220CS
220-240V/50-60Hz	-	max. 9,2	-	Y1220-240V/50-60Hz
24VDC	-	-	10,1	Y124VDC

permissible differential pressures in bar and kv values

seat seal	nominal diameter DN[mm]	normally closed NC SL002						normally open NO SL003		kv value [m ³ /h water]
		coil BD.		coil Y1		coil GD.		coil BD., Y1	coil GD.	
		AC	DC	AC	DC	AC	DC	AC and DC	AC and DC	
N, E, V, T	1,5	30	18	25	18	40	30	25	35	0,08
R	1,5	35	15	22	10	40	40	35	35	0,08
N, E, V, T	2,0	22	16	14	8	35	30	20	30	0,12
R	2,0	25	9	11	6	40	25	30	34	0,12
N, E, V, T	2,5	14	9	10	7	30	25	14	17	0,19
R	2,5	14	5	9	5	40	20	16	17	0,19
N, E, V, T	3	10	6	4	2	25	20	10	15	0,24
R	3	10	4	5	2,5	20	15	10	15	0,24
N, E, V	4,5	5	2	1,3	0,3	12	8	4	6	0,39
T	4,5	5	1,5	1,3	0,3	12	6	4	6	0,39
N, E, V	5,5	3	1	0,9	0,2	10	5	-	3,5	0,54
T	5,5	3,5	1	0,9	0,2	7	5	-	3,5	0,54

dimensions



connection G	B	C	D	E	F	H	H1	I	L	weight [approx. kg]	coil	type
G1/8"	28	30	42	36	16	78	92	7	40	0,32	BD.	SL002/SL003
G1/8"	28	52	55	36	16	78	92	7	40	0,60	GD.	SL002/SL003
G1/8"	28	36	47	25	16	78	114	7	40	0,44	Y1	SL002/SL003

connection G	B	C	D	E	F	H	H1	I	L	weight [approx. kg]	coil	type
G1/4"	28	30	42	36	16	78	92	7	40	0,32	BD.	SL002/SL003
G1/4"	28	52	55	36	16	78	92	7	40	0,60	GD.	SL002/SL003
G1/4"	28	36	47	25	16	78	114	7	40	0,44	Y1	SL002/SL003

connection G	B	C	D	E	F	H	H1	I	L	weight [approx. kg]	coil	type
G3/8"	26	30	42	36	16	76	90	10	46	0,37	BD.	SL002/SL003
G3/8"	26	52	55	36	16	76	90	10	46	0,65	GD.	SL002/SL003
G3/8"	26	36	47	25	16	76	112	10	46	0,49	Y1	SL002/SL003

connection G	B	C	D	E	F	H	H1	I	L	weight [approx. kg]	coil	type
G1/2"	26	30	42	36	16	76	90	10	58	0,37	BD.	SL002/SL003
G1/2"	26	52	55	36	16	76	90	10	58	0,65	GD.	SL002/SL003
G1/2"	26	36	47	25	16	76	112	10	58	0,49	Y1	SL002/SL003

illustrations are non-binding
all designs, configurations, measurements and materials are subject to change without prior notice