DATA SHEET

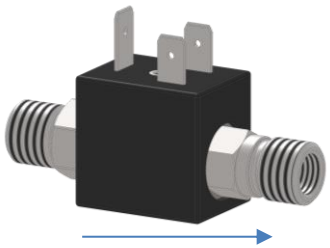
Type 3913 Solenoid Valve

CE

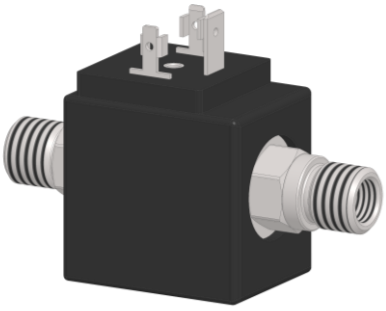
Application

Solenoid valve for liquid or gaseous application, for compact installation in electronic-controlled systems, pharmaceutical and food industry applications, filling operation or on / off applications.

Solenoid valve, low power consumption, direct-acting, on-off, spring-loaded, solenoid-operated, two-position linear valve. Different nominal signals and fluid connections allows the solenoid valve to be optimally adapted for each specific task. Two sizes, type 3913-6 and 3913-7, covering different seat diameters.



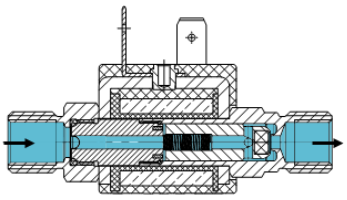
Device version 3913-6



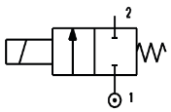
Device version 3913-7

Standard features

- 2/2-way normally closed solenoid valve with K_{VS} 0.038, 0.13, 0.17, 0.25, 0.39 and 0.44
- Nominal signal 12, 24, 115 V DC and 12, 24, 48 and 230 V AC
- Power 1.3, 7.5, 10 and 20.5 W depending on maximum differential pressure and seat bore diameter
- Maximum allowed differential pressure up to 90 bar, more available on request
- Admissible ambient temperature -20°C to +50°C
- Stainless steel or brass version
- Corrosion-resistant coils, with standard degree of protection IP 65 (with suitable connector)
- Standard industrial connector according to DIN/EN 175301-803, Form A or B depending of the seat bore diameter
- High level of operational reliability due to the solidity and optimized internal axial design
- Patented dead space free design for optimized construction with no retention zones
- Short reaction time inferior to 2 milliseconds
- Large range of compatible fluids: water, distilled water, oils, beverages, gases, …



Cross sectional view



Switching diagram

Options

- Fluid connections: threaded, cannula, push-in and check valves as standard. Special connections, Filters, etc, on request
- Design of special manifolds and mounting kits with 3913 solenoid valves on request
- Additional flow meter and accessories on request

SAMSON RÉGULATION S.A.S. · 1, rue Jean Corona · 69120 Vaulx-en-Velin, France
Téléphone : +33 (0)4 72 04 75 00 · france@samsongroup.com · www.samsongroup.com

Edition January 2025

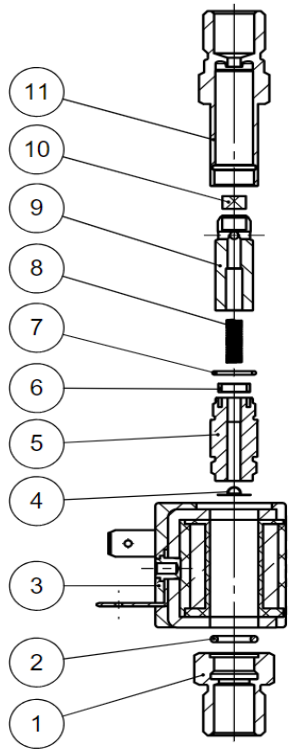
Function

Type 3913 is a direct-acting normally closed 2/2 solenoid valve with on/off function. There are two sizes, 3913-6 and 3913-7, to cover all seat sizes. The valve is actuated by the magnetic field of a coil (3) and returned to safety position when unpowered though the recall spring action.

The fluid flows through the inlet Fitting (1), mounted directly on the ferromagnetic fixed core (5), to the moveable Plug (9). The Plug (9) is pressed to the body's seat due to the force of the spring (8). The seal of the Plug (10) ensures the integral tightness of the valve.

When the coil is energized, the magnetic force moves the Plug (9) to its open position against the fixed core (5). This movement lifts the Plug seal (10) from the body's seat and opens the valve.

The body (11) and inlet fitting (1) are designed with various fluidic connections permitting any mounting option required.



1. Fitting
2. O-ring
3. Coil
4. Filter (Option)
5. Core
6. Shading ring
7. O-ring
8. Spring
9. Plug
10. Plug's seal
11. Body

Product configuration:

Product configuration is available on www.fluidcontrol.samson.fr

Technical Data

General data		
Design		Coaxial / Inline solenoid valve
Degree of protection		IP 50 without connector
		IP 65 with connector *
Conformity		CE
Material	Coil	Device version 3913-6: PA6 Device version 3913-7: PET
	Body	Stainless-steel or Brass
	Seal	EPDM (NSF51) or FKM
	Spring	Stainless steel
Isolation class of the coil		F (155°C) for 3913-6
		H (180°C) for 3913-7
Ambient temperature		-20°C to +50°C
Mounting position		Any
Switching cycles		Device version 3913-6: $\geq 2 \times 10^7$ (With air) Device Version 3913-7: $\geq 1 \times 10^7$ (With air)
Bursting pressure		> 250 Bar
Operating pressure		Max. 90 Bars for Stainless steel, max. 42 bar for brass**

* Higher IP protection with dedicated connector available on request
** More on request

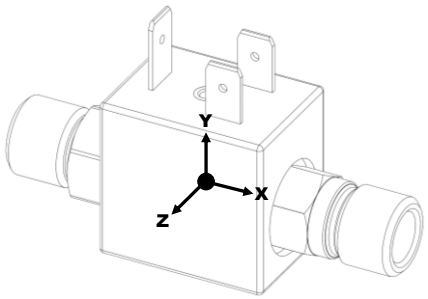
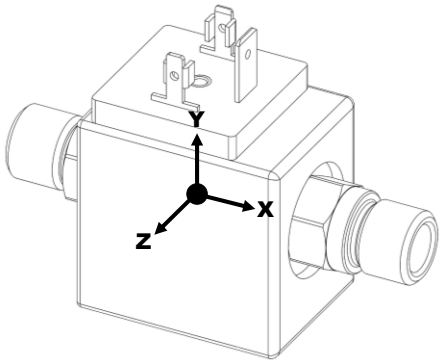
Electric data										
Direct current										
Nominal signal		12 V DC		24 V DC			115 V DC			
Max overvoltage		10% of nominal Voltage								
Steady-state consumption	Power (W)	7.5	20.5	7.5	10	20.5	1.3	7.5	10	20.5
	Current (A)	0.625	1.708	0.313	0.417	0.854	0.011	0.065	0.087	0.178
Alternating current										
Nominal signal 50/60 Hz		24 V AC		48 V AC			230 V AC			
Max overvoltage		10% of nominal Voltage								
Apparent power (VA)		3.2	28.8	15.0	23.0	27.8	3.2	16.8	23.9	28.5
Duty cycle		100% ED								

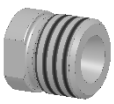
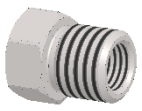
Flow coefficient (Kvs) with water at +20°C and ΔP= 1bar						
Size	3913-6			3913-7		
Seat diameter (DN)	1.0 mm	2.0 mm	2.8 mm	3.0 mm	4.0 mm	5.5 mm
Kvs	0.04 m^3/h	0.13 m^3/h	0.17 m^3/h	0.25 m^3/h	0.40 m^3/h	0.44 m^3/h

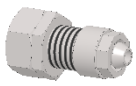
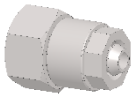
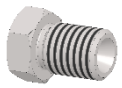
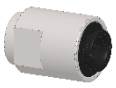
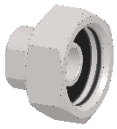
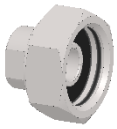
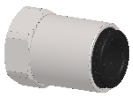
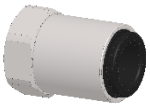
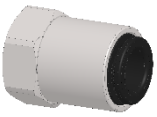
Maximum operating differential pressures with coils at 20°C in bar												
Size	3913-6						3913-7					
Seat diameter [mm]	1.0		2.0		2.8		3.0		4.0		5.5	
Power [W]	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC	DC	AC
1.3	-	42	-	-	-	-	-	-	-	-	-	-
7.5	90*	90*	18.5	35.5	6	13.5	-	-	-	-	-	-
10	90*	90*	22	40	8	15.7	-	-	-	-	-	-
20.5	-	-	-	-	-	-	31	24	15	13.3	5.3	5.8

** Max. 90 bar for stainless steel, max. 42 bar for brass. Higher pressures on request*

Dimensions (in mm)

Type 3913-6		Type 3913-7	
			
X	29.5 mm (+ variable according to fluid connection, see table below)	X	39 mm (+ variable according to fluid connection, see table below)
Y	27.8 mm connector base 40.3 mm connector top	Y	42 mm connector base 54 mm connector top
Z	22 mm	Z	30 mm

Fluid connection dimensions					
Type	**Inside connection**	**Outside connection**	**Material**	**Length (mm)**	**Scheme**
Type 000 - Without	None	G 1/8"	Stainless steel	11.7	
Type 010	Conical	G 1/2"	Stainless steel	24.5	
Type 030	G 1/4"	G 3/8"	Stainless steel, Brass	19.0	
Type 031	Conical	G 3/8"	Stainless steel	17.0	
Type 040	G 1/8"	G1/4"	Stainless steel, Brass	17.0	

Type	Inside connection	Outside connection	Material	Length	Scheme
Type 100	None	Tube for 6mm tube and cap nut, Long thread	Stainless steel, Brass	34.2	
Type 120	None	Tube for 6mm tube and cap nut	Stainless steel, Brass	20.2	
Type 130	Conical	G 1/4″	Stainless steel	24.0	
Type 160	Push in for tube 6mm	G 3/8″	Stainless steel, brass	21.0	
Type 220	G 1/2" collar nut	None	Stainless steel, Brass	19.0	
Type 230	Conical + G5/8″ collar nut	None	Stainless steel, Brass	19.0	
Type 280	Push-in for tube 10mm	None	Stainless steel	27.1	
Type 281	Push-in for tube 3/8″	None	Stainless steel	28.9	
Type 290	Push-in for tube 8mm	None	Stainless steel	24.1	
Type 990	G3/4″ collar nut	None	Stainless steel	19.0	

Spare Parts and accessories

Spare parts for type 3913 Solenoid valve	
Designation	**Order number**
Coil for type 6 - DIN EN 175301-803 form B – 10W – 115 V DC / 230 V AC – Isolation class F	8845-9001
Coil for type 6 - DIN EN 175301-803 form B – 1.3W – 115 V DC / 230 V AC - Isolation class F	8845-9002
Coil for type 6 - DIN EN 175301-803 form B – 7.5W – 115 V DC / 230 V AC - Isolation class F	8845-9003
Coil for type 6 - DIN EN 175301-803 form B – 10W – 24 V DC / 48 V AC - Isolation class F	8845-9004
Coil for type 6 - DIN EN 175301-803 form B – 7.5W – 24 V DC / 48 V AC - Isolation class F	8845-9005
Coil for type 6 - DIN EN 175301-803 form B – 7.5W – 12 V DC / 24 V AC - Isolation class F	8845-9006
Coil for type 7 - DIN EN 175301-803 form A – 20.5W – 115 V DC / 230 V AC - Isolation class H	8845-9009
Coil for type 7 - DIN EN 175301-803 form A – 20.5W – 24 V DC / 48 V AC - Isolation class H	8845-9010
Coil for type 7 - DIN EN 175301-803 form A – 20.5W – 12 V DC / 24 V AC - Isolation class H	8845-9011
Rectangular connector form B with seal for Type 6 – without cable – with locking screw	8831-9006
Rectangular connector form A with seal for Type 7 – without cable – with locking screw	8831-9007
Rectangular connector form B with seal for Type 6 – with 1.5m cable & Schuko plug (CEE 7/7)	8831-9008
Rectangular connector form B with LED & seal for Type 6 – with 1.5m cable & Schuko plug (CEE 7/7)	8831-9015
Filter for type 6 – Stainless steel 1.4301 – 0.125mm mesh	0559-0016
Filter for type 7 – Stainless steel 1.4301 – 0.125mm mesh	0559-0017

Accessories	
Designation	**Order number**
Flowmeter – MVQ seals – 3.0-30 L/min flow rate – 24 V DC – 50% ED	005970
Support bracket, 1.5mm thick - 1.4301 - 2x M4 diagonal, 24x24mm	1139-4365-173

SAMSON RÉGULATION S.A.S. · 1, rue Jean Corona · 69120 Vaulx-en-Velin, France
Téléphone : +33 (0)4 72 04 75 00 · france@samsongroup.com · www.samsongroup.com