ASCO SOLENOID VALVES

direct drive

Fittings

Description

A solenoid valve is an electromechanically operated valve. The valve is controlled by an electric current through a solenoid: in case of a two-port valve the flow is switched on or off; in case of a three-port valve, the outflow is switched between the two outlet ports. Multiple solenoid valves can be placed together on a manifold. Solenoid valves are the most frequently used control elements in fluidics. Their tasks are to shut off, release, dose, distribute or mix fluids. They are found in many application areas. Solenoids offer fast and safe switching, high reliability, long service life, good medium compatibility of the materials used, low control power and compact design. Solenoid valves are also characterized by how they operate. A small solenoid can generate a limited force. If that force is sufficient to open and close the valve, then a direct acting solenoid valve is possible.

Flowrate

The flow rate is indicated by the flow factor Kv, which represents the quantity of water, expressed in m/h, that flows through the solenoid valve with a pressure drop of 1 bar and a temperature between 5 °C and 30 °C (Standard VDI/VDE2173)

Response time

The time requested to pass from fully open to fully closed or vice versa, changes according different parameters. In particular, the voltage value, the type of fluids, the pressure, the valve, its mobile parts dimensions and the operating system are all factors that affect the response time. For the valves of the “L” series, the response time is about few tens of milliseconds for direct acting valves and hundreds (in some cases thousands) of milliseconds for pilot operated valves.

Specifications

- for use with non-aggressive clean liquids and gasses compatible with the used materials
- available versions:
  - brass body also available in stainless steel
  - sealing and diaphragm depending on different parameters such as temperature and controlled fluids
  - standard gas female threaded ports (ISO 228) or for sub-base mounting.
  - 2/2 of 3/2, NO or NC
- max viscosity: 35 mm²/s
- liquid temperature: according table

- voltages:
  - standard 24-11-220-230 Volt, 50 Hz and 12-24VDC
  - other voltages and frequencies on request
  - tolerance: +10%/-15% for AC, +10%/-5% for DC
- coils according 73/23/EC
- duty: 100% ED
- seals: NBR, Viton® FPM, PTFE, EPDM or VMQ
- pressure: vacuum up to 30 bar

Capacity Sirai™ solenoid valves for neutral liquid and gaseous media
2/2 NC solenoid valves direct acting

PORT SIZE	ORFICE SIZE mm	BODY	SEALS	DIFFERENTIAL PRESSURE					PS (BAR)	Kv (m^3/h)	MEDIUM TEMPERATURE		ABSORBED POWER			VALVE	COIL	NOTES
				ķ P MIN	ķ P MAX								AC		DC (W)			
					GASES		LIQUIDS						VA	VA				
					AC	DC	AC	DC			min	max	INRUSH	HOLDING				
G 1/8	1,2	O	FPM	0	28	20	28	20	50	0,05	-10	130	12	6	5,5	L172V03	ZB10A	A - B
	1,6	O	NBR	0	30	20	30	20	30	0,09	-10	90	16	10	6	L177B04	Z610A	-
	1,6	O	FPM	0	30	20	30	20	30	0,09	0	130	16	10	6	L177V04	Z610A	-
	1,6	O	FPM	0	30	30	30	30	40	0,09	0	130	23	14	9	L120V02	ZA30A	C - D
	1,6	N	FPM	0	30	30	30	30	40	0,09	0	130	23	14	9	L120V04	ZA30A	C - E
	1,6	O	FPM	0	20	12	20	12	50	0,08	-10	130	12	6	5,5	L172V03	ZB10A	A - B
	2	O	FPM	0	15	6	15	6	50	0,11	-10	130	12	6	5,5	L172V03	ZB10A	A - B
	2,3	O	FPM	0	20	16	20	16	40	0,15	0	130	23	14	9	L120V02	ZA30A	C - F
	2,3	O	NBR	0	13	6	12	5	30	0,14	-10	90	16	10	6	L177B04	Z610A	G
	2,3	O	FPM	0	13	6	12	5	30	0,14	0	130	16	10	6	L177V04	Z610A	G
	2,3	N	FPM	0	20	16	20	16	40	0,15	0	130	23	14	9	L120V04	ZA30A	C - E
	2,4	O	FPM	0	12	4	12	4	50	0,13	-10	130	12	6	5,5	L172V03	ZB10A	A - B
	3,2	O	NBR	0	7	1,4	6	1,2	30	0,25	-10	90	16	10	6	L177B04	Z610A	-
	3,2	O	FPM	0	7	1,4	6	1,2	30	0,25	0	130	16	10	6	L177V04	Z610A	H - I
G 1/4	1,6	O	FPM	0	30	30	30	30	40	0,09	0	130	23	14	9	L121V02	ZA30A	C
	2,3	O	FPM	0	20	16	20	16	40	0,15	0	130	23	14	9	L121V02	ZA30A	C
	2,3	O	EPDM	0	20	16	20	16	40	0,15	-10	140	23	14	9	L121D02	ZA30A	C
	2,3	N	FPM	0	20	16	20	16	40	0,15	0	130	23	14	9	L121V05	ZA30A	C - E
	3	O	NBR	0	7	-	7	-	30	0,25	-10	90	16	10	-	L171B13	Z610A	-
	3	O	FPM	0	7	-	7	-	30	0,25	0	130	16	10	-	L171V13	Z610A	-
	3	O	NBR	0	-	3,5	-	3,5	30	0,25	-10	90	-	-	6	L171B14	Z610A	-
	3	O	FPM	0	-	3,5	-	3,5	30	0,25	0	130	-	-	6	L171V14	Z610A	-
	3,2	O	NBR	0	12	4	12	4	40	0,3	-10	90	23	14	9	L121B02	ZA30A	C
	3,2	O	NBR	0	-	7	-	7	40	0,3	-10	90	-	-	12	L121B02	ZA30E	-
	3,2	O	FPM	0	12	4	12	4	40	0,3	0	130	23	14	9	L121V02	ZA30A	C
	3,2	O	FPM	0	-	7	-	7	40	0,3	0	130	-	-	12	L121V02	ZA30E	-
	3,2	N	FPM	0	12	4	12	4	40	0,3	0	130	23	14	9	L121V05	ZA30A	C - E
	3,2	N	FPM	0	-	7	-	7	40	0,3	0	130	-	-	12	L121V05	ZA30E	E

Capacity Sirai™ solenoid valves for neutral liquid and gaseous media
2/2 NC solenoid valves direct acting

PORT SIZE	ORFICE SIZE mm	BODY	SEALS	DIFFERENTIAL PRESSURE					PS (BAR)	Kv (m³/h)	MEDIUM TEMPERATURE		ABSORBED POWER			VALVE	COIL	NOTES
				ḳ P MIN	ḳ P MAX								AC		DC (W)			
					GASES		LIQUIDS				min	max	VA	VA				
					AC	DC	AC	DC					INRUSH	HOLDING				
G 1/4	4,5	O	NBR	0	2,5	-	2,5	-	30	0,4	-10	90	16	10	-	L171B13	Z610A	-
	4,5	O	FPM	0	2,5	-	2,5	-	30	0,4	0	130	16	10	-	L171V13	Z610A	-
	4,5	O	NBR	0	6	2	6	2	40	0,4	-10	90	23	14	9	L121B02	ZA30A	-
	4,5	O	NBR	0	-	3	-	3	40	0,4	-10	90	-	-	12	L121B02	ZA30E	-
	4,5	O	FPM	0	6	2	6	2	40	0,4	0	130	23	14	9	L121V02	ZA30A	-
	4,5	O	FPM	0	-	3	-	3	40	0,4	0	130	-	-	12	L121V02	ZA30E	-
	4,5	O	FPM	0	6	2	6	2	40	0,4	-10	140	23	14	9	L121D02	ZA30A	-
	4,5	O	FPM	0	-	3	-	3	40	0,4	-10	140	-	-	12	L121D02	ZA30E	-
	4,5	O	NBR	0	8	4	8	4	20	0,5	-10	90	44	24	13	L139B08	Z130A	-
	4,5	O	FPM	0	8	4	8	4	20	0,5	0	130	44	24	13	L139V08	Z130A	-
	6	O	NBR	0	1	-	1	-	30	0,65	-10	90	16	10	-	L171B13	Z610A	-
	6	O	FPM	0	1	-	1	-	30	0,65	0	130	16	10	-	L171V13	Z610A	-
	6	O	NBR	0	-	0,3	-	0,3	30	0,65	-10	90	-	-	6	L171B14	Z610A	-
	6	O	FPM	0	-	0,3	-	0,3	30	0,65	0	130	-	-	6	L171V14	Z610A	-
	6	O	NBR	0	3,5	1,5	3,5	1,5	20	0,7	-10	90	44	24	13	L139B08	Z130A	-
	6	O	FPM	0	3,5	1,5	3,5	1,5	20	0,7	0	130	44	24	13	L139V08	Z130A	-
G 1/2	12	O	FPM	0	0,3	-	0,3	-	2	2	0	130	23	14	-	L113V22	ZA30A	-
	12	O	FPM	0	-	0,2	-	0,2	2	2	0	130	-	-	9	L113V23	ZA30A	L
G 3/4	19	O	NBR	0	0,2	-	0,2	-	2	4,8	-10	90	44	24	-	L113B20	Z130A	-
-	2,3	O	FPM	0	20	16	20	16	40	0,15	0	130	23	14	9	L134V05	ZA30A	-

PS = max pressure O = brass N = nickel plated brass