Directly operated solenoid valves Series A

2/2 way, 3/2 way
monostable, bistable (with magnetic memory)
Ports M5, G1/8, cartridge ø4

The Series A solenoid valves are of the directly operated type and can be used with dry or lubricated air.
They are available in the 2/2 and 3/2-way versions with normally closed (N.C.) or normally open (N.O.) operations.
They are also supplied in versions which differ with respect to the body type, the threaded ports and the orifice, as indicated in the tables for each type, in order to satisfy various operating and installation requirements.
The electromagnet (or solenoid) is separate and can be easily and rapidly replaced without interfering with the pressurised part of the valve.
This series of solenoid valves has different types of solenoids which can be interchanged on the same mechanical part. The choice of solenoid determines the performance of the solenoid valve (consumption and pressure).

GENERAL DATA

Construction	poppet-type
Valve group	2/2, 3/2-way / pos. N.C. or N.O.
Materials	body OT58 (nickel-plated) or technopolymer - other parts: stainless steel, NBR seals
Ports	M5, G1/8, cartridge ø4
Installation	in any position
Temperature	0 ÷ 60°C (with dry air -20°C)

PNEUMATIC DATA

Operating pressure	bar (see table)
Nominal flowrate	Qn (see table)
Nominal diameter	ø (see table)
Fluid	filtered air, without lubrication*

* If lubricated air is used, it is recommended to use ISOVG3 oil. The lubrication should never be interrupted.

CODING OF SERIES A SOLENOID VALVES

A331-0C2-U77

SERIES

BODY DESIGN
1 = base (24 x 24 mm) interface rotatable through 360°
2 = base (24 x 24 mm) fixed interface
3 = threaded body
4 = rapid exhaust body
5 = base with ISO standard interface, fixed body in technopolymer
6 = base (16 x 16 mm) interface rotatable through 360°
A = single manifold
B = 2-part manifold
C = 3-part manifold
D = 4-part manifold
E = 5-part manifold
F = 6-part manifold
G = 7-part manifold
H = 8-part manifold
K = 9-part manifold
L = 10-part manifold
M = 11-part manifold
N = 12-part manifold
P = 13-part manifold
R = 14-part manifold
S = 15-part manifold

N° OF PORTS
2 = 2 way
3 = 3 way

FUNCTION
1 = NC (normally closed)
2 = NO (normally open)
3 = NO in line

SOLENOID VOLTAGE

		U70	G70	A80	H80	G90
B	24V AC 50/60Hz	-	-	5VA	5,5VA	-
C	48V AC 50/60Hz	-	-	-	5,5VA	-
D	110V AC 50/60Hz	-	-	5VA	5,5VA	-
E	230V AC 50/60Hz	-	-	5VA	5,5VA	-
F	380V AC 50/60Hz	7VA	7VA	-	-	-
H	24V 50/60Hz	3,5VA	3,5VA	-	-	-
	12V D.C.	3,1W	3,1W	-	-	-
K	110V AC 50/60Hz	4,3VA	4,3VA	-	-	-
	125V AC 50/60Hz	5,5VA	5,5VA	-	-	-
K1*	110V AC 50/60Hz	4,3VA	4,3VA	-	-	-
	125V AC 50/60Hz	5,5VA	5,5VA	-	-	-
J	230V AC 50/60Hz	3,5VA	3,5VA	-	-	-
	240V AC 50/60Hz	4VA	4VA	-	-	-
1	6V DC	5,1W	5,1W	-	-	-
2	12V DC	5W	5W	-	-	-
3	24V DC	5W	5W	4W	5,5W	4/2W
4	48V DC	5,3W	5,3W	4W	-	-
6	110V DC	4,2W	4,2W	-	-	-
7	24V DC	3,1W	3,1W	-	-	-
	48V AC 50/60 Hz	3,5VA	3,5VA	-	-	-
71*	24V DC	3,1W	3,1W	-	-	-
	48V AC 50/60Hz	3,5VA	3,5VA	-	-	-
9	48V DC	3,1W	3,1W	-	-	-
10	110V DC	3,2W	3,2W	-	-	-

*Only for valve models N.O. in line

SOLENOID DIMENSIONS
7 = 22 x 22
8 = 30 x 30
9 = 22 x 58

PORTS

	1	2	3
0	M5	M5	M5
1	G1/8	G1/8	M5
3	M5	G1/8 male	M5
4	M5	G1/8 male (with manual override)	M5
A	rotatable O-Ring interface		M5
B	fixed O-Ring interface		M5
C	cartridge ø4 (only manifold)		M5

ENCAPSULATING MATERIAL
G = nylon
U = PET
A8 = PPS
H8 = PA6 VO

BODY MATERIAL
2 = OT58/Aluminium
3 = technopolymer

NOMINAL DIAMETER
C = ø1,5 D = ø2 E = ø2,5

Functioning 2/2

For vacuum applications connect the vacuum in "2"

N.C.

Mod.	Solenoids of 3 W working pressure (bar) min	max	Solenoids of 4-5 W working pressure (bar) min	max
A321-1C2	-0,9	8	-0,9	15
A321-0C2	-0,9	8	-0,9	15
A321-1D2	-0,9	4	-0,9	9
A321-1E2	-0,9	1	-0,9	6

N.O.

Mod.	Solenoids of 3 W working pressure (bar) min	max	Solenoids of 4-5 W working pressure (bar) min	max
A322-0C2	2	10	-0,9	10
A322-1C2	2	10	-0,9	10

Functioning 3/2

For vacuum applications connect the vacuum in "1"

N.C.

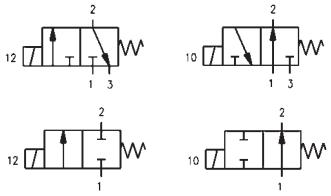
Mod.	Solenoids of 3 W working pressure (bar) min	max	Solenoids of 4-5 W working pressure (bar) min	max
A331-1C2	2	10	-0,9	10
A331-0C2	2	10	-0,9	10
AA31-0C2	2	10	-0,9	10
AA31-CC2	2	10	-0,9	10
A331-3C2	2	10	-0,9	10
A331-4C2	2	10	-0,9	10
A631-AC2	2	10	-0,9	10
A231-BC2	2	10	-0,9	10
A131-AC2	2	10	-0,9	10
A431-1C2	2	10	2	10
A531-BC2	2	10	-0,9	10

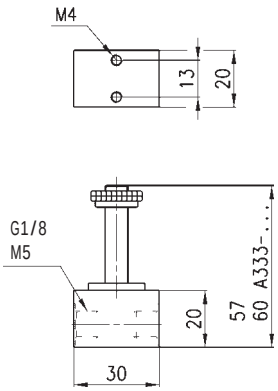
N.O.

Mod.	Solenoids of 3 W working pressure (bar) min	max	Solenoids of 4-5 W working pressure (bar) min	max
A332-1C2	-0,9	6	-0,9	6
A332-0C2	-0,9	6	-0,9	6
A333-0C2	0	10		
A333-1C2	0	10		
AA31-0C3	0	8		
AA33-0C2	0	10		
A333-CC2	0	10		
AA33-0C3	0	8		
AA31-CC3	0	8		
AA31-CC3	0	8		

2/2 and 3/2-way solenoid valves Mod. A32... and Mod. A33..

The 2/2 and 3/2-way solenoid valves, for individual assembly, are available for normally closed or normally open operation. The ports on the body may be G1/8 or M5, while the outlet which is provided is always M5.



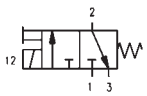


Mod.	Thread port	Function	orifice Ø mm	Qn Nl/min
A321-0C2-000	M5	2/2 N.C.	1.5	60
A321-1C2-000	G1/8	2/2 N.C.	1.5	60
A321-1D2-000	G1/8	2/2 N.C.	2	100
A321-1E2-000	G1/8	2/2 N.C.	2.5	100
A322-0C2-000	M5	2/2 N.O.	1.8	140
A322-1C2-000	G1/8	2/2 N.O.	1.8	96
A331-0C2-000	M5	3/2 N.C.	1.5	60
A331-1C2-000	G1/8	3/2 N.C.	1.5	66
A332-0C2-000	M5	3/2 N.O.	1.5	45
A332-1C2-000	G1/8	3/2 N.O.	1.5	50
A333-0C2-000*	M5	3/2 N.O. in line	1.5	
A333-1C2-000	G1/8	3/2 N.O in line	1.5	

***=** For the use of N.O. valves in line, use the coil model U771 or U7K1 or G771 or G7H1.

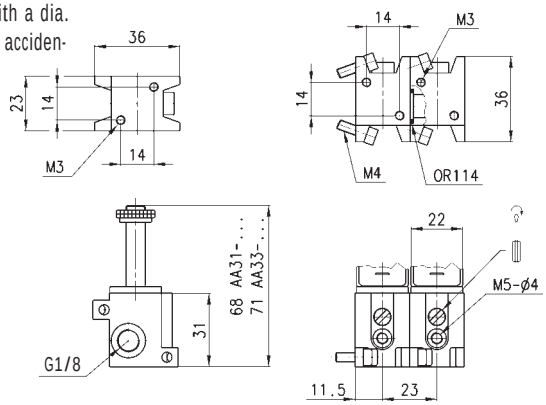
3/2-way solenoid valve 3/2 Mod. AA31...

The 3/2-way solenoid valves for manifold assembly are available in the N.C. (normally closed) version, with 1/8" ports at the manifold inlet, and may be used with M5 threading or with a dia. 4 cartridge. These solenoid valves are provided with a manual override protected against accidental operation and may be bistable or monostable.
The body is supplied complete with O-ring and screws.



AA** - OC3

AA** - OC2

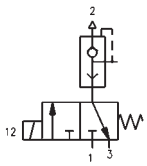


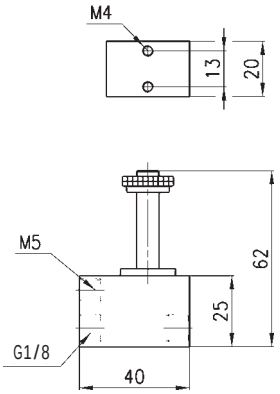
Mod.	Inlet/outlet	Function	Orifice Ø mm	Int. Man. Bistable	Qn Nl/min
AA31-0C2-000*	G1/8 M5	3/2 N.C.	1.5	yes	62
AA31-CC2-000*	G1/8 ø4	3/2 N.C.	1.5	yes	62
AA31-0C3-000*	G1/8 M5	3/2 N.C.	1.5	yes	62
AA33-0C2-000*	G1/8 M5	3/2 N.O. in line	1.5	no	62
AA33-CC2-000*	G1/8 ø4	3/2 N.O. in line	1.5	no	62
AA33-0C3-000*	G1/8 M5	3/2 N.O. in line	1.5	no	62
AA31-CC3-000*	G1/8 ø4	3/2 N.C.	1.5	yes	62
AA33-CC3-000*	G1/8 ø4	3/2 N.O. in line	1.5	no	62

***choose solenoid required.**

3/2-way solenoid valve Mod. A43...

The 3/2-way NC solenoid valve, with G1/8 ports, incorporates a rapid exhaust valve.
This feature allows not only the dimensions to be reduced, but also the exhaust time to be reduced.
It is particularly suitable for operating small single-acting cylinders and pressurising small compressed air containers.



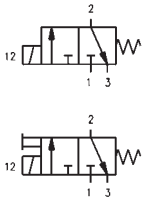


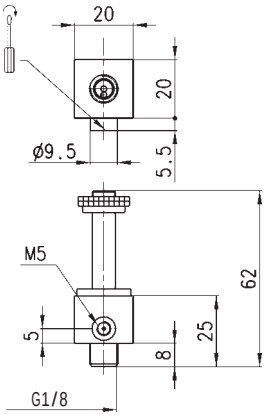
Mod.	Thread port	Function	Orifice ø mm	Qn Nl/min
A431-1C2-000*	G1/8	N.C.	1.5	70

o*choose solenoid required

3/2-way solenoid valve Mod. A33...

The 3/2-way NC solenoid valve has been designed principally for two very important applications: the actuation of small single-acting cylinders and the operation of pneumatic valves with very low operating pressures.
The body has an outlet with a G1/8 male thread which can be screwed directly onto the component to be operated. The inlet port is MS threaded.



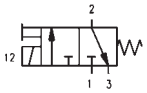


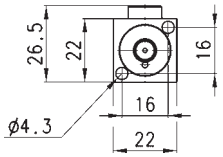
Mod.	Inlet/outlet	Function	Orifice ø mm	Int. Man. Bistable	Qn Nl/min
A331-3C2-000*	M5 / G1/8	N.C.	1.5	no	55
A331-4C2-000*	M5 / G1/8	N.C.	1.5	yes	55

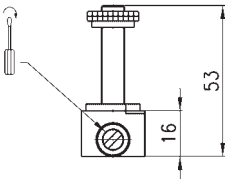
*choose solenoid required.

3/2-way solenoid valve Mod. A63...

only on request.
The 3/2-way NC solenoid valve, which has a rotating interface, is designed to be mounted directly onto machine parts by two screws.
A sealing action is ensured by two concentric O-rings which allow the body to be adjusted through 360°.
These solenoid valves are provided with a manual override for bistable or monostable operation.





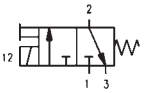


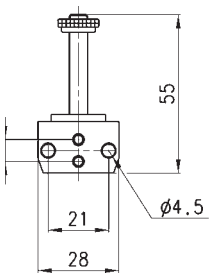
Mod.	Interface	Function	Orifice ø mm	Qn Nl/min
A631-AC2-000*	OR	N.C.	1.5	70

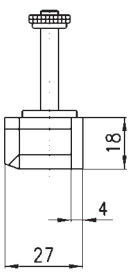
*choose solenoid required.

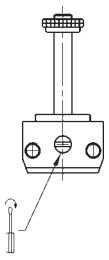
3/2-way solenoid valve Mod. A53...

The 3/2-way N.C. solenoid valve, which has an interface fixed at 90°C relative to the axis, has been designed so as to be mounted on valves with an ISO interface.
The interface is interchangeable with all ISO version.
These solenoid valves are equipped with a manual override for bistable and monostable operation.
Exists only with plastic body.









Mod.	Interface	Function	Orifice ø mm	Qn Nl/min
A531-BC2-000*	OR	N.C.	1.5	70

*choose solenoid required.