

Indirectly controlled soft seal spool valves
Solenoid actuated
Port size G 1/4, 1/4" NPT
NAMUR Interface
Operating pressure: 29 to 116 psi (2 to 8 bar)



Approval depends on
magnetic system

Description

NAMUR Interface for filtered, non-lubricated and dry compressed air*
 Operation: solenoid, indirectly controlled
 Mounting position: as required
 Flow direction: fixed
 Nominal size: 0.24 inch
 Connection 1: G 1/4
 Connection 3 and 5: G 1/8
 Electrical connection: see solenoid table

Temperatures:

Valve: -13°F to 122°F (-25 °C to +50 °C),
 Solenoid: see solenoid table
 ** Oil recommendation: Shell Hydrol DO 32, ESSO Febis K 32 (as of July 1992) or comparable oils with DVI-values < 8 (DIN 53521) and ISO viscosity class 32-46 (DIN 51519).

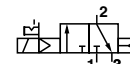


Material

Body: Aluminum anodized
 Pilot flange: PBT
 Seals: NBR

Features

For single and double operated actuators
 Exhaust air recirculation (3 way function)
 Crossover-free switching, switch-over function guaranteed even with small cross section air supply
 In event of power failure, valve switches to original position (spring-loaded with monostable design)
 Lockable manual override
 Compact design
 Simple design of soft seal spool system
 Easily interchangeable solenoid

Technical data

Symbol	Port size	Function	Actuation/Return	Operating pressure (bar)	Flow (l/min)	Model*
	G 1/4	3/2	Solenoid/air spring	2 ... 8	750	9710000*
	1/4 NPT	3/2	Solenoid/air spring	2 ... 8	750	9710010*
	G 1/4	5/2	Solenoid/air spring	2 ... 8	750	9711000*
	1/4 NPT	5/2	Solenoid/air spring	2 ... 8	750	9711010*
	G 1/4	5/3 APB	Solenoid/Solenoid, APB	2 ... 8	500	9712000*
	1/4 NPT	5/3 APB	Solenoid/Solenoid, APB	2 ... 8	500	9712010*




*1) Order example: To order a series 97100 Inline valve, 3/2 function, G 1/4" port with a 24 Vdc, IP65, DIN Form B coil, Model Number: 9710000305002400.

Valve model code 9710000 + Coil code 305002400 = Model Number: 9710000305002400.

To order the valve only, replace the * after the Valve model code from the table with 9 zero's, i.e. 9710000000000000.

The solenoid valves are used in ATEX- zones, resulting from Protection Class Atex-category of solenoids(see table of solenoids).

Solenoid operators


	Power consumption		Rated current		Ex-Protection	Protection Class (ATEX- Category) IP-Protection According to EN60529	Temperature Ambient/ Medium (°C)	Order separate	Coil code
	24 V DC (W)	230 V AC (VA)	24 V DC (mA)	230 V AC (mA)					
	1.8	-	70	-	-	IP 65 (Connector DIN EN 175301-803, Form B) *6)	-15 ... +50	0000000305002400	305002400
	0.7	2.0 *2)	29	-	-	IP 65 (Connector DIN EN 175301-803, Form A) *6)	-15 ... +50	0000000303402400	303402400
			4	-	-			0000000303423050	303423050
	2.7	-	115	-	II2G II2D	Ex mb IIC T5 Gb Ex mb tb T95°C Db IP 65 (with 3 m cable)	-20 ... +50	0000000306202400	306202400
								-	2.1

Standard voltages 24 V d.c., 230 V a.c., other voltages on request.

*2) Valves can be operated with DC only. For 230V AC application please use 206V DC coil together with rectifier plug 0663303

*6) Connector is not scope of delivery, see table »Accessories«

For intrinsically safe circuits, Protection class Ex ia IIC T6/T4 (cat. II 2G)

	Nominal resistance RN Coil (Ω)	Required switching min. Current min (mA)	Rated current on RW 50 Coil (Ω)	Required switching at terminal RW 50 (V)	Temperature Ambient/ Medium (°C)	Order separate *1)	Coil code
	275	37	345	13,8	T6 -40 ... +50 T4 -40 ... +85	0000000303900000 *6)	303900000

When selecting an intrinsically safe power supply, the permissible maximum values according to the Certificate of Conformity should be taken in account.

On the other hand, the low effective inductivity and capacity can be ignored.

*6) Connector not supplied, required connector: model 0570275

Accessories

Connector DIN EN 175301-803	Silencer *1) (plastic)	Silencer (stainless steel) *1)	Exhaust guard *2)
			
0570275000000000 Form A	M/S2 (G1/4)	0014613000000000 (G 1/4)	0613422000000000 (1/4")
0663303000000000 Form A (with rectifier)	C/S2 (1/4NPT)	0613678000000000 (1/4 NPT)	
0680003000000000 Form B			

*1) For indoors use only

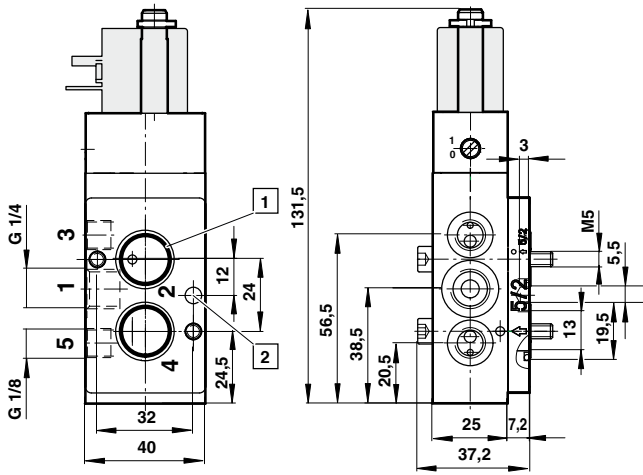
*2) For outdoors use ~ 0,2 (bar)

Approvals

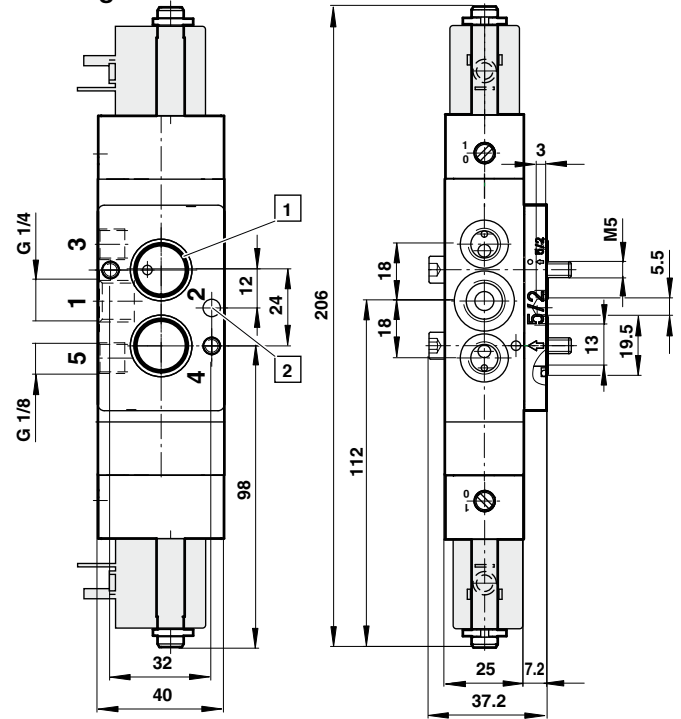
Model	Approvals ATEX	FM
306x	PTB 03 ATEX 2015 X	—
3039	PTB 03 ATEX 2134	CSA-LR 51090-4

Dimensional drawings for valves

Drawing 1 and 2 *

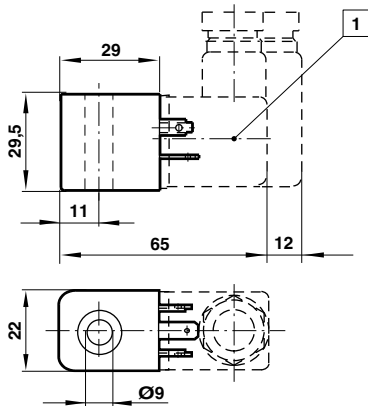


Drawing 3 *

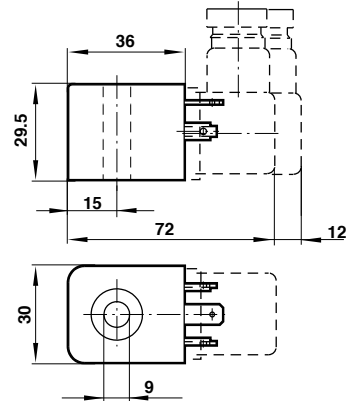


Dimensional drawings for solenoid operators

Drawing 4 *



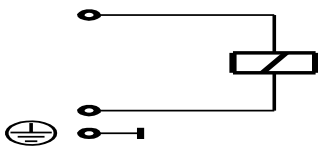
Drawing 5 *



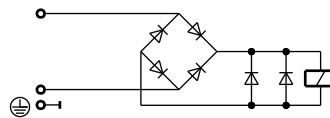
* Dimensions in mm

Circuit diagrams

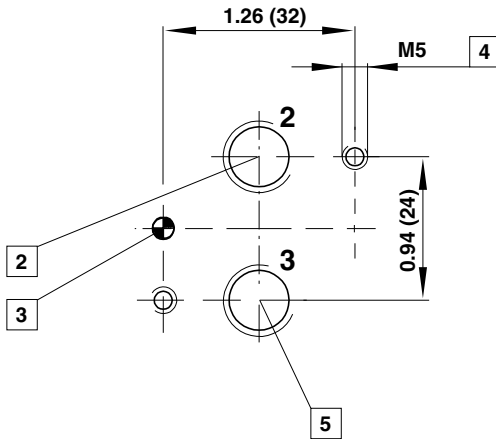
Circuit diagram 1



Circuit diagram 2



NAMUR hole pattern*



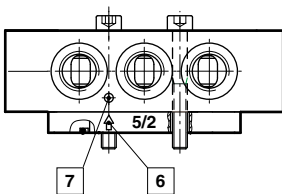
Drawing legend

- 2 Port 2 (A)
- 3 Coded screw
- 4 M5 x 10
- 5 Port 3 (R)

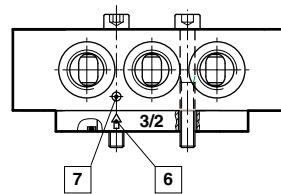
* Dimensions in inches (mm)

Conversion instructions of 5/2 into 3/2-way function

5/2-way function (original mode of supply)



3/2-way function



Drawing legend

- 6 Arrow
- 7 Marker

3/2 or 5/2-way function can be achieved by swapping enclosed adaptor plates.
 Make sure Marker and Arrow match as shown on above drawing. Original mode of supply: 5/2 function.