

3/2-WAY SOLENOID VALVE

TYPE 92



O₂ oxygene applications



DESCRIPTION

Valve type 92 is a compact 3/2-way direct acting solenoid valve for general applications with gases and liquids for low to medium pressures.

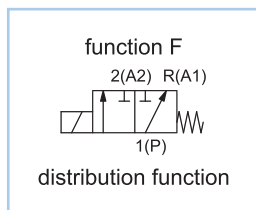
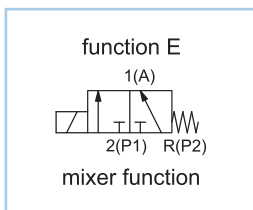
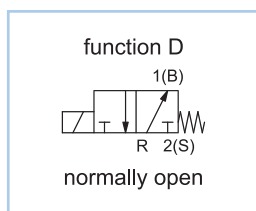
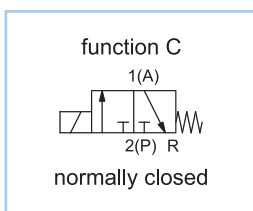
CONSTRUCTION

Body material	stainless steel
Internal parts	stainless steel
Sealing material	NBR, EPDM, FPM
Voltages	24 V DC, 24 V 50Hz, 230 V 50Hz
Connections	G1/8

ON REQUEST

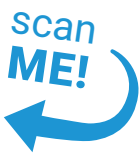
Valve for oxygene applications
 Non-standard coil voltages
 Higher ambient temperature range
 Non-standard equipment
 Manual override

VARIANTS



SWITCHING PRESSURE

Orifice in mm	Normally closed in bar	Normally open in bar
1,0	16,0	5,8
1,2	15,0	5,8
1,5	8,0	5,4
2,0	4,0	4,1
2,5	3,0	-
See details on the website		



DETAILED INFORMATION

General	
type of construction	3/2-way poppet valve, normally closed NC or normally open NO, coil 360° rotatable
operation	electrically, on request: manual override
ports	G1/8
ambient temperature	-20°C to +50°C, higher acceptable ambient temperature range on request
fluid temperature	dependent on sealing material and coil
viscosity	max. 21 mm ² /s (cst)
material	body: AISI 303 plunger tube: AISI 430 internal parts: stainless steel sealing: see type selection
mounting	installation into fixed piping systems, by use of 2 threads M4 or fixing holes diameter 3,2 mm on the bottom side
installation	in any position, preferable vertically fixed solenoid coil
unit of supply	without connector

Electrical	
voltage	DC voltage or AC voltage
standard voltages	24 V DC, 24 V 50Hz, 230 V 50Hz
non-standard voltage on request	6 V - 200 V DC, 12 V - 240 V 50Hz or 60Hz
acceptable voltage tolerance	±10%
power consumption	see specifications at solenoid coils
coil temperature classification	temperature class F (155°C), winding class H (180°C)
duty cycle	100%, continuous operation
protection class	IP65 according DIN EN 60529 (DIN 40050) with correctly mounted connector

Pneumatic – Hydraulic	
fluid	all liquids and gases, non-aggressive to the used material
max. valve body pressure	PN 40
response time	12 - 20 ms
non-standard equipment on request	coil type with cable, coils for temperature class H (180°C), higher differential pressure, other sealing materials

CONFIGURATION & PRESSURE RANGE

Coil power consumption at 20°C			
coil type	inrush power 50Hz in VA	rated power 50Hz in VA	power DC in W
C1DA	9	5	3
C2DA	13	10	6,5
C3AA	17	13	6,3

3/2-WAY SOLENOID VALVE

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NORMALLY CLOSED VALVES

Type 92C, 3/2-way solenoid valve, normally closed, pressure at port 2 (P)									
type (order-no.)	NW DN in mm	ports	maximum differential pressure in bar						
			coil C1DA				coil C2DA		
			fluid compr. air		fluid water		fluid compr. air		
			50Hz	DC	50Hz	DC	50Hz	DC	
92C-1.1012CA-A	1,0	G1/8	9,6	9,6	6,0	6,0	-	-	
92C-1.1212CA-A	1,2	G1/8	9,0	9,0	5,5	5,5	-	-	
92C-1.1515BA-A	1,5	G1/8	3,0	3,0	2,0	2,0	-	-	
92C-1.2018BA-A	2,0	G1/8	1,6	1,6	1,6	1,6	-	-	
92C-1.2518BA-A	2,5	G1/8	1,4	1,4	1,4	1,4	-	-	
92C-1.1012FA-A	1,0	G1/8	-	-	-	-	13,0	13,0	
92C-1.1212FA-A	1,2	G1/8	-	-	-	-	11,0	11,0	
92C-1.1515FA-A	1,5	G1/8	-	-	-	-	7,0	7,0	
92C-1.2018DA-A	2,0	G1/8	-	-	-	-	3,2	3,2	
92C-1.2518DA-A	2,5	G1/8	-	-	-	-	2,5	2,5	
92C-1.1012GA-A	1,0	G1/8	-	-	-	-	-	-	
92C-1.1212GA-A	1,2	G1/8	-	-	-	-	-	-	
92C-1.1515GA-A	1,5	G1/8	-	-	-	-	-	-	
92C-1.2018FA-A	2,0	G1/8	-	-	-	-	-	-	
92C-1.2518EA-A	2,5	G1/8	-	-	-	-	-	-	

MIXER FUNCTION

Type 92E, 3/2-way solenoid valve, mixer function, input at port 2 and R										
type (order-no.)	NW DN in mm	ports	maximum differential pressure in bar						kv- value body nozzle in m ³ /h	kv- value pole nozzle in m ³ /h
			50Hz			DC				
			2(P1)		R(P2)	2(P1)		R(P2)		
-	-	G1/8	-	-	-	-	-	-	-	-

More technical data is available on request and with notification of the exact pressure values at the connections

CONFIGURATION & PRESSURE RANGE

Sealing material	Code	Fluid temperature	Applicable for
NBR (Perbunan)	B	-10°C to 80°C	neutral gases and liquids
EPDM	E	-10°C to 130°C	hot water, steam, not for oil and grease
FPM	V	-10°C to 130°C	oil, petrol, oxygen

Type 92C, 3/2-way solenoid valve, normally closed, pressure at port 2 (P)

maximum differential pressure in bar							kv-value body nozzle in m ³ /h	kv-value pole nozzle in m ³ /h
coil C2DA		coil C3AA						
fluid water		fluid compr. air		fluid water				
50Hz	DC	50Hz	DC	50Hz	DC			
-	-	-	-	-	-	0,030	0,040	
-	-	-	-	-	-	0,045	0,040	
-	-	-	-	-	-	0,082	0,060	
-	-	-	-	-	-	0,133	0,071	
-	-	-	-	-	-	0,195	0,071	
12,0	12,0	-	-	-	-	0,030	0,040	
10,0	10,0	-	-	-	-	0,045	0,040	
7,0	7,0	-	-	-	-	0,082	0,060	
3,2	3,2	-	-	-	-	0,133	0,071	
2,5	2,5	-	-	-	-	0,195	0,071	
-	-	16,0	16,0	16,0	16,0	0,030	0,040	
-	-	15,0	15,0	15,0	15,0	0,045	0,040	
-	-	8,0	8,0	8,0	8,0	0,082	0,060	
-	-	4,0	4,0	4,0	4,0	0,133	0,071	
-	-	3,0	3,0	3,0	3,0	0,195	0,071	

DISTRIBUTION FUNCTION

Type 92F, 3/2-way solenoid valve, distribution function, input at port 1

type (order-no.)	NW DN in mm	ports	maximum differential pressure in bar		kv-value body nozzle in m ³ /h	kv-value pole nozzle in m ³ /h
			50Hz	DC		
-	-	G1/8	-	-	-	-

More technical data is available on request and with notification of the exact pressure values at the connections

3/2-WAY SOLENOID VALVE

TYPE 92

CE | UK CA |  US Certified coils | O₂ oxygene applications

NORMALLY OPEN VALVES

Type 92D, 3/2-way solenoid valve, normally open, pressure at port R									
type (order-no.)	NW DN in mm	ports	maximum differential pressure in bar						
			coil C1DA				coil C2DA		
			fluid compr. air		fluid water		fluid compr. air		
			50Hz	DC	50Hz	DC	50Hz	DC	
92D-1.1012AB-A	1,0	G1/8	3,1	1,8	4,8	2,5	-	-	
92D-1.1212AB-A	1,2	G1/8	2,8	1,3	4,2	1,6	-	-	
92D-1.1515AB-A	1,5	G1/8	2,2	0,7	2,8	1,0	-	-	
92D-1.2018AB-A	2,0	G1/8	1,8	0,3	2,3	0,4	-	-	
92D-1.1012AC-A	1,0	G1/8	-	-	-	-	4,0	3,4	
92D-1.1212AC-A	1,2	G1/8	-	-	-	-	3,6	2,6	
92D-1.1515AC-A	1,5	G1/8	-	-	-	-	2,8	1,8	
92D-1.2018AC-A	2,0	G1/8	-	-	-	-	2,3	1,3	
92D-1.1012AD-A	1,0	G1/8	-	-	-	-	-	-	
92D-1.1212AD-A	1,2	G1/8	-	-	-	-	-	-	
92D-1.1515AD-A	1,5	G1/8	-	-	-	-	-	-	
92D-1.2018AD-A	2,0	G1/8	-	-	-	-	-	-	

ORDER CODE

Type 92													
order code	92	C	-	1	B	20	18	B	A	-	A	C2DA	02400

Type 92D, 3/2-way solenoid valve, normally open, pressure at port R								
maximum differential pressure in bar							kv-value body nozzle in m ³ /h	kv-value pole nozzle in m ³ /h
coil C2DA		coil C3AA						
fluid water		fluid compr. air		fluid water				
50Hz	DC	50Hz	DC	50Hz	DC			
-	-	-	-	-	-	0,030	0,040	
-	-	-	-	-	-	0,045	0,040	
-	-	-	-	-	-	0,082	0,060	
-	-	-	-	-	-	0,133	0,071	
5,8	4,8	-	-	-	-	0,030	0,040	
5,8	4,0	-	-	-	-	0,045	0,040	
2,8	2,2	-	-	-	-	0,082	0,060	
2,3	1,6	-	-	-	-	0,133	0,071	
-	-	5,3	4,2	5,8	5,8	0,030	0,040	
-	-	4,8	3,6	5,8	5,8	0,045	0,040	
-	-	4,0	3,5	5,4	4,1	0,082	0,060	
-	-	3,2	1,9	4,1	2,5	0,133	0,071	

Code decoding

type	type 92, direct operated, body and plunger tube: stainless steel
function	C = normally closed, D = normally open, E = mixer function, F = distribution function
ports	1 = G1/8
seal material	B = NBR (Perbunan), E = EPDM, V = FPM
nominal size seat	10 = 1,0 mm, 12 = 1,2 mm, 15 = 1,5 mm, 20 = 2,0 mm, 25 = 2,5 mm
nominal size pole	12 = 1,2 mm, 15 = 1,5 mm, 18 = 1,8 mm
external plunger spring	Depends to the valve type, see specifications of the particular type
internal plunger spring	A = 3/2 NC, B = 3/2 NO
short circuit ring	A = copper short circuit ring, X = without short circuit ring
coil type	see specifications of the particular coil
supply voltage	always 5-digits, see code for standard voltage

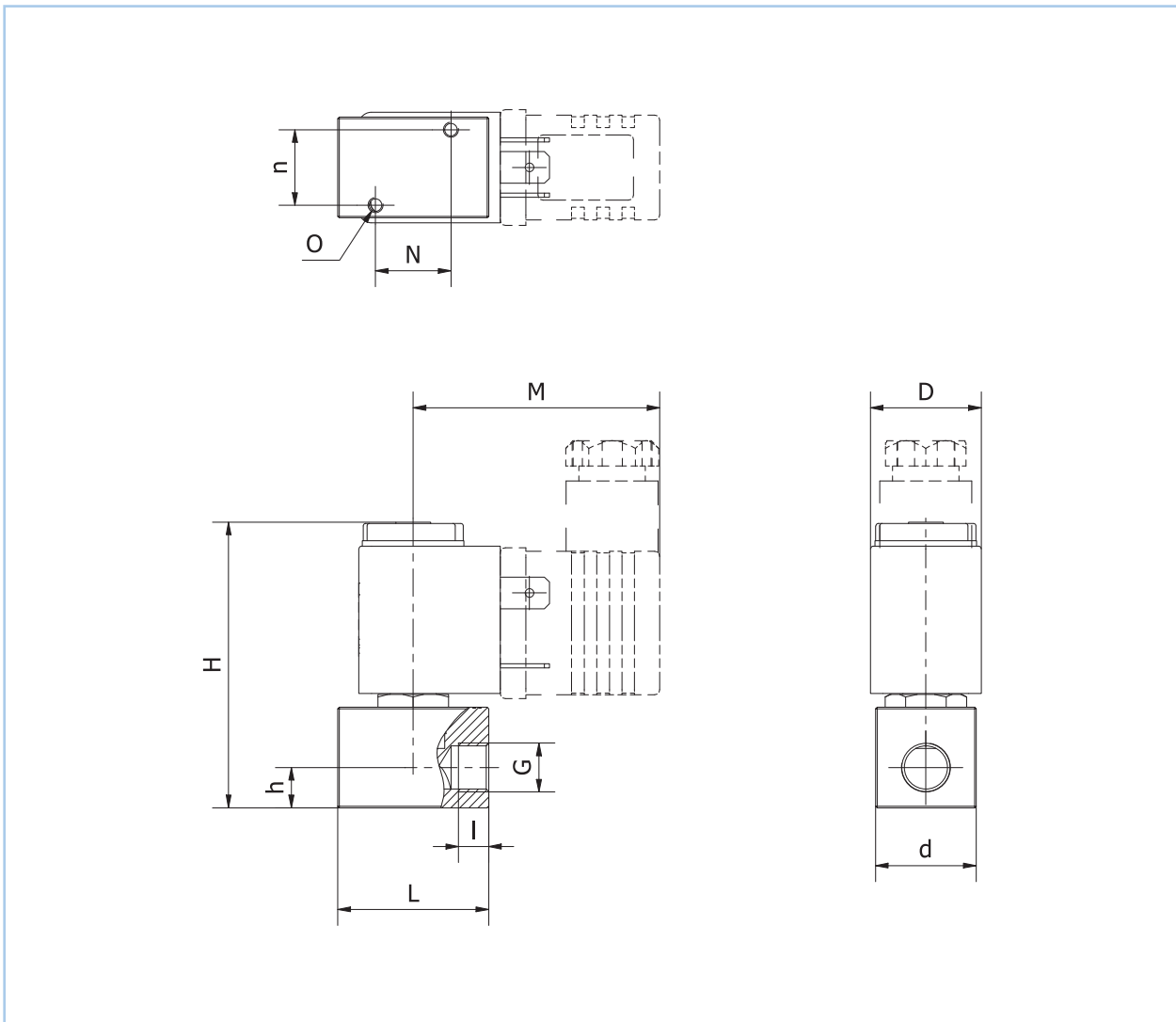
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O_2 oxygene applications

DIMENSIONS



Dimension table for type 92 in mm, approx. weight in g

coil	G	N	n	M	h	H	O	l	L	D	d	approx. weight in g
C1DA	G1/8	15	15	49	8	57	M3	6	30	22	20	142
C2DA	G1/8	15	15	49	8	57	M3	6	30	22	20	142
C3AA	G1/8	15	15	53,5	8	57	M3	6	30	30	20	197