

# 2/2-WAY SOLENOID VALVE

## TYPE 78



O<sub>2</sub> oxygene applications



### DESCRIPTION

Valve type 78 is a 2/2-way force pilot operated solenoid valve for general applications with gases and liquids for high flow rates. Due to the special diaphragm design, the valve can be used at 0 bar differential pressure.

### 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	G3/8 - G1/2

### ON REQUEST

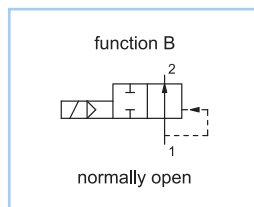
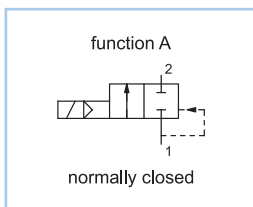
Valve for oxygene applications  
 Non-standard coil voltages  
 Higher ambient temperature range  
 Non-standard equipment  
 Manual override

### SWITCHING PRESSURE

Ports	Normally closed in bar	Normally open in bar
G3/8	16,0	12,0
G1/2	16,0	12,0

See details on the website

### VARIANTS



## DETAILED INFORMATION

General	
type of construction	2/2-way poppet valve, with diaphragm, normally closed NC or normally open NO, coil 360° rotatable
operation	electrically, on request: manual override
ports	G3/8 - G1/2
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 <sup>2</sup> /s (cst)
material	body: AISI 316L plunger tube: AISI 303 internal parts: stainless steel sealing: see type selection
mounting	installation into fixed piping system
installation	only with vertical 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 16
response time	depending on operating pressure and fluid
non-standard equipment on request	coil type with cable, bright nickel-plated or chemical nickel-plated, coils for temperature class H (180°C)

# 2/2-WAY SOLENOID VALVE

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$O_2$  oxygene applications

### 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
E4AA	32	14	12
E1AA	32	14	12
E2AA	42	19	17

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

### NORMALLY CLOSED VALVES

Type 78A, normally closed							
type (order-no.)	NW DN in mm	ports	maximum differential pressure in bar				kv-value in m <sup>3</sup> /h
			E1AA		E2AA		
			50Hz	DC	50Hz	DC	
78A-3.-A...	10	G3/8	14,0	3,0	16,0	12,0	1,82

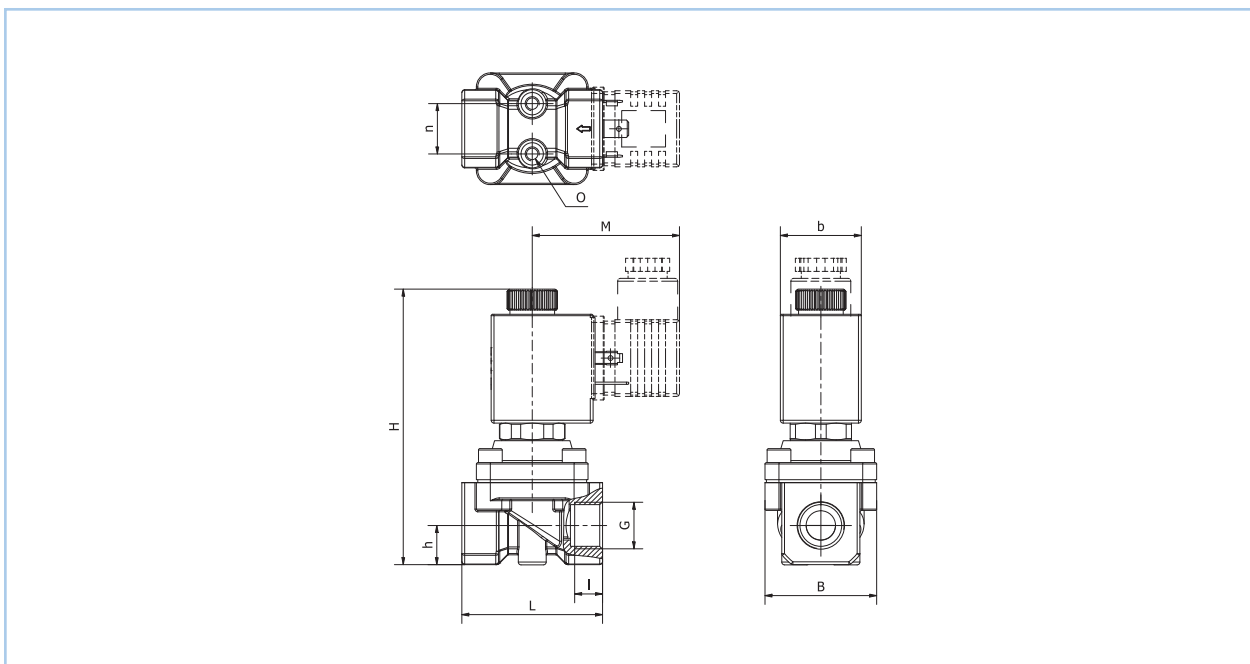
### NORMALLY OPEN VALVES

Type 78B, normally open							
type (order-no.)	NW DN in mm	ports	maximum differential pressure in bar				kv-value in m <sup>3</sup> /h
			E2AA		E3AE		
			50Hz	DC	50Hz	DC	
78B-3.-A...	10	G3/8	12,0	12,0	12,0	12,0	1,82

## ORDER CODE

Type 78A, normally closed										
order code	78	A	-	3	B	-	A	E1AA	02400	
Type 78B, normally open										
order code	78	B	-	3	B	-	A	E4AA	02400	
Code decoding										
type	type 78, force pilot operated, body and plunger tube: stainless steel									
function	A = normally closed, B = normally open									
ports	3 = G3/8, 4 = G1/2									
seal material	B = NBR (Perbunan), E = EPDM, V = FPM									
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									

## DIMENSIONS



Dimension table for type 78 in mm, approx. weight in g

coil	G	type 78A		type 78B		M	b	L	I	B	n	O	approx. weight in g	
		H	h	H	h								78A	78B
E1	G3/8	99	14	99	14	52,5	30	50,5	10	40	18	M5	527	527
E2	G3/8	99	14	99	14	54	36	50,5	10	40	18	M5	569	569
E1	G1/2	98,5	14	98,5	14	52,5	30	50,5	10	40	18	M5	535	535
E2	G1/2	98,5	14	98,5	14	54	36	50,5	10	40	18	M5	577	577