ENGINEERING TOMORROW



Data sheet

Direct-operated 2/2-way compact solenoid valves Type EV210A



EV210A covers a wide range of small, directoperated 2/2-way solenoid valves for use in industrial machinery.

The compact design together with the broad range of coils means that EV210A covers a broad variety of industrial applications.

Features and versions

- For water, steam, oil, compressed air, aggressive liquids and gases
- Differential pressure: 0 30 bar
- Media temperature from -30 120 °C
- Ambient temperature: Up to 50 $^{\circ}\text{C}$
- · Coil enclosure: Up to IP65
- Thread connections: G $^1/_8$ and G $^1/_4$
- DN 1.2 3.5
- Viscosity: Up to 20 cSt

- EV210A NC and NO versions in brass for neutral media
- EV210A NC stainless steel version for neutral and aggressive liquids and gases.



Brass valve body, NC



Control Cont		Seal		K _v -				min. to n	al pressure nax. [bar]		Media temperature,	
FPOM 1,2 0,04 Water AC 0 - 30 0 - 30 0 - 30 0 - 24 0 -	Connection		Orifice			Coil		Suitable	coil type			Code
FPOM 1.2 0.04 Water DC 0 - 17.5 0 - 24 0 - 24 0 - 24 - 30 - 120 032H8000	ISO228/1	rial	size	[m ³ /h]	Media	voltage	AB	AC	AM	AK	[°C]	number
FKM 1.2		FPDM	1 2	0.04	Water	AC	0 - 30	0 - 30	0 - 30	-	-30 - 120	032H8000
FRM				0.0 1		DC	0 – 17.5	0 – 24	0 - 24	0 - 24	30 120	
FKM 12 0.04 Ac 0 - 16 0 - 24 0 - 2					Oil	AC	0 – 28	0 - 30	0 - 30	-		
Air		FKM	1 2	0.04		DC	0 – 16	0 – 24	0 - 24	0 - 24	-10 - 100	032H8001
FKM 1.5 0.08				0.01	Air	AC	0 - 30	0 - 30	0 - 30	-		
FKM 1.5 0.08 OII DC 0 - 8 0 - 16 0 - 19 0 - 17.5 -10 - 100 O32H8003						DC	0 – 19	0 – 24	0 - 24	0 - 24		
FKM 1.5 0.08					Oil	AC	0 - 15	0 – 24	0 – 26	-		
Air AC 0 - 22 0 - 30 0 - 30 - 10		FKM	1.5	0.08		DC	0 - 8	0 - 16	0 - 19	0 – 17.5	-10 - 100	032H8003
G1/4 FRM 20 0.11 Water FRM 20 0.11 Water FRM 2.5 0.17 Water FRM 3.0 0.22 Water FRM 2.5 0.17 Water FRM 2.5 0					Air	AC	0 - 22	0 - 30	0 - 30	-		
G 1/4 FKM 2.0 0.11 Water OI										0 - 19		
G1/4 FKM 2.0 0.11 Oil		EPDM	2.0	0.11	Water						-30 - 120	032H8004
FKM 2.0 0.11 OC 0 - 5 0 - 9.5 0 - 17 0 - 9 0.10 0.3248005								0 – 10.5		0 - 9		
FKM 2.0 0.11					Oil							
FKM 2.5 0.17 Water DC 0 - 6 0 - 11 0 - 24 0 - 9	G 1/8	FKM	2.0	0.11							-10 - 100	032H8005
FKM 2.5 0.17 Water PKM 2.5 0.17 Water FKM 3.0 0.22					Air							
FKM 2.5 0.17 Water DC												
FKM 2.5 0.17		EPDM	2.5	0.17	Water						-30 – 120	032H8006
FKM 2.5 0.17												
FKM 2.5 0.17					Oil						-10 - 100	
Air DC 0 - 3 0 - 6 0 - 14.5 0 - 5 D32H8008 FRM 3.0 0.22 Water AC 0 - 4 0 - 7 0 - 13 - 3 - 30 - 120 032H8008 FRM 3.0 0.22 Water AC 0 - 3 0 - 6 0 - 12 - DC 0 - 1.5 0 - 3 0 - 8 0 - 14 - DC 0 - 1 - 10 - 100 032H8009 FRM 2.5 0.17 Water AC 0 - 5 0 - 8 0 - 14 - DC 0 - 2 0 - 3 0 - 5 0 - 9 0 - 3 - 30 - 120 032H8014 FRM 2.5 0.17 Water AC 0 - 6 0 - 11 0 - 17 - DC 0 - 2 0 - 3 0 - 5 0 - 9 0 - 16 - DC 0 - 2 0 - 2 0 - 3 0 - 5 0 - 12 0 - 5 0 - 10 0 032H8015 FRM 3.0 0.22 Water AC 0 - 8 0 - 12 0 - 2 0 - 3 0 - 6 0 0 - 14.5 0 - 5 0 - 9 0 - 16 0 - DC 0 - 3 0 - 6 0 0 - 14.5 0 - 5 0 - 9 0 - 10 0 032H8016 FRM 3.0 0.22 Water AC 0 - 8 0 - 12 0 - 2 0 - 3 0 - 6 0 0 - 12 0 - 3 0 - 3 0 - 3 0 - 6 0 0 - 12 0 - 3 0 - 12 0 0 032H8016 FRM 3.0 0.22 Water AC 0 - 1 0 0 - 1 0 0 0 0 0 0 0 0 0 0 0 0 0		FKM	2.5	0.17								032H8007
FKM 3.0 0.22 Water AC												
FKM 3.0 0.22 Water DC 0 - 1.5 0 - 3.5 0 - 9 0 - 3 -30 - 120 032H8008 FKM 3.0 0.22 Oil AC 0 - 3 0 - 6 0 - 12 - 0 032H8009 FKM 3.0 0.22 Oil AC 0 - 5 0 - 8 0 - 14 - 0 032H8009 FKM 2.5 0.17 Water DC 0 - 6 0 - 11 0 - 17 - 0 032H8009 FKM 2.5 0.17 Water DC 0 - 3 0 - 5.5 0 - 13 0 - 5 0 - 30 - 120 032H8014 FKM 2.5 0.17 Oil AC 0 - 5 0 - 9 0 - 16 0 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0												
FKM 3.0 0.22		EPDM	3.0	0.22	Water						-30 – 120	032H8008
FKM 3.0 0.22												
FKM 3.0 0.22 Air					Oil							
FKM 2.5 0.17 Water DC 0 - 2 0 - 3.5 0 - 9 0 - 3		FKM	3.0	0.22							-10 - 100	032H8009
FKM 2.5 0.17 Water DC 0 - 6 0 - 11 0 - 17					Air							
FKM 2.5 0.17 Water DC 0 - 3 0 - 5.5 0 - 13 0 - 5 0 - 30 - 120 032H8014 FKM 2.5												
FKM 2.5 0.17 Oil		EPDM	2.5	0.17	Water						-30 – 120	032H8014
FKM 2.5 0.17												
FKM 2.5 0.17 Air AC 0 - 8 0 - 12 0 - 20 10 - 100 032H8015 EPDM 3.0 0.22 Water AC 0 - 4 0 - 7 0 - 13 0 - 3 - 30 - 120 032H8016 FKM 3.0 0.22 FKM 3.0 0.22 FKM 3.0 0.22 Water AC 0 - 1.5 0 - 3.5 0 - 9					Oil						!	
Air DC 0 - 3 0 - 6 0 - 14.5 0 - 5 EPDM 3.0 0.22 Water DC 0 - 1.5 0 - 3.5 0 - 9		FKM	2.5	0.17							-10 - 100	032H8015
FKM 3.0 0.22 Water AC 0 - 4 0 - 7 0 - 13 0 - 3 -30 - 120 032H8016 FKM 3.0 0.22 Water DC 0 - 1.5 0 - 3.5 0 - 9					Air							
G 1/4 FKM 3.0 0.22 Water DC 0 - 1.5 0 - 3.5 0 - 930 - 120 032H8016 RKM 3.0 0.22 Water DC 0 - 1.5 0 - 3.5 0 - 910 - 100 032H8016 RKM 3.0 0.22 Water DC 0 - 1.5 0 - 3 0 - 8 0 - 12 0 - 3 0 - 8 0 - 10 - 10 032H8017 Rightarrow AC 0 - 2 0 - 3.5 0 - 9 0		_										
G 1/4 FKM 3.0 0.22 Oil AC 0 - 3 0 - 6 0 - 12 0 - 3 O - 8 O - 10 - 10 O32H8017 AIR AC 0 - 5 0 - 8 0 - 14 0 - 3 O - 10 O - 10 O32H8018 EPDM 3.5 0.26 Water AC 0 - 2.8 0 - 5 0 - 11 0 - 10 O22H8018 FKM 3.5 0.26 Oil AC 0 - 2 0 - 4 0 - 10 0 - 10 O - 10 O - 10 O O O O O O O O O O O O O O O O O O		EPDM	3.0	0.22	Water						-30 – 120	032H8016
FKM 3.0 0.22												
FKM 3.0 0.22 Air AC 0 - 5 0 - 8 0 - 14 0 - 3 DC 0 - 2 0 - 3.5 0 - 9 - EPDM 3.5 0.26 Water AC 0 - 2.8 0 - 5 0 - 11 - DC 0 - 1.2 0 - 2.5 0 - 6 0 - 1.5 Oil AC 0 - 2 0 - 4 0 - 10 - DC 0 - 0.8 0 - 2.5 0 - 5.5 0 - 1.5 AIr AC 0 - 3 032H8017 O32H8018	G 1/4			Oil								
Air DC 0 - 2 0 - 3.5 0 - 9 - EPDM 3.5 0.26 Water AC 0 - 2.8 0 - 5 0 - 11 - DC 0 - 1.2 0 - 2.5 0 - 6 0 - 1.5 -30 - 120 032H8018 FKM 3.5 0.26 Air AC 0 - 2 0 - 4 0 - 10 - DC 0 - 0.8 0 - 2.5 0 - 5.5 0 - 1.5 -10 - 100 032H8019		FKM	3.0	0.22							-10 - 100	032H8017
EPDM 3.5 0.26 Water AC 0 - 2.8 0 - 5 0 - 1130 - 120 032H8018 FKM 3.5 0.26 O.26 AC 0 - 0.8 0 - 2.5 0 - 6 0 - 1.5 O.26 O.26 O.27 O.27 O.28 O.28 O.28 O.28 O.28 O.28 O.28 O.28					Air					_		
FKM 3.5 0.26 Water DC 0 - 1.2 0 - 2.5 0 - 6 0 - 1.5 -30 - 120 032H8018 AC 0 - 2 0 - 4 0 - 10 - DC 0 - 0.8 0 - 2.5 0 - 5.5 0 - 1.5 AIr AC 0 - 3.5 0 - 5.5 0 - 11 -										_		
FKM 3.5 0.26 Oil AC 0 - 2 0 - 4 0 - 10 - DC 0 - 0.8 0 - 2.5 0 - 5.5 0 - 1.5 AC 0 - 3.5 0 - 5.5 0 - 11 - 0.0 032H8019		EPDM	3.5	0.26	Water						-30 – 120	032H8018
FKM 3.5 0.26 Oil DC 0 - 0.8 0 - 2.5 0 - 5.5 0 - 1.5 -10 - 100 032H8019										-		
FKM 3.5 0.26 Air AC 0 - 3.5 0 - 5.5 0 - 1110 - 100 032H8019					Oil					0 - 1.5		
Air Handard Control of the Control o		FKM	3.5	0.26							-10 - 100	032H8019
					Air	DC	0 - 1.2	0 - 2.5	0 - 6	0 - 1.5		



Brass valve body, NO



						Differential pressure min. to max. [bar]	Media temperature,				
Connection ISO228/1	Seal material	Orifice size	K _v - value [m³/h]	Media	Coil voltage	Suitable coil type, AM	min. to max. [°C]	Code number			
				Water	AC	0 - 30					
				vvater	DC	0 - 16					
		1.5	0.06	Oil	AC	0 - 24		032H8049			
		1.5	0.00	Oii	DC	0 - 13		032110049			
				Air	AC	0 - 30					
				All	DC	0 – 16					
				Water	AC	0 - 14					
				vvatei	DC	0 - 10					
		2.0	0.12	Oil	AC	0 - 11		032H8051			
		2.0	0.12	Oii	DC	0 - 8		032110031			
				Air	AC	0 - 14					
				All	DC	0 - 10					
				Water	AC	0 - 10					
							vvatei	DC	0 - 6		
G 1/8	FKM	2.5	0.15	Oil	AC	0 - 8	-10 – 100	032H8053			
G /8	I NIVI	2.3	0.15	0.15	0.15	0.15	Oii	DC	0 - 4.5	10 100	032118033
				Air	AC	0 - 10					
				All	DC	0 - 6					
				Water	AC	0 - 6					
				vvatei	DC	0 - 4					
		3.0	0.18	Oil	AC	0 - 5		032H8055			
		3.0	0.16	Oii	DC	0 - 3		032118033			
				Air	AC	0 - 6					
				All	DC	0 - 4					
				Water	AC	0 - 4					
				vvater	DC	0 - 3					
		3.5	0.20	Oil	AC	0 - 4		032H8057			
		3.3	0.20	Oii	DC	0 - 2		U32F16U3/			
				Air	AC	0 - 4					
				All	DC	0 - 3					

Technical data, brass valve body, NC and NO

Time to open and close	7 – 10 ms (depending on pressur	7 – 10 ms (depending on pressure, coil and viscosity)				
Installation	Optional, but vertical solenoid sy	stem is recommended				
Max. test pressure	50 bar					
Tightness		Internally: Better than 8.3 x 10 ² mbar l/sec (5 ccm air per min) Externally: Better than 1 x 10 ³ mbar l/sec (100% He)				
Ambient temperature	Max 50 °C					
Viscosity	Max. 20 cSt	Max. 20 cSt				
	Valve body:	Brass	W.no. 2.0401			
	Armature:	Stainless steel	W. no. 1.4016 / AISI 430			
	Armature tube:	Stainless steel	W. no. 1.4303 / AISI 305			
Materials	Armature stop:	Stainless steel	W. no. 1.4016 / AISI 430			
	Spring	Stainless steel	W. no. 1.4310 / AISI 301			
	Valve orifice	Stainless steel	W. no. 1.4305 / AISI 303			
	O-rings / valve plate	EPDM or FKM				



Stainless steel valve body, NC



								al pressure nax. [bar]		Media										
Connection	Seal mate-	Orifice	K _v - value		Coil		Suitable	coil type		temperature, min. to max.	Code									
ISO228/1	rial	size	[m³/h]	Media	voltage	AB	AC	AM	AK	[°C]	number									
				147 -	AC	0 - 30	0 - 30	0 - 30	-											
				Water	DC	0 - 17.5	0 - 24	0 - 24	0 - 24											
			1,2	1.0	0.04	0:1	AC	0 - 28	0 - 30	0 - 30	-									
		1.2	0.04	Oil	DC	0 – 16	0 - 24	0 - 24	0 - 24		032H8025									
				Λ:-	AC	0 - 30	0 - 30	0 - 30	-											
				Air	DC	0 - 19	0 - 24	0 - 24	0 - 24											
				Water	AC	0 - 18	0 – 26	0 – 28	-											
				water	DC	0 – 9.5	0 – 17.5	0 – 22.5	0 – 17.5											
		1.5	0.08	Oil	AC	0 - 15	0 - 24	0 – 26	-		032H8027									
		1.5	0.06	Oll	DC	0 - 8	0 – 16	0 – 19	0 - 17.5		U32H6U2/									
				Air	AC	0 – 22	0 - 30	0 - 30	-											
G 1/8				All	DC	0 - 10.5	0 - 18.5	0 - 24	0 – 19											
G '/8				Water	AC	0 - 11	0 - 18	0 - 23	-											
				water	DC	0 - 5.5	0 - 10.5	0 – 18.5	0 – 9											
		2.0	0.11	Oil	AC	0 – 9	0 – 16	0 – 22	-		032H8029									
		2.0	0.11	0.17	0.11	0.11	0.11	0.11	Oll	DC	0 - 5	0 – 9.5	0 – 17	0 - 9		03200029				
				A :	AC	0 - 14	0 – 22	0 - 30	-											
				Air	DC	0 - 6	0 - 11	0 - 24	0 - 9											
		FKM 3.0						Mator	AC	0 - 4	0 - 7	0 - 13	-							
			0.22	Water	DC	0 - 1.5	0 - 3.5	0 – 9	0 - 3		100 032H8033									
	FIZA				AC	0 – 3	0 - 6	0 - 12	-	10 100										
	FKM	3.0			DC	0 - 1.5	0 - 3	0 - 8	0 - 3	-10 – 100	03200033									
				Λ:-	AC	0 – 5	0 - 8	0 - 14	-											
				Air	DC	0 - 2	0 - 3.5	0 – 9	0 - 3											
													Mater	AC	0 - 6	0 - 11	0 - 17	-		
				Water	DC	0 - 3	0 - 5.5	0 - 13	0 - 5											
		2.5	0.17	0:1	AC	0 – 5	0 – 5	0 - 16	-		022110020									
		2.5	0.17	Oil	DC	0 - 2.5	0 – 5	0 - 12	0 – 5		032H8039									
					AC	0 - 8	0 - 12	0 - 20	-											
				Air	DC	0 – 3	0 – 6	0 - 14.5	0 - 5											
				14/	AC	0 - 4	0 - 7	0 - 13	-											
				Water	DC	0 - 1.5	0 - 3.5	0 – 9	0 - 3											
C1/		20	0.22	O:I	AC	0 – 3	0 - 6	0 - 12	-		022110041									
G 1/4		3.0	0.22	Oil	DC	0 - 1.5	0 - 3	0 - 8	0 - 3		032H8041									
				Α	AC	0 – 5	0 - 8	0 - 14	-											
				Air	DC	0 – 2	0 - 3.5	0 - 9	0 - 3											
				\A/=+ · ·	AC	0 - 2.8	0 - 5	0 - 11	-											
				Water	DC	0 - 1.2	0 - 2.5	0 - 6	0 - 1.5											
		3.5	0.25	0:1	AC	0 - 2	0 - 4	0 - 10	-		032H8043									
		3.5	0.26	Oil	DC	0 - 0.8	0 - 2.5	0 - 5.5	0 - 1.5											
				Α.	AC	0 - 3.5	0 - 5.5	0 - 11	-											
				Air	DC	0 - 1.2	0 - 2.5	0 – 6	0 - 1.5											





Technical data, stainless steel valve body

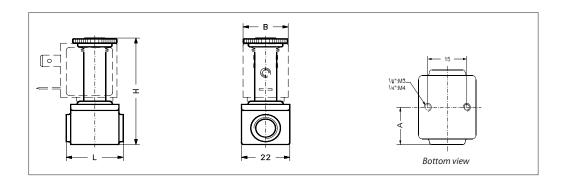
Time to open and close	7 – 10 ms (depending on pressu	7 – 10 ms (depending on pressure, coil and viscosity)				
Installation	Optional, but vertical solenoid s	ystem is recommended				
Max. test pressure	50 bar					
Tightness	Internally: Better than 8.3 x 10 ⁻² mbar l/sec (5 ccm air per min) Externally: Better than 1 x 10 ⁻³ mbar l/sec (100% He)					
Ambient temperature	Max 50 °C					
Viscosity	Max. 20 cSt					
	Valve body:	Stainless steel	W.no. 1.4305 / AISI 303			
	Armature:	Stainless steel	W. no. 1.4016 / AISI 430			
	Armature tube:	Stainless steel	W. no. 1.4303 / AISI 305			
Materials	Armature stop:	Stainless steel	W. no. 1.4016 / AISI 430			
	Spring	Stainless steel	W. no. 1.4310 / AISI 301			
	Valve orifice	Stainless steel	W. no. 1.4305 / AISI 303			
	O-rings / valve plate	FKM				

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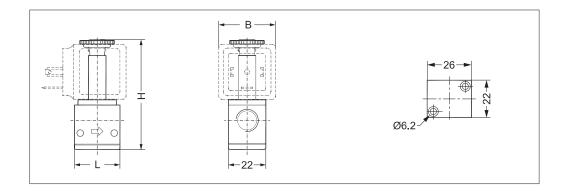
Dimensions and weight, brass NC

		Weight gross		В [і	mm]		
Type	Connection ISO 228/1	Valve body without coil [kg]	L [mm]	Coil type AB / AC	Coil type AM / AK	H [mm]	A [mm]
EV210A	G 1/8	0.085	26	22	33	54	13
EV210A	G 1/4	0.110	35	22	33	59	17.5



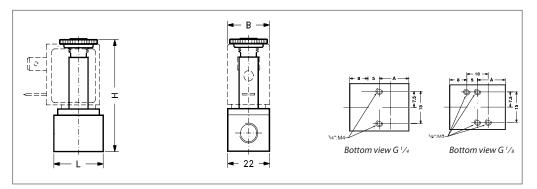
Dimensions and weight, brass NO

		Weight gross		B [mm]	
Туре	Connection ISO 228/1	Valve body without coil [kg]	L [mm]	Coil type AM	H [mm]
EV210A	G 1/8	0.125	26	33	63



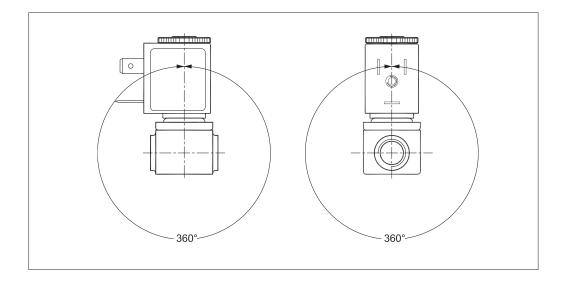
Dimensions and weight, stainless steel

		Weight gross		B [mm]			
Туре	Connection ISO 228/1	Valve body without coil [kg]	L [mm]	Coil type AB / AC	Coil type AM / AK	H [mm]	A [mm]
EV210A	G 1/8	0.085	26	22	33	54	13
EV210A 6	G 1/4	0.110	35	22	33	59	17.5





Mounting angle



Below coils can be used with EV210A

Coil	Туре	Power consumption	Enclosure	Features
DENMARK DENMARK Odi LORRORD Type LAROXO 2N SOROHY 4.3W CE N0759	АВ	4.5 W AC 5 W DC	IP00 with spade connector, IP65 with cable plug	In accordance with VDE 0580
DENUAR COIL DENUARS COIL DENUARS Type ACOME AV 5000 NE 7 W NOTO	AC	7.0 W AC 10 W DC	IP00 with spade connector, IP65 with cable plug	In accordance with VDE 0580
	АМ	7.5 W AC 9.5 W DC	IP00 with spade connector, IP65 with cable plug	In accordance with VDE 0580
	AK	3.0 W DC	IP00 with spade connector, IP65 with cable plug	In accordance with VDE 0580

For further information and for ordering, see separate data sheet for coils.

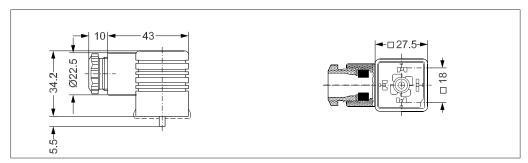
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Accessories: Cable plug

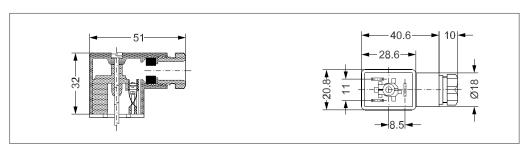




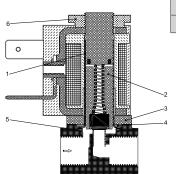








Spare part kit for EV210A NC



Seal material	Code number
EPDM	042U0067
FKM	042U0068



The spare parts set contains:

Armature tube

Armature with valve plate and spring

Flange

Disk

2 O-rings

Nut

2 screws for connecting tube to valve body



Function NC

Coil voltage disconnected (closed):

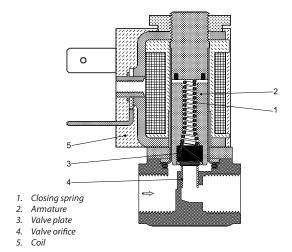
When the voltage is disconnected, the armature (2) with the valve plate (3) is pressed down against the valve orifice (4) by the closing spring (1) and the medium's pressure.

The valve will be closed for as long as the voltage to the coil is disconnected.

Coil voltage connected (open):

When voltage is applied to the coil (5), the armature (2) with the valve plate (3) is lifted clear of the valve orifice (4).

The valve is now open for unimpeded flow and will be open for as long as there is voltage to the coil.



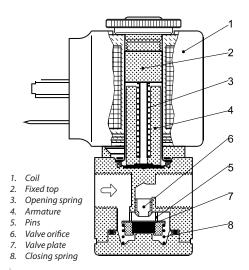
Function NO

Coil voltage disconnected (open):

When the voltage to the coil is disconnected, the valve orifice (6) is open, the opening spring (3) pressing the valve plate (7) clear of the orifice (6) via the armature (4) and the pins (5). The valve will be open for as long as the supply voltage is disconnected.

Coil voltage connected (closed):

When voltage is applied to the coil, the armature (4) is drawn up to touch the fixed top (2). The valve plate (7) is pressed against the valve orifice (6) by the closing spring (8). The valve will be closed for as long as there is voltage to the coil.

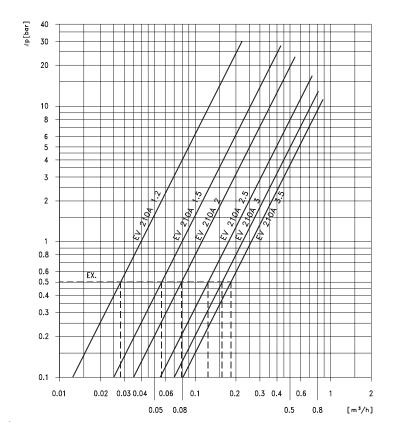




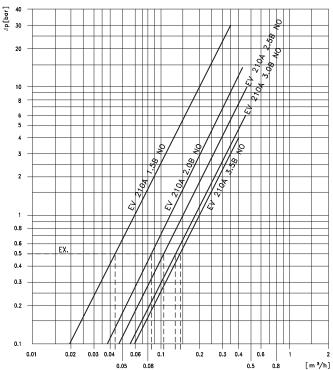
Capacity diagrams:

EV210A NC

Example, water at higher pressure: Capacity for EV210A 2.5B at differential pressure of 0.5 bar. Approx. 0.12 m³/h



EV210A NO
Example, water at higher pressure:
Capacity for EV210A 2.5B NO at differential pressure of 0.5 bar. Approx. 0.11s m³/h



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