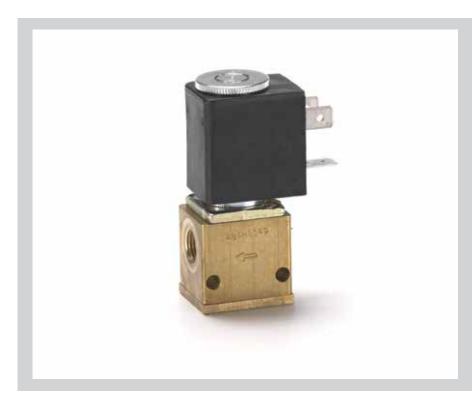


#### Data sheet

# Solenoid valves 2/2-way direct-operated type EV210A



EV210A covers a wide range of small, direct-operated 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



									ferentia						Media			
Connec- tion	Seal mate-	Orifice	k <sub>v</sub> - value		Coil			S	uitable	coil	typ	e			temperature, min. to max.			
ISO228/1	rial	size	[m³/h]	Media	voltage	AB			AC		Α	M		AK	[°C]	Code number		
	EPDM	1.0	0.04	Water	a.c.	0 - 30		0 –	30	0	-	30	-		-30 - 120	032H8000		
	LFDIVI	1.2	0.04	water	d.c.	0 – 17.	.5	0 –	24	0	-	24	0 -	24	-50 - 120	032116000		
						Oil	a.c.	0 – 28		0 –	30	0	-	30	-			
	LIVA	1.2	0.04	Oii	d.c.	0 – 16		0 –	24	0	-	24	0 -	24	-10 - 100	032H8001		
	FKM	1.2	0.04	Air	a.c.	0 - 30		0 –	30	0	-	30	-		-10 - 100	03200001		
				All	d.c.	0 – 19		0 –	24	0	_	24	0 -	24				
	EPDM	1.5	0.08	Water	a.c.	0 – 18		0 –	26	0	-	28	_		-30 - 120	032H8002		
	LFDIN	۱.۵	0.00	water	d.c.	0 – 9.5		0 –	17.5	0	-	22.5	0 -	17.5	-30 - 120			
				Oil	a.c.	0 – 15		0 -	24	0	-	26	-					
	FKM	1.5	0.08	Oll	d.c.	0 - 8		0 –	16	0	_	19	0 -	17.5	-10 - 100	032H8003		
	FNIVI	1.5	0.06	Air	a.c.	0 – 22		0 –	30	0	-	30	-		-10 - 100	U32H6UU3		
				All	d.c.	0 – 10.	.5	0 –	18.5	0	-	24	0 -	19				
	EPDM	20	0.11	Water	a.c.	0 - 11		0 –	18	0	-	23	-		-30 – 120	032H8004		
	EPDINI	M 2.0	2.0 0.11	0.11	water	d.c.	0 - 5.5		0 –	10.5	0	_	18.5	0 -	9	-50 - 120	U32H6UU4	
G 1/8				Oil	a.c.	0 - 9		0 -	16	0	-	22	-					
G 1/8	FKM	2.0	0.11	Oll	d.c.	0 - 5		0 –	9.5	0	-	17	0 -	9	-10 - 100	032H8005		
	FNIVI	2.0	0.11	A in	a.c.	0 - 14		0 –	22	0	-	30	-		-10 - 100	U32H6UU3		
					Air	d.c.	0 - 6		0 -	- 11	0	-	24	0 -	9			
	EDDM	2.5 0	2.5	2.5 0.17	14/	a.c.	0 - 6		0 -	- 11	0	-	17	-		20 120	022110006	
	EPDM				0.17	Water	d.c.	0 - 3		0 -	5.5	0	-	13	0 -	5	-30 – 120	032H8006
				0:1	a.c.	0 - 5		0 -	9	0	-	16	-					
	FKM	2.5	0.17	Oil	d.c.	0 – 2.5		0 -	- 5	0	-	12	0 -	5	10 100			
		2.5	0.17	A * .	a.c.	0 - 8		0 -	12	0	-	20	_		-10 – 100	032H8007		
						Air	d.c.	0 - 3		0 -	6	0	-	14.5	0 -	5		
	EPDM	20	0.22	14/	a.c.	0 - 4		0 -	- 7	0	-	13	-		-30 - 120	022110000		
	EPDIM	3.0	0.22	Water	d.c.	0 – 1.5		0 –	3.5	0	-	9	0 -	- 3		032H8008		
				Oil	a.c.	0 - 3		0 –	6	0	-	12	-		-10 - 100	032H8009		
	FKM	2.0	0.22	Oii	d.c.	0 – 1.5		0 –	- 3	0	-	8	0 -	3				
	I NIVI	3.0	0.22	3.0 0.22	Air	a.c.	0 - 5		0 -	8	0	-	14	-		-10 - 100	032118009	
				All	d.c.	0 – 2		0 –	3.5	0	-	9	0 -	3				
	EPDM	2.5	0.17	Water	a.c.	0 – 6		0 –	- 11	0	-	17	-		-30 – 120	032H8014		
	LI DIVI	2.5	0.17	water	d.c.	0 – 3		0 –	5.5	0	-	13	0 -	- 5	-30 - 120	032110014		
				Oil	a.c.	0 - 5		0 -	9	0	-	16	-					
	FKM	2.5	0.17	Oii	d.c.	0 – 2.5		0 –	- 5	0	_	12	0 -	5	-10 - 100	032H8015		
	I IXIVI	2.5	0.17	Air	a.c.	0 - 8		0 –	12	0	-	20	-		10 - 100	032110013		
				All	d.c.	0 – 3		0 –	6	0	_	14.5	0 -	5				
	EPDM	3.0	0.22	Water	a.c.	0 - 4		0 –	7	0	-	13	0 -	3	-30 – 120	032H8016		
	LI DIVI	5.0	0.22	water	d.c.	0 – 1.5		0 –	3.5	0	_	9	-		-30 - 120	032110010		
G 1/4				Oil	a.c.	0 - 3		0 –	6	0	-	12	0 -	3				
G 1/ <sub>4</sub>	FKM	3.0	0.22	Oii	d.c.	0 – 1.5		0 –	- 3	0	-	8	_		-10 - 100	032H8017		
	I INWI	3.0	0.22	Air	a.c.	0 - 5		0 –	8	0	-	14	0 -	3	10 - 100	032110017		
				Air	d.c.	0 – 2		0 –	3.5	0	_	9	-					
	EPDM	3 E	0.26	Wator	a.c.	0 – 2.8		0 –	5	0	-	11	-		-30 - 120	032H8018		
	LI DIVI	DM 3.5 0.26 Water d.c. 0 – 1.2		0 –	2.5	0	_	6	0 -	1.5	-30 - 120	0321100110						
				Oil	a.c.	0 – 2		0 –	4	0	-	10	-					
	FKM	3.5	0.26	Oll	d.c.	0 – 0.8		0 -	2.5	0	-	5.5	0 -	1.5	-10 - 100	032H8019		
	I INVI	د.د	0.20	Air	a.c.	0 – 3.5		0 -	5.5	0	-	11	_		-10 - 100	032110019		
				Air	d.c.	0 - 1.2	T	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 <sub>V</sub> - value [m³/h]	Media	Coil voltage	Suitable coil type, AM	min. to max. [°C]	Code number					
				Water	a.c.	0 - 30							
				vvater	d.c.	0 – 16							
		1.5	0.06	0.06	0.06	Oil	a.c.	0 - 24		032H8049			
		1.5	0.00	Oii	d.c.	0 - 13		032118049					
				Air	a.c.	0 - 30							
				7 (11	d.c.	0 - 16							
				Water	a.c.	0 - 14							
				TTUCCI	d.c.	0 - 10							
		2.0	0.12	Oil	a.c.	0 - 11		032H8051					
		2.0	0.12	OII	d.c.	0 - 8		032110031					
									Air	a.c.	0 - 14		
								7 (11	d.c.	0 - 10			
							Water	a.c.	0 - 10				
				TTUTCI	d.c.	0 - 6							
G 1/8	FKM	2.5	0.15	0.15	0.15	Oil	a.c.	0 - 8	-10 - 100	032H8053			
G 1/0	11001	2.3	0.15	Oii	d.c.	0 - 4.5	10 100	032110033					
				Air	a.c.	0 - 10							
				7	d.c.	0 - 6							
				Water	a.c.	0 - 6							
					d.c.	0 - 4							
		3.0	0.18	Oil	a.c.	0 - 5		032H8055					
		3.0	0.10	0	d.c.	0 - 3		05000					
				Air	a.c.	0 - 6							
					d.c.	0 - 4							
			Water	a.c.	0 - 4	1							
					d.c.	0 - 3	_						
		3.5	0.20	Oil	a.c.	0 - 4		032H8057					
					d.c.	0 - 2		33_33					
				Air	a.c.	0 - 4							
				,	d.c.	0 - 3							

# Technical data, brass valve body, NC and NO

Time to open and close	7 – 10 ms (depending on pressure	e, coil and viscosity)				
Installation	Optional, but vertical solenoid sys	tem is recommended				
Max. test pressure	50 bar	50 bar				
Tightness	Internally: Better than $8.3 \times 10^{-2}$ mbar I/sec (5 ccm air per min) Externally: Better than $1 \times 10^{-3}$ mbar I/sec (100% He)					
Ambient temperature	Max 50 °C					
Viscosity	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 max. [bar]		Media											
Connec- tion	Seal mate-	Orifice	k <sub>v</sub> - value		Coil-		Suitable	coil type		temperature, min. to max.											
ISO228/1	rial	size	[m³/h]	Media	voltage	AB	AC	AM	AK	[°C]	Code number										
				Water	a.c.	0 - 30	0 - 30	0 - 30	-												
				water	d.c.	0 – 17.5	0 – 24	0 - 24	0 – 24												
		1.2	0.04	Oil	a.c.	0 – 28	0 - 30	0 - 30	-		032H8025										
		1.2		Oil	d.c.	0 – 16	0 - 24	0 - 24	0 - 24		U32H6U23										
				Air	a.c.	0 - 30	0 - 30	0 - 30	-												
				All	d.c.	0 – 19	0 – 24	0 – 24	0 - 24												
				Water	a.c.	0 - 18	0 – 26	0 - 28	-												
				Water	d.c.	0 – 9.5	0 – 17.5	0 - 22.5	0 – 17.5												
		1.5	0.08	Oil	a.c.	0 - 15	0 - 24	0 - 26	-		032H8027										
		1.5	0.00	Oil	d.c.	0 - 8	0 – 16	0 - 19	0 – 17.5		032110027										
				Air	a.c.	0 - 22	0 - 30	0 - 30	-												
				7 (11	d.c.	0 - 10.5	0 – 18.5	0 - 24	0 - 19												
				Water	a.c.	0 - 11	0 - 18	0 - 23	-												
			2.0 0.11				water	d.c.	0 - 5.5	0 - 10.5	0 – 18.5	0 - 9									
C 1/-		20		Oil	a.c.	0 - 9	0 – 16	0 - 22	-		032H8029										
G 1/8		2.0	0.11	Oil	d.c.	0 - 5	0 – 9.5	0 - 17	0 - 9		032110029										
				Air	a.c.	0 - 14	0 - 22	0 - 30	-												
				All	d.c.	0 - 6	0 - 11	0 - 24	0 - 9												
				Water	a.c.	0 - 6	0 - 11	0 - 17	-												
					.5 0.17	0.17	0.17	5 0.17	vvalei	d.c.	0 - 5.5	0 - 13	0 - 5	0 - 1.5	]						
		2.5	5 0.17	0.17					0.17	0.17	0.17	0.17	0.17	Oil	a.c.	0 - 5	0 – 9	0 - 16	-		032H8031
		2.3								Oli	d.c.	0 - 2.5	0 – 5	0 - 12	0 - 5		-52,1003				
				Air	a.c.	0 - 8	0 – 12	0 - 20	-	-											
	FKM						All	d.c.	0 - 3	0 – 6	0 - 14.5	0 – 5	-10 - 100								
	I INIVI			0.22	0.22	Water	a.c.	0 - 4	0 – 7	0 - 13	-	-10 - 100									
						0.22		vvater	d.c.	0 – 1.5	0 – 3.5	0 – 9	0 - 3								
			3.0				Oil	a.c.	0 - 3	0 - 6	0 - 12	-		032H8033							
		5.0	0.22	011	d.c.	0 - 1.5	0 – 3	0 - 8	0 - 3		032110033										
				Air	a.c.	0 – 5	0 - 8	0 - 14	-												
				7.111	d.c.	0 – 2	0 - 3.5	0 - 9	0 – 3												
				Water	a.c.	0 - 6	0 - 11	0 - 17	-												
				Water	d.c.	0 – 3	0 - 5.5	0 - 13	0 – 5												
		2.5	0.17	Oil	a.c.	0 – 5	0 – 5	0 - 16	-		032H8039										
		2.3	0.17	011	d.c.	0 – 2.5	0 – 5	0 - 12	0 - 5		0020007										
				Air	a.c.	0 - 8	0 - 12	0 - 20	-												
					d.c.	0 – 3	0 – 6	0 - 14.5	0 – 5												
				Water	a.c.	0 - 4	0 – 7	0 - 13	-												
					d.c.	0 – 1.5	0 – 3.5	0 – 9	0 - 3												
G 1/4		3.0	0.22	Oil	a.c.	0 - 3	0 – 6	0 - 12	-		032H8041										
					d.c.	0 – 1.5	0 – 3	0 - 8	0 – 3		032H8041										
				Air	a.c.	0 - 5	0 – 8	0 - 14	-												
					d.c.	0 – 2	0 - 3.5	0 – 9	0 - 3												
				Water	a.c.	0 - 2.8	0 – 5	0 - 11	-												
					d.c.	0 - 1.2	0 - 2.5	0 – 6	0 – 1.5												
		3.5	0.26	Oil	a.c.	0 – 2	0 - 4	0 - 10	-		032H8043										
					d.c.	0 - 0.8	0 – 2.5	0 - 5.5	0 – 1.5												
				Air	a.c.	0 - 3.5	0 - 5.5	0 - 11	-												
					d.c.	0 - 1.2	0 - 2.5	0 - 6	0 - 1.5												



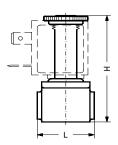
# Technical data, stainless steel valve body

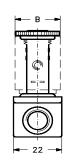
Time to open and close	7 – 10 ms (depending on pressure	7 – 10 ms (depending on pressure, coil and viscosity)				
Installation	Optional, but vertical solenoid sys	Optional, but vertical solenoid system is recommended				
Max. test pressure	50 bar					
Tightness	Internally: Better than 8.3 x 10 <sup>-2</sup> in Externally: Better than 1 x 10 <sup>-3</sup> m					
Ambient temperature	Max 50 °C	Max 50 ℃				
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				

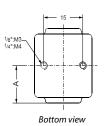


## Dimensions and weight, brass NC

				В [	mm]		
Туре	Connection ISO 228/1	Weight gross 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

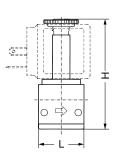


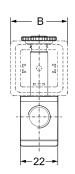


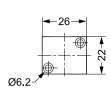


## Dimensions and weight, brass NO

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

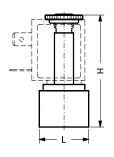


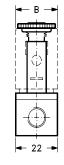


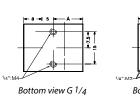


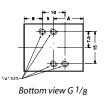
## Dimensions and weight, stainless steel

				B [m	nm]		
Туре	Connection ISO 228/1	Weight gross 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











#### Below coils can be used with EV210A

Coil	Туре	Power consumption	Enclosure	Features
DARMARK DINMARK DIN JOSEPH TON TON SET STORES SET STORE	AB	4.5 W a.c. 5 W d.c.	IP00 with spade connector, IP65 with cable plug	In accordance with VDE 0580
Therefore  Street and Therefore	AC	7.0 W a.c. 10 W d.c.	IP00 with spade connector, IP65 with cable plug	In accordance with VDE 0580
	AM	7.5 W a.c. 9.5 W d.c.	IP00 with spade connector, IP65 with cable plug	In accordance with VDE 0580
College of the second	AK	3.0 W d.c.	IP00 with spade connector, IP65 with cable plug	In accordance with VDE 0580

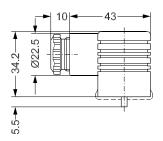
For further information and for ordering, see separate data sheet for coils.

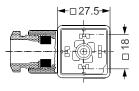


#### Accessories: Cable plug

Application	Code number
GDM 2011 (grey) cable plug according to DIN 43650-A PG11	042N0156

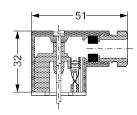


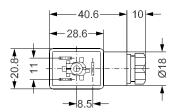




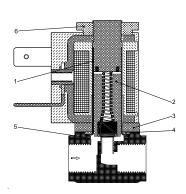
Application	Code number
GM 209 (black) cable plug according to DIN 46650-B PG9	042N0139







## 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):

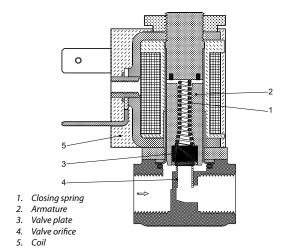
When the voltage is disconnected, the armature (2) with the valve plate (3) is pressed down against the valve orifice (4) by the closing spring (1) and the medium's pressure.

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.



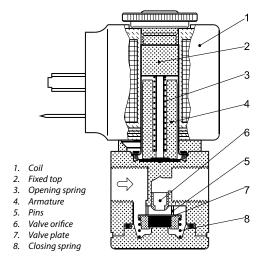
#### **Function NO**

#### 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.

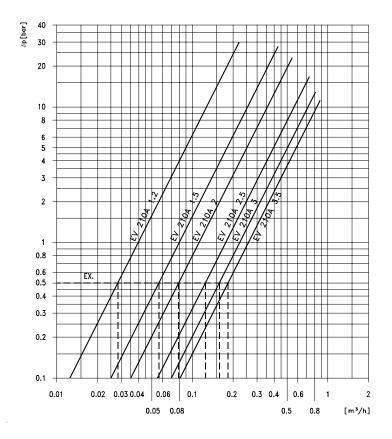




#### **Capacity diagrams:**

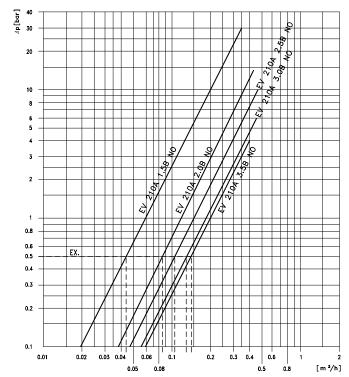
EV210A NC

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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