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Solenoid valves 3/2-way direct-operated Type EV310A

Features



EV310A NC and NO

- Very compact valves for industrial application, such as control.
- For water, oil, compressed air and similar neutral media.
- Ambient temperature: Up to +50 $^{\rm o}{\rm C}$
- Coil enclosure: Up to IP 65
- Thread connections: $G^{1\!/_{\!\!8}}$ and $G^{1\!/_{\!\!4}}$
- Viscosity: Up to 20 cSt
- k_v values up to 0.08 m³/h

Technical data

Installation		Optional, but vertical solenoid system is recommended				
Pressure range	NC	0 to 20 bar				
	NO	0 to 13 bar				
Max. test pressure		50 bar				
Time to open and to close		7 - 10 ms (depending on the pressure)				
Ambient temperature		max.+50°C				
Medium temperature		FKM:-10° to +100°C				
Viscosity		max. 20 cSt				
Materials		Valve body:Brass,W.no.2.0401Valve orifice:Stainless steel, W.no.1.4305 / AISI 303Armature:Stainless steel, W.no.1.4016 / AISI 430Armature tube:Stainless steel, W.no.1.4303 / AISI 305Armature stop:Stainless steel, W.no.1.4016 / AISI 430Spring:Stainless steel, W.no.1.4310 / AISI 301O-rings/valve plate:FKM				

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Function NC



Coil voltage disconnected (closed): When the voltage to the coil (4) is disconnected, the armature (2) with the valve plates (3) is pressed down by the closing spring (1) and closes the connection between P and A. At the same time, the connection between gates A and R is opened. The connection between P and A will be closed

for as long as the voltage to the coil is disconnected. *Coil voltage connected (open):*

When voltage is applied, the armature (2) with the valve plates (3) is lifted and closes the connection between A and R.

At the same time, the connection between P and A is opened.

The connection between P and A will be open for as long as there is voltage to the coil.

Ordering NC Valve body

Conn.	Seal	k _v		Media	a temp.	Type de	signation		Peri	Permissible differential pressure (bar) ²⁾								
ISO 228/1	mate- rial ¹⁾	value	mm	Min	Max.	Main type	Specification	without coil	without	without coil	without coil	hout oil Min			Max.			able coil
		[m ³ /h] OC OC				a.c./	d.c.	a.c./	ni ′ d.c.	Ai a.c./	r d.c.	types						
	FKM	0.04	1.2	-10	+100	EV310A 1.2B	G 18F NC000	032H8085	0	18	18	9	9	20	20	AC, AM		
G1/8	FKM	0.07	1.5	-10	+100	EV310A 1.5B	G 18F NC000	032H8087	0	10	10	5	5	12	12	AC, AM		
	FKM	0.08	2.0	-10	+100	EV310A 1.8B	G 18F NC000	032H8089	0	6.5	6.5	4	4	8	8	AC, AM		
	FKM	0.04	1.2	-10	+100	EV310A 1.2B	G 14F NC000	032H8095	0	18	18	9	9	20	20	AC, AM		
G¼	FKM	0.07	1.5	-10	+100	EV310A 1.5B	G 14F NC000	032H8097	0	10	10	5	5	12	12	AC, AM		
	FKM	0.08	2.0	-10	+100	EV310A 1.8B	G 14F NC000	032H8099	0	6.5	6.5	4	4	8	8	AC, AM		

1) For WRAS approved seal material in EPDM, please contact Danfoss

2) The EV310A valve in de-energized closed version, is also available for higher differential pressure up to 28 bar. Please contact Danfoss.

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Function NO



Coil voltage disconnected (open):

When the voltage is disconnected, the armature (2) with the valve plates (3) is pressed down by the opening spring (1) and closes the connection between A and R.

At the same time, the connection between P and A is open. The connection between P and A will be open for

as long as the voltage to the coil is disconnected.

armature (2) with the valve plates (3) is lifted and closes the connection between P and A. At the same time, the connection between gates A and R is opened.

When voltage is applied to the coil (4), the

Coil voltage connected (closed):

The connection between P and A will be closed for as long as there is voltage to the coil.

Ordering NO Valve body

Conn	Soal		DN	Media	a temp.	Type de	signation	F	Permissible differential pressure (bar)										
ISO	ma-	K _V value		Min	Max			Code no. without coil	Code no. without coil	Code no. without coil				M	ax.			Suitable coil	
228/1	te- rial	[m ³ /h]	mm	°C	°C	Main type	Specification				coil	il ^{Min.}	Wa a.c.,	iter / d.c.	C a.c.)il / d.c.	A a.c.,	.ir / d.c	types
	FKM	0.04	1.2	-10	+100	EV310A 1.2B	G 18F NO000	032H8125	0	6 9 13	4 7 9 4	6 9 13	4 7 9 4	6 9 13	4 7 9 4	AB AC AM AK			
G 1/8	FKM	0.07	1.5	-10	+100	EV310A 1.5B	G 18F NO000	032H8127	0	3 5 7	2 3.5 5 2	3 5 7	2 3.5 5 2	3 5 7	2 3.5 5 2	AB AC AM AK			
	FKM	0.04	1.2	-10	+100	EV310A 1.2B	G 14F NO000	032H8133	0	6 9 13	4 7 9 4	6 9 13	4 7 9 4	6 9 13	4 7 9 4	AB AC AM AK			
G ¼	FKM	0.07	1.5	-10	+100	EV310A 1.5B	G 14F NO000	032H8135	0	3 5 7	2 3.5 5 2	3 5 7	2 3.5 5 2	3 5 7	2 3.5 5 2	AB AC AM AK			

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3/2-way direct-operated valvesType EV310A

Dimensions and weight



Thread	L	B [n	nm]	н	A	Weight without coil	
ISO 228/1	[mm]	Coil type AB + AC Coil type AM +AK		[mm]	[mm]	[kg]	
G 1/8	26	22	33	54	13	0.085	
G 1/4	35	22	33	59	17.5	0.110	

Coil options

Type AC·70	W a

Type AC: 7.0 W a.c. / 10 W d.c. (Type AB: 4.5 W a.c. / 5 W d.c.)

Type AM: 7.5 W a.c. / 9.5 W d.c. (Type AK: 3,0 W d.c.)

Ordering - coils

See separate data sheet for coils DKACV.PD.600.A

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3/2-way direct-operated valvesType EV310A

Features



EV310A NC Man

- Very compact valves for industrial application, such as control.
 - For water, oil, compressed air and similar neutral media.
- Ambient temperature: Up to +50°C
- Coil enclosure: Up to IP 65
- Thread connections: $G^{1\!/_{\!\!8}}$ and $G^{1\!/_{\!\!4}}$
- Viscosity: Up to 20 cSt
- k_v values up to 0.07 m³/h
- Differential pressure: Up to 20 bar

Tech	nica	l data

Installation	Optional, but vertica	Optional, but vertical solenoid system is recommended					
Pressure range	0 to 20 bar						
Max. test pressure	50 bar						
Time to open and to close	7 - 10 ms (depending	7 - 10 ms (depending on the pressure)					
Ambient temperature	max.+50°C	nax. +50°C					
Medium temperature	FKM: -10° to +100°C						
Viscosity	max. 20 cSt						
Materials	Valve body: 4 Valve orifice: 5 Armature: 5 Armature tube: 5 Armature stop: 5 Spring: 5 Other parts: 5 O-rings/valve plate: 5	Brass, W.no.2.0401 Stainless steel,W.no.1.4305 / AISI 303 Stainless steel,W.no.1.4016 / AISI 430 Stainless steel,W.no.1.4303 / AISI 305 Stainless steel,W.no.1.4016 / AISI 430 Stainless steel,W.no.1.4305 / AISI 303 Stainless steel,W.no.1.4016 / AISI 430F FKM					

Function



Coil voltage disconnected (closed): When the voltage to the coil (4) is disconnected, the armature (2) with the valve plates (3) is pressed down by the closing spring (1) and closes the connection between P and A. At the same time, the connection between gates A and R is opened. The connection between P and A will be closed for as long as the voltage to the coil is disconnected. Coil voltage connected (open):

When voltage is applied, the armature (2) with the valve plates (3) is lifted and closes the connection between A and R. At the same time, the connection between P and A is opened. The connection between P and A will be open for as long as there is voltage to the coil.

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3/2-way direct-operated valvesType EV310A

Ordering

	Soal		DN	Media	a temp.	Type de	Type designation		Permissible differential pressure (bar))	
Conn. ISO	ma-	к _v value	DIN	Min	Max			Code no. without				M	ax			Suitable coil
228/1	rial	[m ³ /h]	[mm]	°C	°C	Main type	Main type Specification	coil	Min.	Wa a.c./	ter d.c.	C a.c./	il ⁄ d.c.	A a.c.,	ir / d.c	types
CI/	FKM	0.04	1.2	-10	+100	EV310A 1.2B	G 18F NC040	032H8141	0	18	18	9	9	20	20	AC, AM
G%	FKM	0.07	1.5	-10	+100	EV310A 1.5B	G 18F NC040	032H8143	0	10	10	5	5	12	12	AC, AM
<u> </u>	FKM	0.04	1.2	-10	+100	EV310A 1.2B	G 14F NC040	032H8151	0	18	18	9	9	20	20	AC, AM
G1⁄4	FKM	0.07	1.5	-10	+100	EV310A 1.5B	G 14F NC040	032H8153	0	10	10	5	5	12	12	AC, AM

Coil options





Ordering - coils

See separate data sheet for coils DKACV.PD.600.A

Dimensions and weight



Thread	1	B [n	nm]	н	Δ	Weight	
ISO 228/1	[mm]	Coil type AC	Coil type AM	[mm]	[mm]	[kg]	
G ¹ / ₈	26	22	33	54	13	0.085	
G 1⁄4	35	22	33	59	17.5	0.110	

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3/2-way direct-operated valvesType EV310A

Features



EV310A NC FL 32

- Very compact valves for industrial application, such as control.
- For water, oil, compressed air and similar neutralmedia.
- Ambient temperature: Up to +50°C
- Coil enclosure: Up to IP 65
- Viscosity: Up to 20 cSt
- Flange connection: 32x32 mm
- Differential pressure: Up to 20 bar

Technical data

Installation	Optional, but vertical solenoid system is recommended					
Pressure range	0 to 20 bar					
Max. test pressure	50 bar					
Time to open and to close	7 - 10 ms (depending on the pressure)					
Ambient temperature	max. +50°C					
Medium temperature	FKM:-10° to +100°C					
Viscosity	max. 20 cSt					
Materials	Valve body:Brass,W.no.2.0401Valve orifice:Stainless steel,W.no.1.4305 / AISI 303Armature:Stainless steel,W.no.1.4016 / AISI 430Armature tube:Stainless steel,W.no.1.4303 / AISI 305Armature stop:Stainless steel,W.no.1.4016 / AISI 430Spring:Stainless steel,W.no.1.4310 / AISI 301Spring extensions:Stainless steel,W.no.1.4104 / AISI 430FO-rings/valve plate:FKM					

Function



Coil voltage disconnected (closed):

When the voltage to the coil (4) is disconnected, the armature (2) with the valve plates (3) is pressed down by the closing spring (1) and closes the connection between P and A.

At the same time, the connection between gates A and R is opened.

The connection between P and A will be closed for as long as the voltage to the coil is disconnected. *Coil voltage connected (open):*

When voltage is applied, the armature (2) with the valve plates (3) is lifted and closes the connection between A and R.

At the same time, the connection between P and A is opened.

The connection between P and A will be open for as long as there is voltage to the coil.

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Data	sheet
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3/2-way direct-operated valvesType EV310A

Ordering

	Seal ma- te-	k _v value	DN	Media temp.		Type designation			Permissible differential pressure (bar)								
Conn. ISO 228/1				Min. °C	Max. °C	Main type	Specification	Code no. without	Min.	Max.					Suit- able coil	Suit- able coil	
	rial	[m ³ /h]	[mm]							Wa a.c./	iter ′ d.c.	C a.c./	il ′ d.c.	A a.c.,	ir /d.c.	types	
32x32	FKM	0.05	1.2	-10	+100	EV310A 1.2B	FL32F NC000	032H8181	0	18	18	9	9	20	20	AC, AM	
JENJE	FKM	0.08	1.5	-10	+100	EV310A 1.5B	FL32F NC000	032H8183	0	10	10	5	5	12	12	AC, AM	

Coil options



Ordering - coils

See separate data sheet for coils DKACV.PD.600.A

Dimensions and weight



Flange	B [n	nm]	н	Weight		
[mm]	Coil type AC	Coil type AM	[mm]	without coil [kg]		
32x32	22	33	50.5	0.085		

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A.P.O. - ELMOS v.o.s., Pražská 90, 509 01 Nová Paka, Tel.: +420 493 504 261, Fax: +420 493 504 257, E-mail: apo@apoelmos.cz, Internet: www.apoelmos.cz