

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

Features



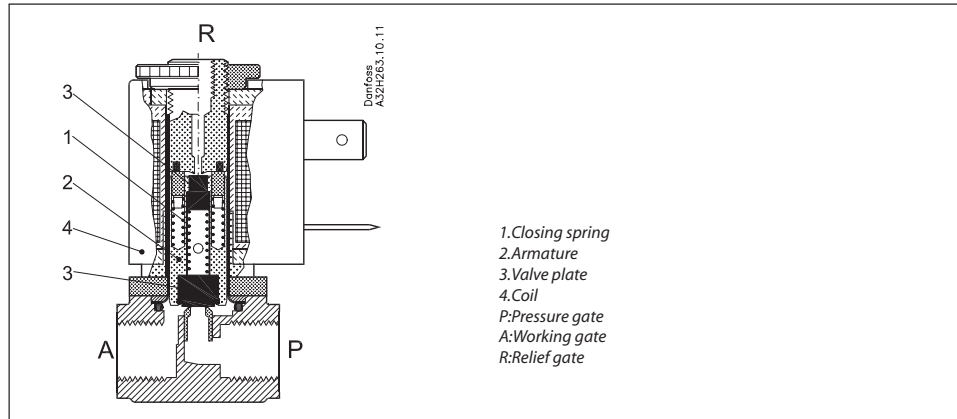
EV310A NC and NO

- Very compact valves for industrial application, such as control.
- For water, oil, compressed air and similar neutral media.
- Ambient temperature: Up to +50 °C
- Coil enclosure: Up to IP 65
- Thread connections: G $\frac{1}{8}$ and G $\frac{1}{4}$
- 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.2.0401 Valve orifice: 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 Armature stop: Stainless steel, W.no.1.4016 / AISI 430 Spring: Stainless steel, W.no.1.4310 / AISI 301 O-rings/valve plate: FKM	

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.

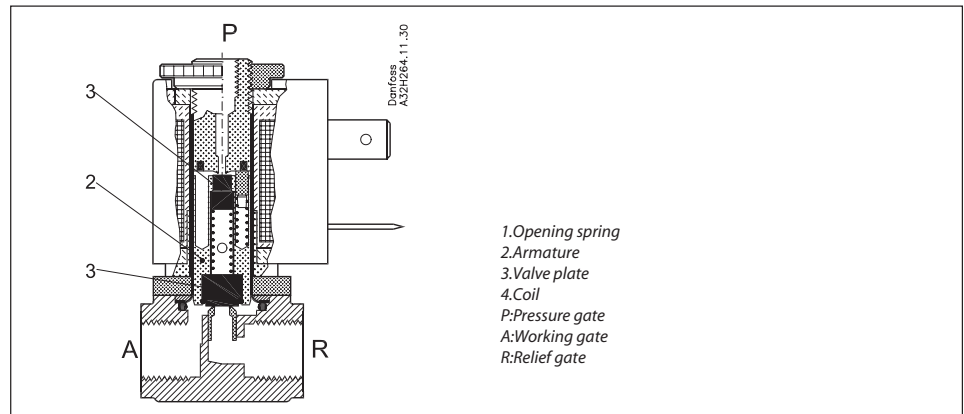
Ordering NC Valve body

Conn. ISO 228/1	Seal material ¹⁾	k _v value [m ³ /h]	DN mm	Media temp.		Type designation		Code no. without coil	Permissible differential pressure (bar) ²⁾						Suitable coil types	
				Min. °C	Max. °C	Main type	Specification		Min.	Max.						
										Water a.c./d.c.	Oil a.c./d.c.	Air a.c./d.c.				
G ¹ / ₂	FKM	0.04	1.2	-10	+100	EV310A 1.2B	G 18F NC000	032H8085	0	18	18	9	9	20	20	AC, AM
	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
G ¹ / ₄	FKM	0.04	1.2	-10	+100	EV310A 1.2B	G 14F NC000	032H8095	0	18	18	9	9	20	20	AC, AM
	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.

Function NO



- 1. Opening spring
- 2. Armature
- 3. Valve plate
- 4. Coil
- P: Pressure gate
- A: Working gate
- R: Relief gate

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.

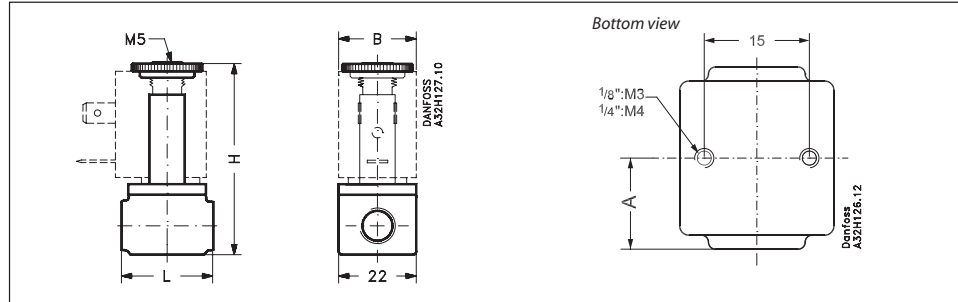
Coil voltage connected (closed):

When voltage is applied to the coil (4), the 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. The connection between P and A will be closed for as long as there is voltage to the coil.

Ordering NO Valve body

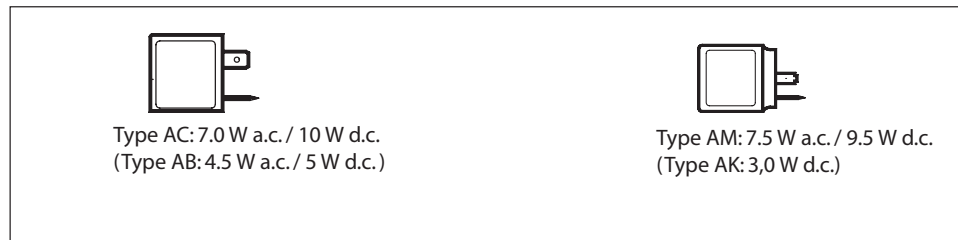
Conn. ISO 228/1	Seal material	k _v value [m ³ /h]	DN mm	Media temp.		Type designation		Code no. without coil	Permissible differential pressure (bar)						Suitable coil types	
				Min. °C	Max. °C	Main type	Specification		Min.	Max.						
										Water a.c./ d.c.	Oil a.c./ d.c.	Air a.c./ d.c.				
G ½	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
	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
G ¼	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
	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

Dimensions and weight



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

Coil options



Ordering - coils

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

Features



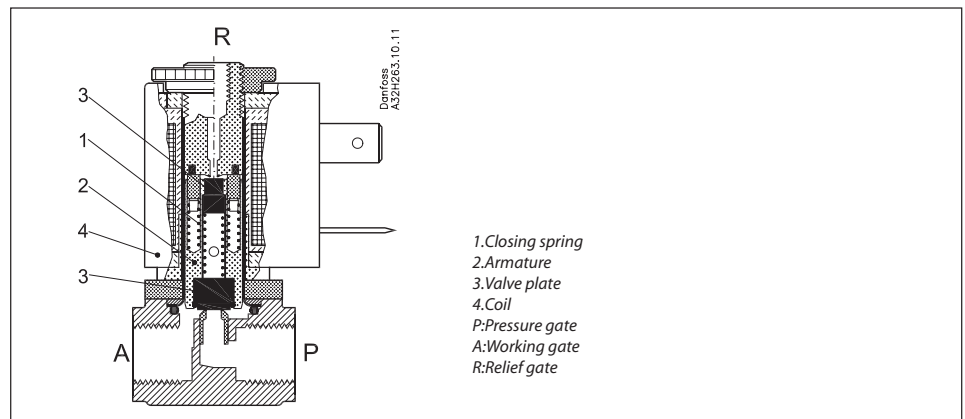
EV310A NC Man

- 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 $\frac{1}{8}$ and G $\frac{1}{4}$
- Viscosity: Up to 20 cSt
- k_v values up to 0.07 m³/h
- 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.2.0401 Valve orifice: 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 Armature stop: Stainless steel, W.no.1.4016 / AISI 430 Spring: Stainless steel, W.no.1.4305 / AISI 303 Other parts: Stainless steel, W.no.1.4016 / AISI 430F O-rings/valve plate: FKM

Function



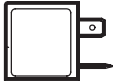
Coil voltage disconnected (closed):
 When the voltage to the coil (4) is disconnected, the armature (2) with the valve plates (3) is pressed down by the closing spring (1) and closes the connection between P and A. At the same time, the connection between gates A and R is opened. The connection between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


Ordering

Conn. ISO 228/1	Seal material	k _v value [m ³ /h]	DN [mm]	Media temp.		Type designation		Code no. without coil	Permissible differential pressure (bar)						Suitable coil types	
				Min. °C	Max. °C	Main type	Specification		Min.	Max						
										Water a.c./d.c.	Oil a.c./d.c.	Air a.c./d.c.				
G ¹ / ₈	FKM	0.04	1.2	-10	+100	EV310A 1.2B	G 18F NC040	032H8141	0	18	18	9	9	20	20	AC, AM
	FKM	0.07	1.5	-10	+100	EV310A 1.5B	G 18F NC040	032H8143	0	10	10	5	5	12	12	AC, AM
G ¹ / ₄	FKM	0.04	1.2	-10	+100	EV310A 1.2B	G 14F NC040	032H8151	0	18	18	9	9	20	20	AC, AM
	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



Type AC:
7.0 W ac / 10 W dc

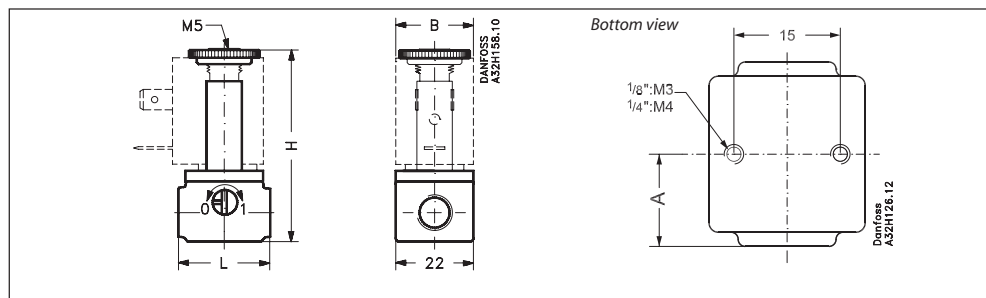


Type AM:
7.5 W ac / 9.5 W dc

Ordering - coils

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

Dimensions and weight



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

Features



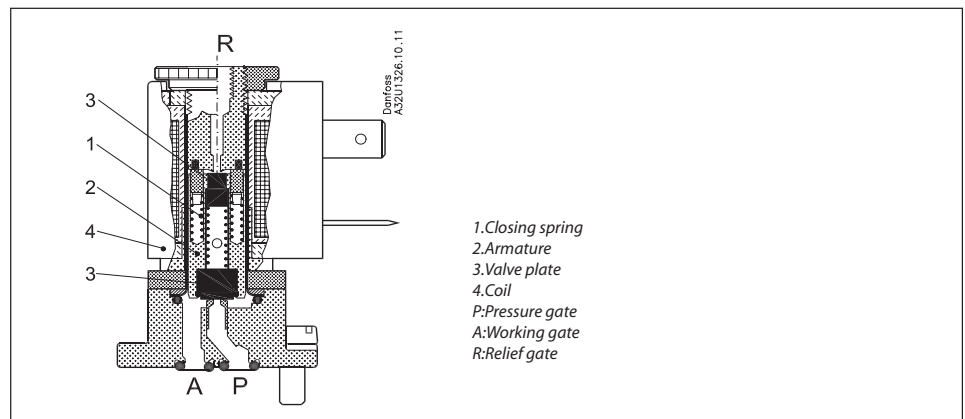
EV310A NC FL 32

- 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
- 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.2.0401 Valve orifice: 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 Armature stop: Stainless steel, W.no.1.4016 / AISI 430 Spring: Stainless steel, W.no.1.4310 / AISI 301 Spring extensions: Stainless steel, W.no.1.4104 / AISI 430F O-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.

Ordering

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

Coil options



Type AC:
7.0 W ac / 10 W dc

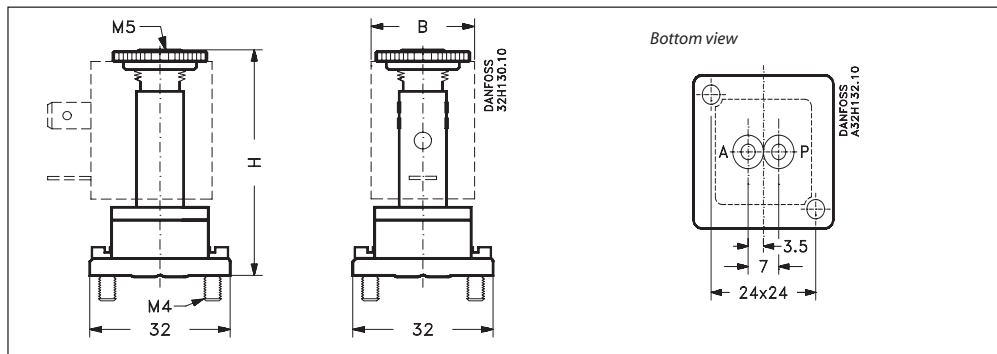


Type AM:
7.5 W ac / 9.5 W dc

Ordering - coils

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

Dimensions and weight



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

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.

DK-6000 Kolding
Denmark