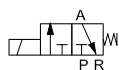


Solenoid valves
3/2-way direct-operated
Type EV310B

3/2-way direct-operated valves



De-energized closed

Type EV310B NC
for neutral liquids and gases
DN 1.5 - 3.5 B

G 1/8
 G 1/4
 G 3/8

Also available with manual override

Features

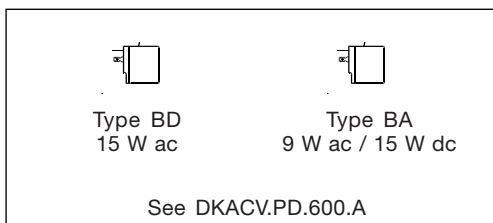


- Very robust valves for industrial application, such as control
- For water, oil, compressed air and similar neutral media
- K_v value up to 0.40 m³/h
- Differential pressure: Up to 20 bar
- Viscosity: Up to 50 cSt
- Ambient temperature: Up to +40°C
- Coil enclosure: Up to IP 65
- Connections: G 1/8 and G 3/8 and flanges
- Also available with manual override

Technical data

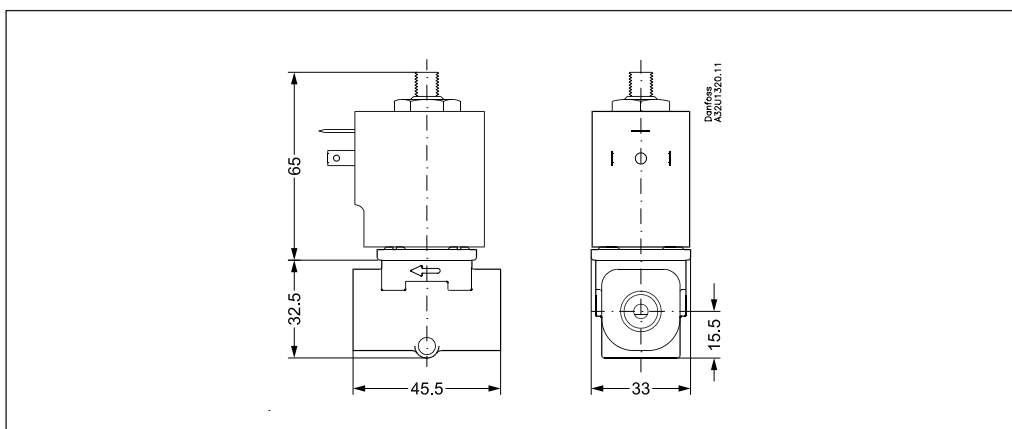
Installation	Optional, but vertical solenoid system is recommended		
Pressure range	0 to 20 bar		
Max. test pressure	50 bar		
Time to open and to close	10 - 20 ms (depending on the pressure)		
Ambient temperature	max. +40°C		
Medium temperature	-10 to +100°C		
Viscosity	max. 50 cSt		
Materials	Valve body:	Brass,	W.no. 2.0402
	Armature:	Stainless steel,	W.no. 1.4105 / AISI 430FR
	Armature tube:	Stainless steel,	W.no. 1.4306 / AISI 304L
	Armature stop:	Stainless steel,	W.no. 1.4105 / AISI 430FR
	Springs:	Stainless steel,	W.no. 1.4310 / AISI 301
	Seal material:	See specific valve data	

Coil options



Danfoss also offers
EEx m II T4 coils for
 use in explosion risk
 areas - please see
 coil data sheet
 DKACV.PD.600.A

Dimensions and weight



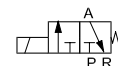
Thread ISO 228/1	A [mm]	B [mm]	Weight without coil [kg]
G 1/8-1/4-3/8	22	7.5	0.220

3/2-way direct-operated valves

G 1/8
G 1/4

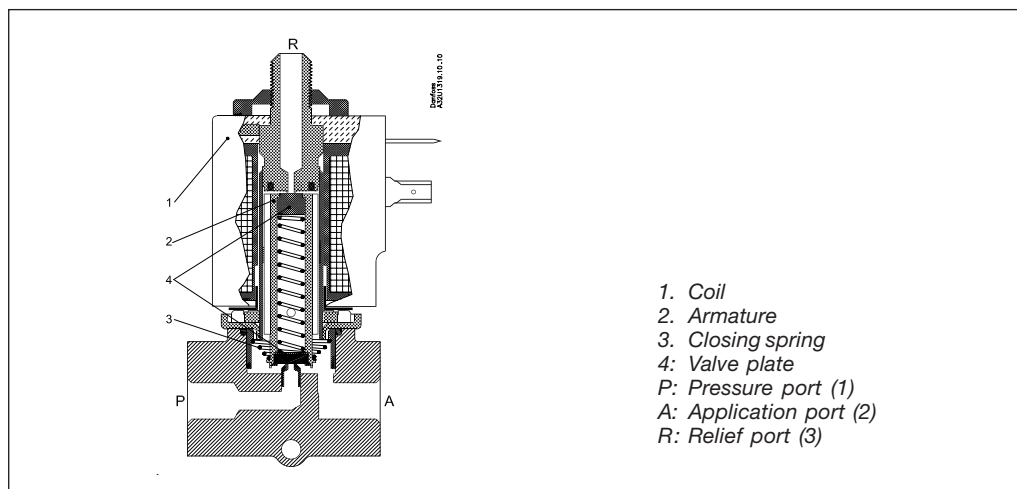
Type EV310B NC
for neutral liquids and gases
DN 1.5 - 3.5 B

De-energized
closed



Also available with manual override

Function



- 1. Coil
- 2. Armature
- 3. Closing spring
- 4. Valve plate
- P: Pressure port (1)
- A: Application port (2)
- R: Relief port (3)

Coil voltage disconnected (closed):
When the voltage to the coil (1) is disconnected, the armature (2) with the valve plates (4) is pressed down by the closing spring (3) and closes the connection between P and A. At the same time, the connection between ports 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. On valves with manual override the connection between P and A can be opened using an opening screw in the valve body.

Coil voltage connected (open):
When voltage is applied, the armature (2) with the valve plates (4) 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.

EV 310B, NC versions for AC (50 / 60 Hz) and DC

Brass bodies

Connections	Seal material **	Kv m ³ /h	DN mm	Media temp		Type designation *		Code no. without coil	Permissible differential pressure (bar)/Coil Type		
				Min.	Max.	Main type	Specification		BA		BD
				°C	°C				9W a.c.	15W d.c.	15W a.c.
G1/8	FKM	0.08	1,5	-10	+100	EV310B 1,5 B	G 18 F NC 000	032U4900	20	20	20
G1/8	FKM	0.15	2,0	-10	+100	EV310B 2,0 B	G 18 F NC 000	032U4901	16	16	16
G1/8	FKM	0.30	3,0	-10	+100	EV310B 3,0 B	G 18 F NC 000	032U4902	7	7	7
G1/4	FKM	0.08	1,5	-10	+100	EV310B 1,5 B	G 14 F NC 000	032U4903	20	20	20
G1/4	FKM	0.15	2,0	-10	+100	EV310B 2,0 B	G 14 F NC 000	032U4904	16	16	16
G1/4	FKM	0.30	3,0	-10	+100	EV310B 3,0 B	G 14 F NC 000	032U4905	7	7	7
G1/4	FKM	0.40	3,5	-10	+100	EV310B 3,5 B	G 14 F NC 000	032U4906	5	5	5
G 3/8	FKM	0.15	2,0	-10	+100	EV310B 2,0 B	G 38 F NC 000	032U4907	16	16	16
G 3/8	FKM	0.30	3,0	-10	+100	EV310B 3,0 B	G 38 F NC 000	032U4908	7	7	7
G 3/8	FKM	0.40	3,5	-10	+100	EV310B 3,5 B	G 38 F NC 000	032U4909	5	5	5

Including manual override

G1/8	FKM	0.08	1,5	-10	+100	EV310B 1,5 B	G 18 F NC 040	032U4915	20	20	20
G1/8	FKM	0.15	2,0	-10	+100	EV310B 2,0 B	G 18 F NC 040	032U4916	16	16	16
G1/8	FKM	0.30	3,0	-10	+100	EV310B 3,0 B	G 18 F NC 040	032U4917	7	7	7
G1/4	FKM	0.08	1,5	-10	+100	EV310B 1,5 B	G 14 F NC 040	032U4918	20	20	20
G1/4	FKM	0.15	2,0	-10	+100	EV310B 2,0 B	G 14 F NC 040	032U4919	16	16	16
G1/4	FKM	0.30	3,0	-10	+100	EV310B 3,0 B	G 14 F NC 040	032U4920	7	7	7
G1/4	FKM	0.40	3,5	-10	+100	EV310B 3,5 B	G 14 F NC 040	032U4921	5	5	5

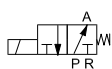
* The EV310B NC is also available in stainless steel bodies, please contact Danfoss for further details.

**EPDM and NBR available as option

Ordering - coils

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

3/2-way direct-operated valves



De-energized
open

Also available with manual override

Type EV310B NO
for neutral liquids and gases
DN 1.5 - 3.5 B

G 1/8
G 1/4
G 3/8

Features

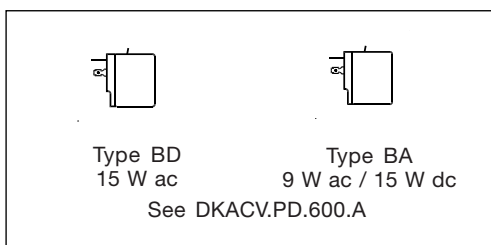


- Very robust valves for industrial application, such as control
- For water, oil, compressed air and similar neutral media
- K_v value up to 0.40 m³/h
- Differential pressure: Up to 20 bar
- Viscosity: Up to 50 cSt
- Ambient temperature: Up to +40°C
- Coil enclosure: Up to IP 65
- Thread connections: G 1/8 and G 3/8
- Also available with manual override

Technical data

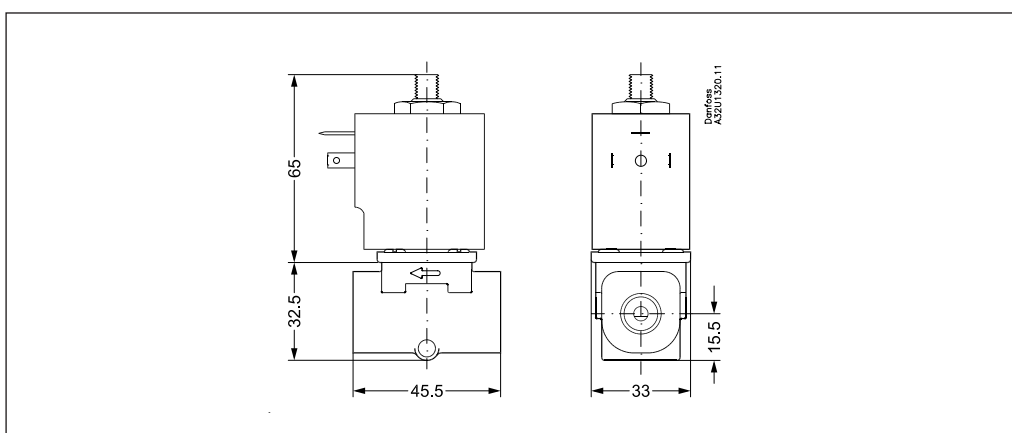
Installation	Optional, but vertical solenoid system is recommended		
Pressure range	0 to 20 bar		
Max. test pressure	50 bar		
Time to open and to close	10 - 20 ms (depending on the pressure)		
Ambient temperature	max. +40°C		
Medium temperature	-10 to +100°C		
Viscosity	max. 50 cSt		
Materials	Valve body:	Brass,	W.no. 2.0402
	Armature:	Stainless steel,	W.no. 1.4105 / AISI 430FR
	Armature tube:	Stainless steel,	W.no. 1.4306 / AISI 304L
	Armature stop:	Stainless steel,	W.no. 1.4105 / AISI 430FR
	Springs:	Stainless steel,	W.no. 1.4310 / AISI 301
	Seal material:	See specific valve data	

Coil options



Danfoss also offers
EEx m II T4 coils for
use in explosion risk
areas - please see
coil data sheet
DKACV.PD.600.A

Dimensions and weight



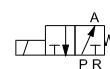
Thread ISO 228/1	A [mm]	B [mm]	Weight without coil [kg]
G 1/8-1/4-3/8	22	7.5	0.220

3/2-way direct-operated valves

G 1/8
G 1/4

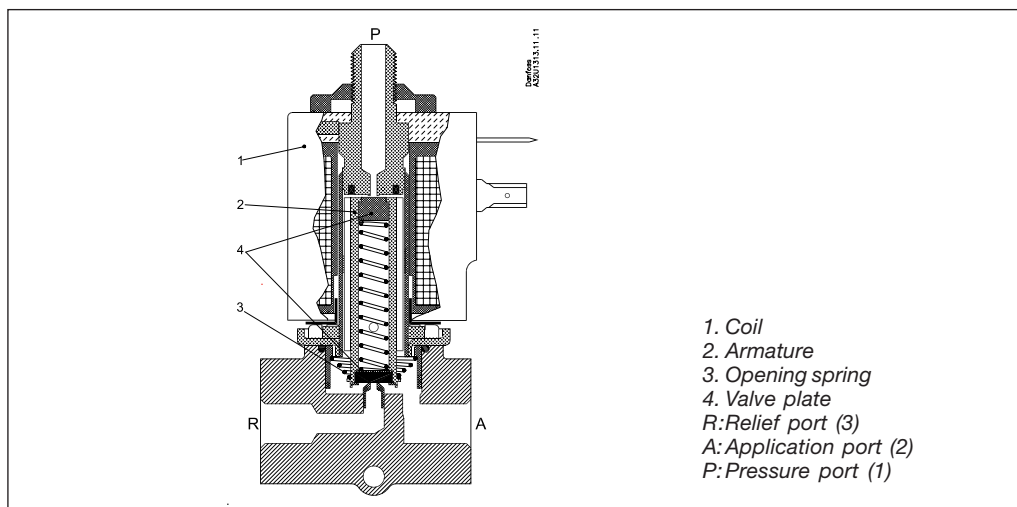
Type EV310B NO
for neutral liquids and gases
DN 1.5 - 3.5 B

De-energized
open



Also available with manual override

Function



- 1. Coil
- 2. Armature
- 3. Opening spring
- 4. Valve plate
- R: Relief port (3)
- A: Application port (2)
- P: Pressure port (1)

Coil voltage disconnected (open):

When the voltage is disconnected, the armature (2) with the valve plates (4) is pressed down by the opening spring (3) and closes the connection between A and R. At the same time, the connection between ports 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.

On valves with manual override the connection between P and A can be closed using a closing screw in the valve body.

Coil voltage connected (closed):

When voltage is applied to the coil (1), the armature (2) with the valve plates (4) is lifted and closes the connection between P and A. At the same time, the connection between ports A and R is opened. The connection between P and A will be closed for as long as there is voltage to the coil.

EV 310B NO versions for AC (50Hz) and DC

Brass bodies

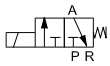
Connections	Seal material**	Kv	DN	Media temp		Type designation		Code no. without coil	Permissible differential pressure (Bar)/Coil type		
				Min.	Max.	Main type	Specification		BA	BD	
				°C	°C				9W a.c.	15W d.c.	15W a.c.
G1/8	FKM	0.08	1,5	-10	+100	EV310B 1,5 B	G 18 F NO 000	032U4926	20	20	20
G1/8	FKM	0.15	2,0	-10	+100	EV310B 2,0 B	G 18 F NO 000	032U4927	16	16	16
G1/8	FKM	0.30	3,0	-10	+100	EV310B 3,0 B	G 18 F NO 000	032U4928	7	7	7
G1/4	FKM	0.08	1,5	-10	+100	EV310B 1,5 B	G 14 F NO 000	032U4929	20	20	20
G1/4	FKM	0.15	2,0	-10	+100	EV310B 2,0 B	G 14 F NO 000	032U4930	16	16	16
G1/4	FKM	0.30	3,0	-10	+100	EV310B 3,0 B	G 14 F NO 000	032U4931	7	7	7
G1/4	FKM	0.40	3,5	-10	+100	EV310B 3,5 B	G 14 F NO 000	032U4932	5	5	5
G 3/8	FKM	0.15	2,0	-10	+100	EV310B 2,0 B	G 38 F NO 000	032U4933	16	16	16
G 3/8	FKM	0.30	3,0	-10	+100	EV310B 3,0 B	G 38 F NO 000	032U4934	7	7	7
G 3/8	FKM	0.40	3,5	-10	+100	EV310B 3,5 B	G 38 F NO 000	032U4935	5	5	5

Including manual override

G1/8	FKM	0.08	1,5	-10	+100	EV310B 1,5 B	G 18 F NO 040	032U4940	20	20	20
G1/8	FKM	0.15	2,0	-10	+100	EV310B 2,0 B	G 18 F NO 040	032U4941	16	16	16
G1/8	FKM	0.30	3,0	-10	+100	EV310B 3,0 B	G 18 F NO 040	032U4942	7	7	7
G1/4	FKM	0.08	1,5	-10	+100	EV310B 1,5 B	G 14 F NO 040	032U4943	20	20	20
G1/4	FKM	0.15	2,0	-10	+100	EV310B 2,0 B	G 14 F NO 040	032U4944	16	16	16
G1/4	FKM	0.30	3,0	-10	+100	EV310B 3,0 B	G 14 F NO 040	032U4945	7	7	7
G1/4	FKM	0.40	3,5	-10	+100	EV310B 3,5 B	G 14 F NO 040	032U4946	5	5	5

**EPDM and NBR available as option

3/2-way direct-operated valves



De-energized closed

Type EV310B NC FL
for neutral liquids and gases
DN 1.5 - 3.0 B

Flange
 32 × 32 mm

Also available with manual override

Features

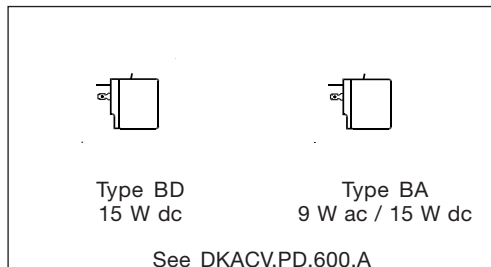


- Very robust valves for industrial application, such as control
- For water, oil, compressed air and similar neutral media
- K_v value up to 0.30 m³/h
- Differential pressure: Up to 20 bar
- Viscosity: Up to 50 cSt
- Ambient temperature: Up to +40°C
- Coil enclosure: Up to IP 65
- Flange connection: 32 × 32 mm
- Also available with manual override

Technical data

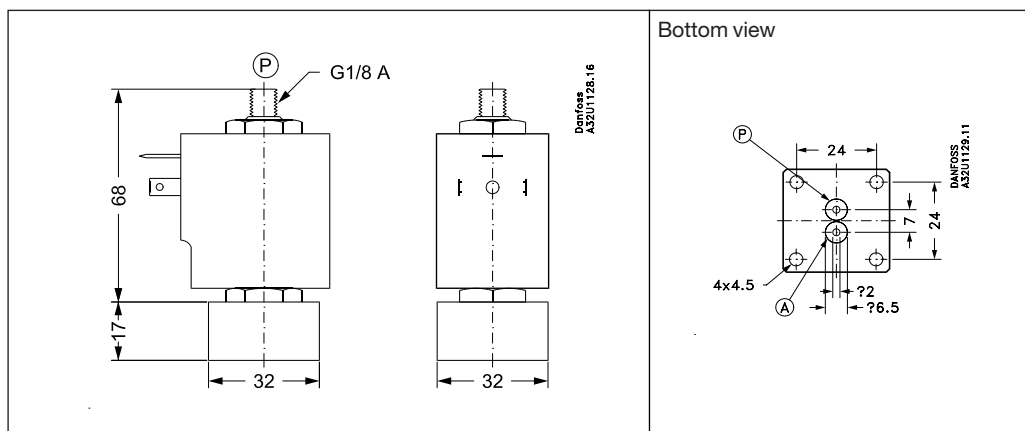
Installation	Optional, but vertical solenoid system is recommended		
Pressure range	0 to 20 bar		
Max. test pressure	50 bar		
Time to open and to close	10 - 20 ms (depending on the pressure)		
Ambient temperature	max. +40°C		
Medium temperature	-10 to +100°C		
Viscosity	max. 50 cSt		
Materials	Valve body:	Brass,	W.no. 2.0402
	Armature:	Stainless steel,	W.no. 1.4105 / AISI 430FR
	Armature tube:	Stainless steel,	W.no. 1.4306 / AISI 304L
	Armature stop:	Stainless steel,	W.no. 1.4105 / AISI 430FR
	Springs:	Stainless steel,	W.no. 1.4310 / AISI 301
	Seal material:	See specific valve data	

Coil options



Danfoss also offers
Ex m II T4 coils for
 use in explosion risk
 areas - please see
 coil data sheet
 DKACV.PD.600.A

Dimensions and weight



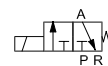
Weight: 0.185 kg

3/2-way direct-operated valves

Flange
32 × 32 mm

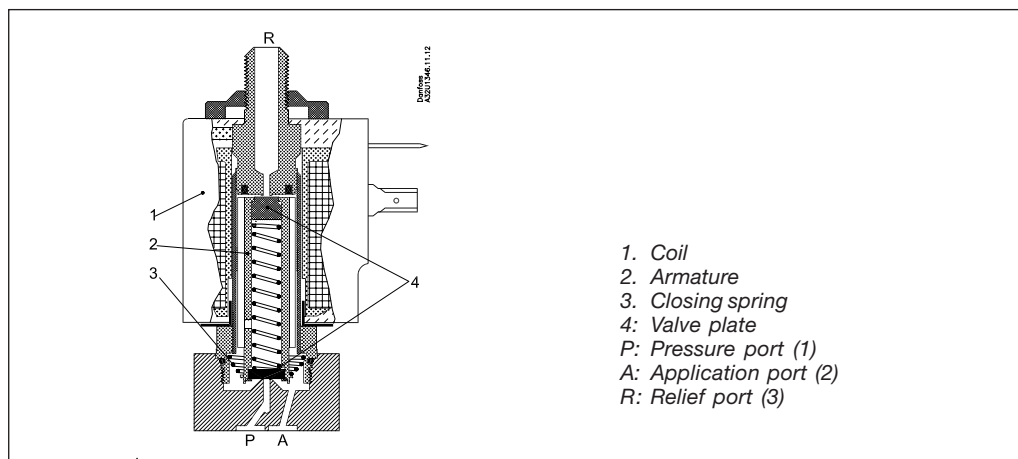
Type EV310B NC FL
for neutral liquids and gases
DN 1.5 - 3.0 B

De-energized
closed



Also available with manual override

Function



Coil voltage disconnected (closed):

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

On valves with manual override the connection between P and A can be opened using an opening screw in the valve body.

Coil voltage connected (open):

When voltage is applied, the armature (2) with the valve plates (4) 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.

Connections	Seal material**	Kv m ³ /h	DN mm	Media temp		Type designation		Code no. without coil	Permissible differential pressure (Bar)/Coil Type		
				Min.	Max.	Main type	Specification		BA		BD
				°C	°C				9W a.c.	15W d.c.	15W a.c.
Flange 32x32	FKM	0.08	1.5	-10	+100	EV310B 1,5 B	FL32 F NC 000	032U4911	20	20	20
Flange 32x32	FKM	0.15	2.0	-10	+100	EV310B 2,0 B	FL32 F NC 000	032U4912	16	16	16
Flange 32x32	FKM	0.30	3.0	-10	+100	EV310B 3,0 B	FL32 F NC 000	032U4913	7	7	7

Including manual override

Flange 32x32	FKM	0.08	1.5	-10	+100	EV310B 1,5 B	FL32 F NC 040	032U4922	20	20	20
Flange 32x32	FKM	0.15	2.0	-10	+100	EV310B 2,0 B	FL32 F NC 040	032U4923	16	16	16

** Suitable for oil, water and air.

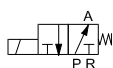
Ordering - coils

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

Base plate

See page 10

3/2-way direct-operated valves



De-energized open

Type EV310B NO FL
for neutral liquids and gases
DN 1.5 - 3.0 B

Flange
32 × 32 mm

Also available with manual override

Features

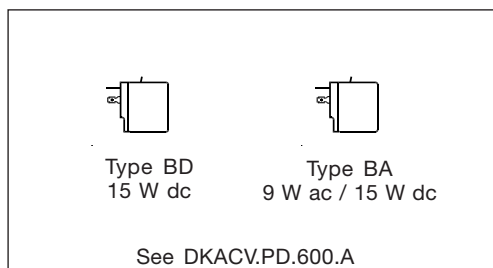


- Very robust valves for industrial application, such as control
- For water, oil, compressed air and similar neutral media
- K_v value up to 0.30 m³/h
- Differential pressure: Up to 20 bar
- Viscosity: Up to 50 cSt
- Ambient temperature: Up to +40°C
- Coil enclosure: Up to IP 65
- Flange connection: 32 × 32 mm
- Also available with manual override and base plate on request - please contact Danfoss

Technical data

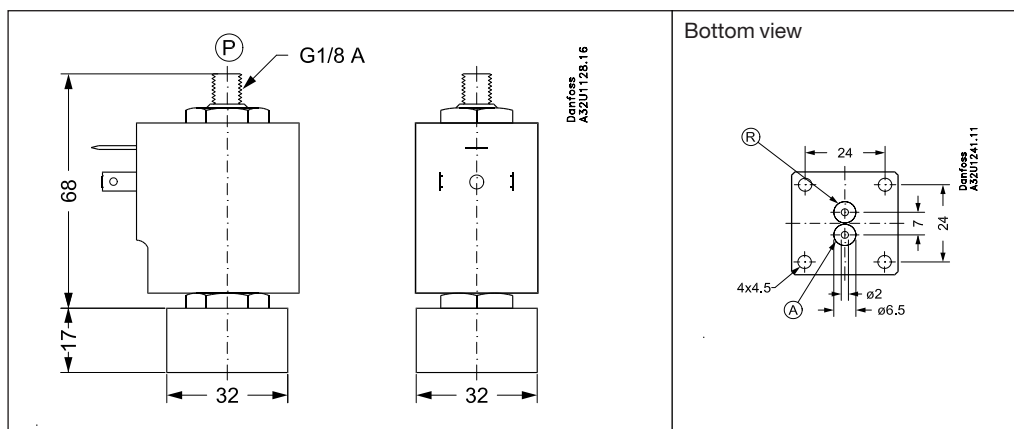
Installation	Optional, but vertical solenoid system is recommended		
Pressure range	0 to 10 bar		
Max. test pressure	50 bar		
Time to open and to close	10 - 20 ms (depending on the pressure)		
Ambient temperature	max. +40°C		
Medium temperature	-10 to +100°C		
Viscosity	max. 50 cSt		
Materials	Valve body:	Brass,	W.no. 2.0402
	Armature:	Stainless steel,	W.no. 1.4105 / AISI 430FR
	Armature tube:	Stainless steel,	W.no. 1.4306 / AISI 304L
	Armature stop:	Stainless steel,	W.no. 1.4105 / AISI 430FR
	Springs:	Stainless steel,	W.no. 1.4310 / AISI 301
	O-rings/valve plate:	NBR	

Coil options



Danfoss also offers EEx m II T4 coils for use in explosion risk areas - please see coil data sheet DKACV.PD.600.A

Dimensions and weight

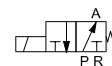


3/2-way direct-operated valves

Flange
32 × 32 mm

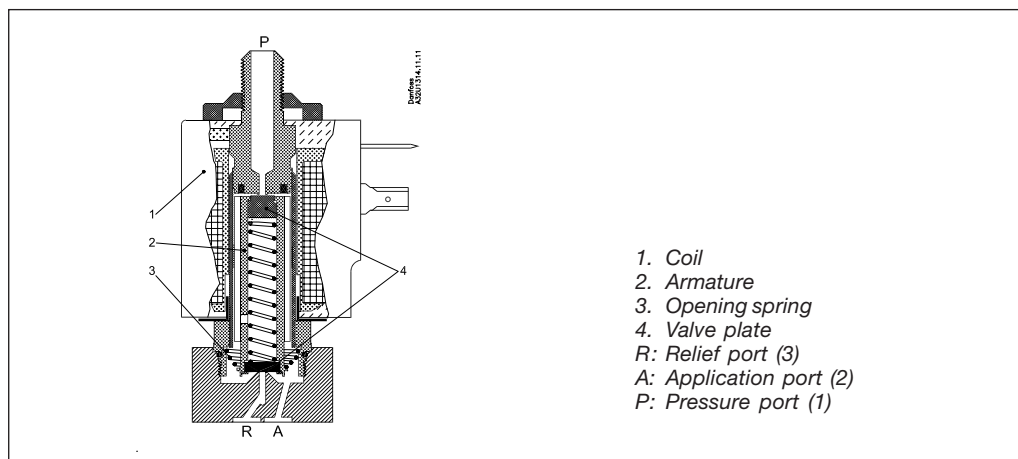
Type EV310B NO FL
for neutral liquids and gases
DN 1.5 - 3.0 B

De-energized
open



Also available with manual override

Function



- 1. Coil
- 2. Armature
- 3. Opening spring
- 4. Valve plate
- R: Relief port (3)
- A: Application port (2)
- P: Pressure port (1)

Coil voltage disconnected (open):

When the voltage is disconnected, the armature (2) with the valve plates (4) is pressed down by the opening spring (3) and closes the connection between A and R. At the same time, the connection between ports 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.

On valves with manual override the connection between P and A can be closed using a closing screw in the valve body.

Coil voltage connected (closed):

When voltage is applied to the coil (1), the armature (2) with the valve plates (4) is lifted and closes the connection between P and A. At the same time, the connection between ports A and R is opened. The connection between P and A will be closed for as long as there is voltage to the coil.

Connections	Seal material**	Kv m³/h	DN mm	Media temp		Type designation		Code no. without coil	Permissible differential pressure (Bar)/Coil Type		
				Min.	Max.	Main type	Specification		BA		BD
				°C	°C				9W a.c.	15W d.c.	15W a.c.
Flange 32x32	FKM	0.08	1.5	-10	+100	EV310B 1,5 B	FL32 F NO 000	032U4936	20	20	20
Flange 32x32	FKM	0.15	2.0	-10	+100	EV310B 2,0 B	FL32 F NO 000	032U4937	16	16	16
Flange 32x32	FKM	0.30	3.0	-10	+100	EV310B 3,0 B	FL32 F NO 000	032U4938	7	7	7

Including manual override

Flange 32x32	FKM	0.08	1.5	-10	+100	EV310B 1,5 B	FL32 F NO 040	032U4947	20	20	20
Flange 32x32	FKM	0.15	2.0	-10	+100	EV310B 2,0 B	FL32 F NO 040	032U4948	16	16	16

Ordering - coils

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

Base plate

See page 11

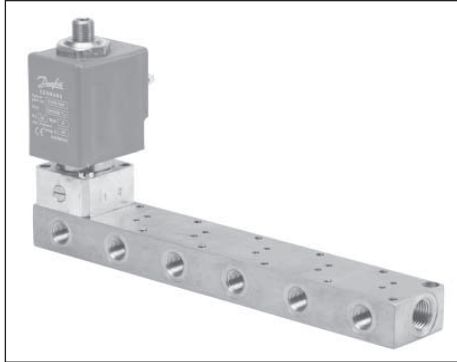
Base plates and spare parts

A ports: G 1/8
P port: G 1/4

for solenoid valves
3/2-way direct-operated
type EV310B

Single base
or manifold

Features

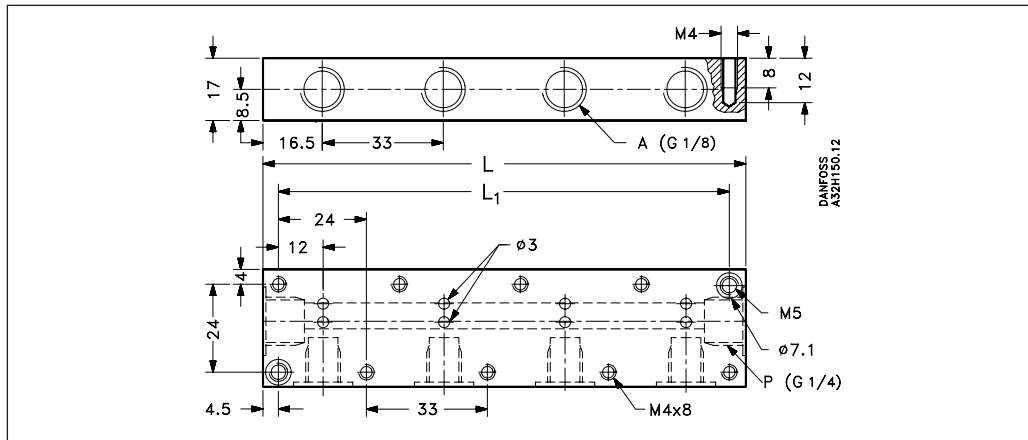


The base plates are an ideal solution to build up compact EV310B FL valve groups with a common supply.

The brass base plates have a full-length P-drilling to supply up to 6 valves. Likewise, the base plates have up to 6 A ports. The connection from the common P-drilling to each A port is controlled by an EV310B valve mounted on the base plate's 32 x 32 mm flange counterpart above the A port.

The common P port has a G 1/4 thread. The A ports have G 1/8 threads.

Dimensions



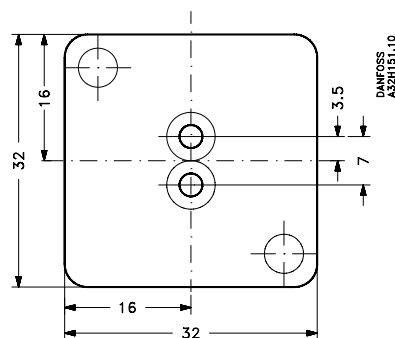
Possible no. of valves	P port: ISO 228/1	A ports: ISO 228/1	L [mm]	L1 [mm]
1	G 1/4	G 1/8	35	24
2	G 1/4	G 1/8	68	57
3	G 1/4	G 1/8	101	90
4	G 1/4	G 1/8	134	123
5	G 1/4	G 1/8	167	156
6	G 1/4	G 1/8	200	189

Ordering, base plate

Possible no. of EV310B FL valves	1	2	3	4	5	6
Code no.	032H8240	032H8241	032H8242	032H8243	032H8244	032H8245

Cover plate

Cover plate for 32 x 32 flange connection including O-rings and mounting screws.

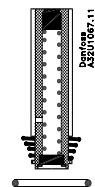


Code no.

032H8251

Spare parts kit

The spare parts kit comprises an armature with mounted spring.



Type	Code no. Thread conn.	Fl. version	Seal Material
NC	032U2033	032U2034	FKM
NO	032U2035	032U2036	FKM

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DK-6000 Kolding
Denmark