

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

Features



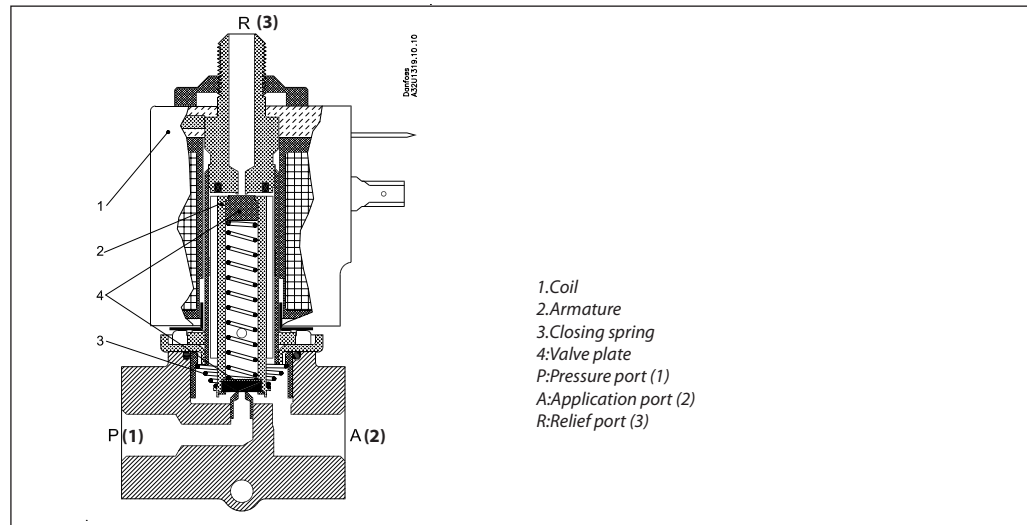
EV310B NC

- 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, G 1/4 and G 3/8

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 - 20ms (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: FKM |

Function NC



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.

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.

Ordering - Valve bodies

NC versions for AC (50/60Hz) and DC

| Con- nec- tions | Seal mate- rial | k _v - value [m ³ /h] | DN [mm] | Media temp. | | Type designation | | Code no. without coil | Permissible differential pressure (bar)/ coil Type | | |
|-----------------------|-----------------------|--|------------|--------------|--------------|------------------|---------------|-----------------------------|--|--------------|----|
| | | | | Min. [°C] | Max. [°C] | Main type | Specification | | BA | | BD |
| | | | | | | | | | 9 W a.c. | 15 W d.c. | |
| G ¼ | FKM | 0.08 | 1.5 | -10 | +100 | EV310B 1,5 B | G 18 F NC 000 | 032U4900 | 20 | 20 | 20 |
| | FKM | 0.15 | 2.0 | -10 | +100 | EV310B 2,0 B | G 18 F NC 000 | 032U4901 | 16 | 16 | 16 |
| | FKM | 0.30 | 3.0 | -10 | +100 | EV310B 3,0 B | G 18 F NC 000 | 032U4902 | 7 | 7 | 7 |
| G ¼ | FKM | 0.08 | 1.5 | -10 | +100 | EV310B 1,5 B | G 14 F NC 000 | 032U4903 | 20 | 20 | 20 |
| | FKM | 0.15 | 2.0 | -10 | +100 | EV310B 2,0 B | G 14 F NC 000 | 032U4904 | 16 | 16 | 16 |
| | FKM | 0.30 | 3.0 | -10 | +100 | EV310B 3,0 B | G 14 F NC 000 | 032U4905 | 7 | 7 | 7 |
| | FKM | 0.40 | 3.5 | -10 | +100 | EV310B 3,5 B | G 14 F NC 000 | 032U4906 | 5 | 5 | 5 |
| G ¾ | FKM | 0.15 | 2.0 | -10 | +100 | EV310B 2,0 B | G 38 F NC 000 | 032U4907 | 16 | 16 | 16 |
| | FKM | 0.30 | 3.0 | -10 | +100 | EV310B 3,0 B | G 38 F NC 000 | 032U4908 | 7 | 7 | 7 |
| | FKM | 0.40 | 3.5 | -10 | +100 | EV310B 3,5 B | G 38 F NC 000 | 032U4909 | 5 | 5 | 5 |

Features



EV310B NO

- 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
- Thread connections: G 1/8, G 1/4 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 - 20ms (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: FKM |

Ordering - Valve bodies

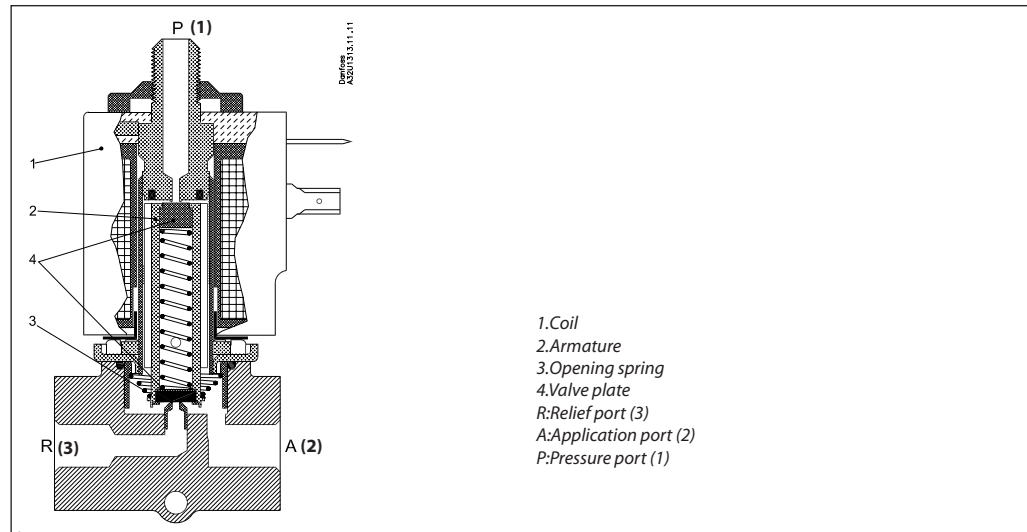
NO versions for AC (50/60Hz) and DC

| Con- nec- tions | Seal mate- rial | k_v - value [m ³ /h] | DN [mm] | Media temp. | | Type designation | | Code no. without coil | Permissible differential pressure (bar)/ coil Type | | |
|-----------------------|-----------------------|---|------------|--------------|--------------|------------------|---------------|-----------------------------|--|--------------|----|
| | | | | Min. [°C] | Max. [°C] | Main type | Specification | | BA | | BD |
| | | | | | | | | | 9 W a.c. | 15 W d.c. | |
| G 1/8 | FKM | 0.08 | 1.5 | -10 | +100 | EV310B 1,5 B | G 18 F NO 000 | 032U4926 | 20 | 20 | 20 |
| | FKM | 0.15 | 2.0 | -10 | +100 | EV310B 2,0 B | G 18 F NO 000 | 032U4927 | 16 | 16 | 16 |
| G 1/4 | FKM | 0.08 | 1.5 | -10 | +100 | EV310B 1,5 B | G 14 F NO 000 | 032U4929 | 20 | 20 | 20 |
| | FKM | 0.15 | 2.0 | -10 | +100 | EV310B 2,0 B | G 14 F NO 000 | 032U4930 | 16 | 16 | 16 |
| | FKM | 0.30 | 3.0 | -10 | +100 | EV310B 3,0 B | G 14 F NO 000 | 032U4931 | 7 | 7 | 7 |
| G 3/8 | FKM | 0.15 | 2.0 | -10 | +100 | EV310B 2,0 B | G 38 F NO 000 | 032U4933 | 16 | 16 | 16 |
| | FKM | 0.30 | 3.0 | -10 | +100 | EV310B 3,0 B | G 38 F NO 000 | 032U4934 | 7 | 7 | 7 |

Including manual override

| | | | | | | | | | | | |
|-------|-----|------|-----|-----|------|--------------|---------------|-----------------|----|----|----|
| G 1/8 | FKM | 0.15 | 2.0 | -10 | +100 | EV310B 2,0 B | G 18 F NO 040 | 032U4941 | 16 | 16 | 16 |
| G 1/4 | FKM | 0.08 | 1.5 | -10 | +100 | EV310B 1,5 B | G 14 F NO 040 | 032U4943 | 20 | 20 | 20 |
| | FKM | 0.15 | 2.0 | -10 | +100 | EV310B 2,0 B | G 14 F NO 040 | 032U4944 | 16 | 16 | 16 |

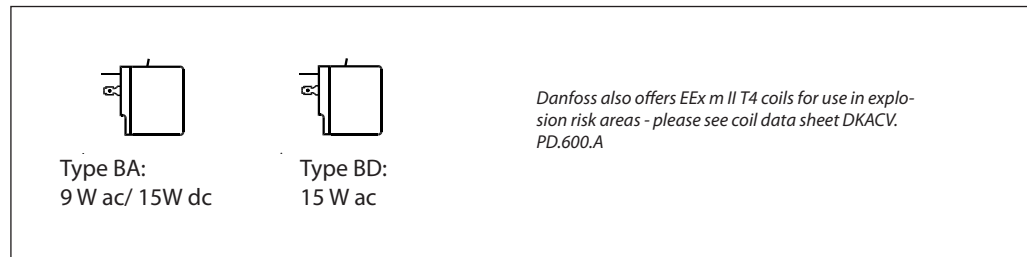
Function NO



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.

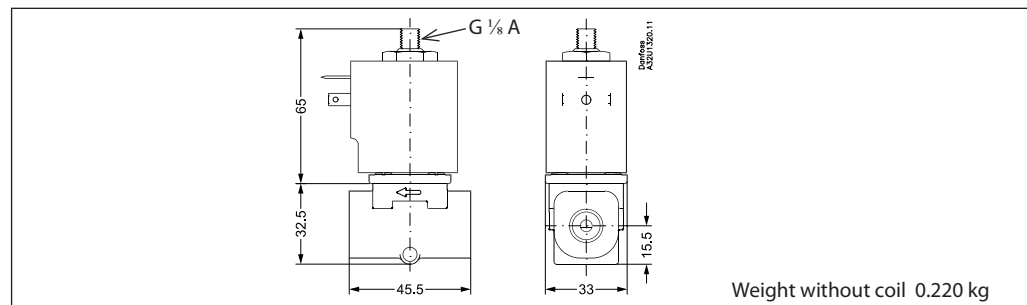
Coil options



Ordering - coils

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

Dimensions and weight



Features



EV310B NC FL32

- Very robust valves for industrial application, such as control
- For water, oil, compressed air and similar neutral media
- K_v value up to 0.15 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 - 20ms (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: FKM |

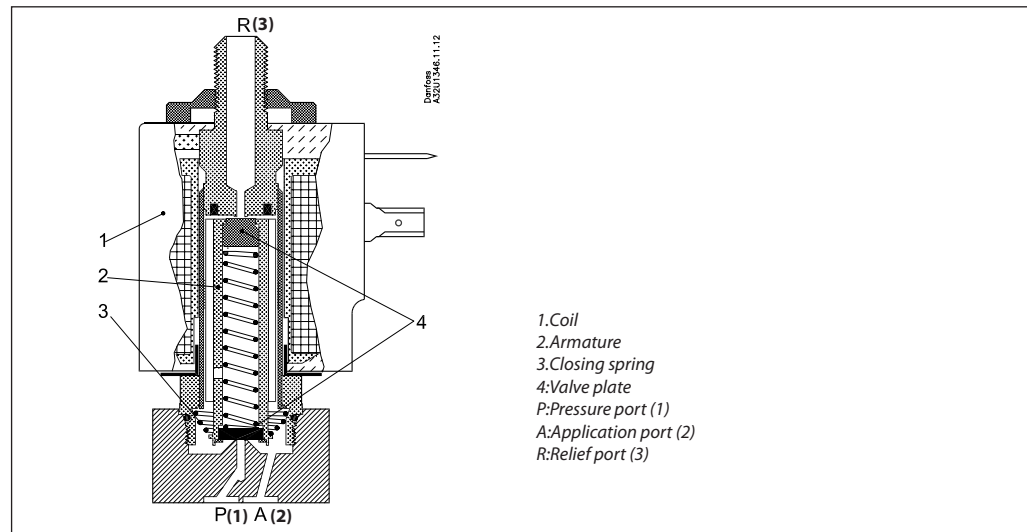
Ordering - Valve bodies

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

Including manual override

| | | | | | | | | | | | |
|--------------|-----|------|-----|-----|------|--------------|---------------|-----------------|----|----|----|
| Flange 32x32 | FKM | 0.15 | 2.0 | -10 | +100 | EV310B 2,0 B | FL32 F NC 040 | 032U4923 | 16 | 16 | 16 |
|--------------|-----|------|-----|-----|------|--------------|---------------|-----------------|----|----|----|

Function NC FL32

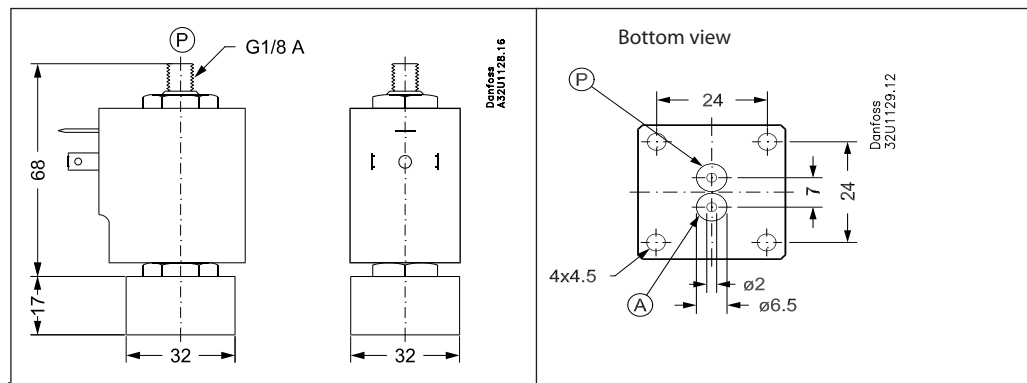


- 1.Coil
- 2.Armature
- 3.Closing spring
- 4.Valve plate
- P:Pressure port (1)
- A:Application port (2)
- R:Relief port (3)

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.

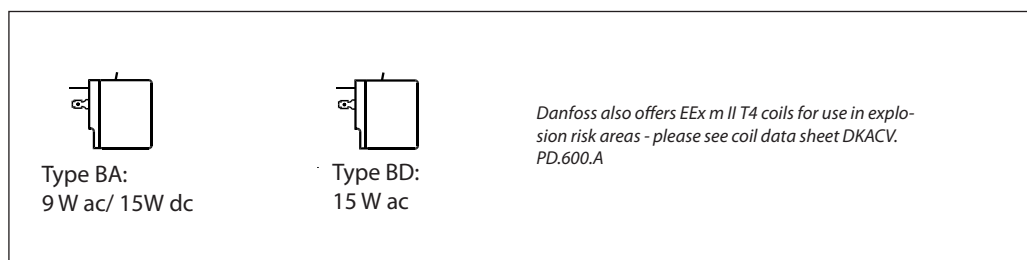
Coil voltage connected (open):
 When voltage is applied, the armature (2) with the valve plates (4) is lifted and closes the connection between A and R. At the same time, the connection between P and A is opened. The connection between P and A will be open for as long as there is voltage to the coil.

Dimensions and weight



Weight without coil : 0.185 kg

Coil options



Ordering - coils

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

Features



EV310B NO FL32

- Very robust valves for industrial application, such as control
- For water, oil, compressed air and similar neutral media
- K_v value up to 0.15 m³/h
- Differential pressure: Up to 10 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 10 bar |
| Max. test pressure | 50 bar |
| Time to open and to close | 10 - 20ms (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: FKM |

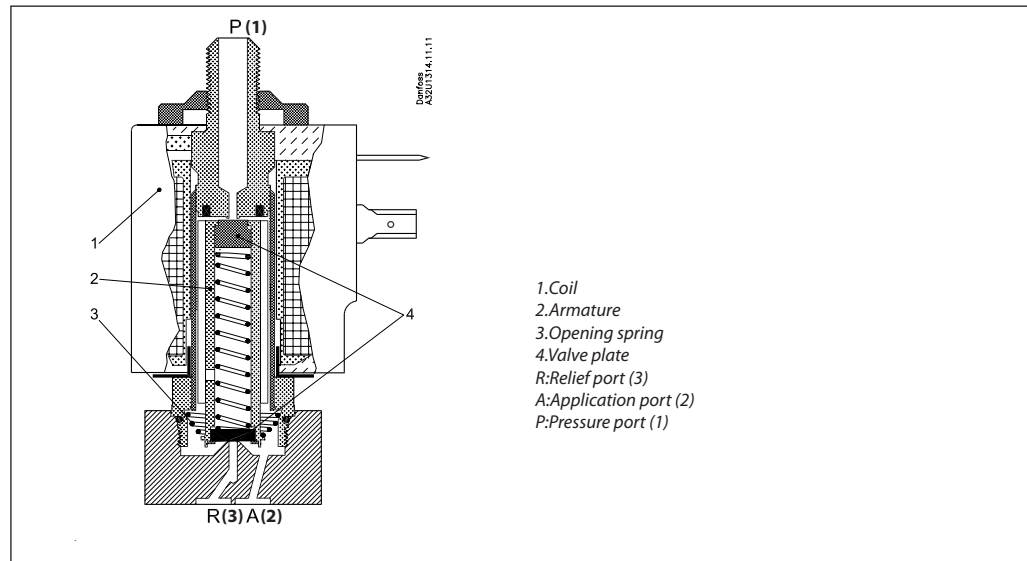
Ordering - Valve bodies

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

Including manual override

| | | | | | | | | | | | |
|--------------|-----|------|-----|-----|------|--------------|---------------|-----------------|----|----|----|
| Flange 32x32 | FKM | 0.15 | 2.0 | -10 | +100 | EV310B 2,0 B | FL32 F NO 040 | 032U4948 | 16 | 16 | 16 |
|--------------|-----|------|-----|-----|------|--------------|---------------|-----------------|----|----|----|

Function NO FL32



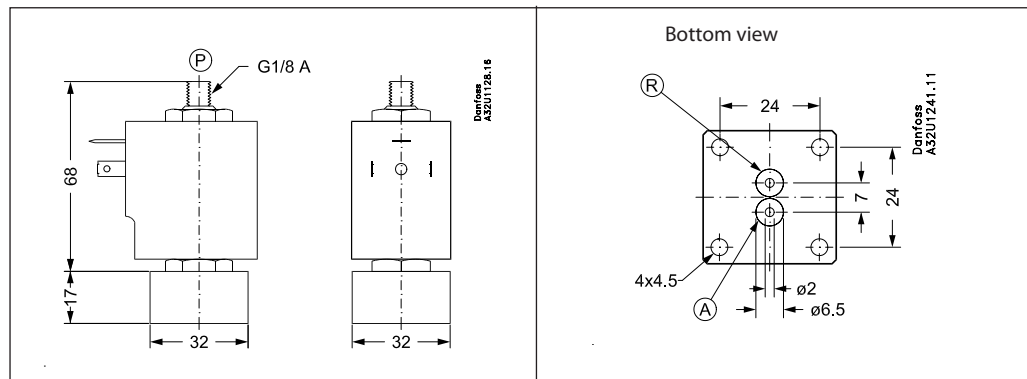
Coil voltage disconnected (open):

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):

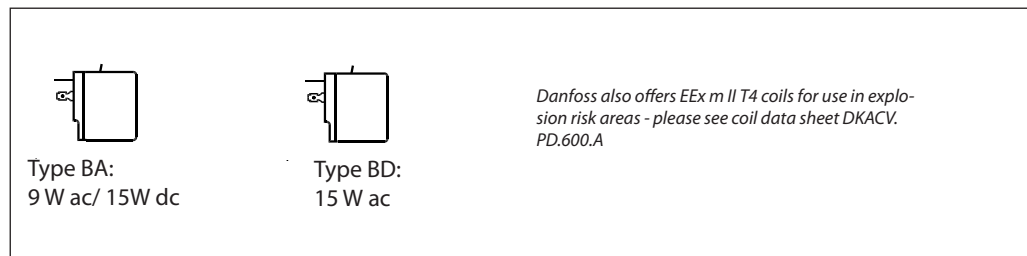
When voltage is applied to the coil (1), the armature (2) with the valve plates (4) is lifted and closes the connection between P and A. At the same time, the connection between ports A and R is opened. The connection between P and A will be closed for as long as there is voltage to the coil.

Dimensions and weight



Weight without coil : 0.185 kg

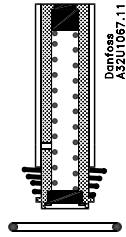
Coil options



Ordering - coils

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

Spare parts kit



The spare parts kit comprises an armature with mounted spring

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

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.