

Data sheet

# Direct-operated 3/2-way solenoid valves

## Type EV310B



EV310B covers a wide range of direct-operated 3/2-way solenoid valves for universal use. EV310B is a real robust valve program with high performance and can be used in all kind of tough working conditions. Clip-on coils can not be used on EV310B.

### Features

- For water, oil, compressed air and similar neutral media
- Differential pressure: Up to 20 bar
- Ambient temperature: Up to 40 °C
- Coil enclosure (cable plug): Up to IP65
- Viscosity: Up to 50 cSt
- $K_v$  values up to 0.40 m<sup>3</sup>/h
- Thread connection:  
NC, NO, NC MAN (manual override), NO MAN  
G 1/8 , G 1/4 and G 3/8
- Flange connection:  
NC FL MAN 32x32 mm

Brass valve body, NC



Connection ISO 228/1	Seal material	Orifice size [mm]	K <sub>v</sub> - value [m <sup>3</sup> /h]	Differential pressure, min. to max. [bar]	Media temperature min. to max. [°C]	Code number
G 1/8	FKM	1.5	0.08	0 – 20	-10 – 100	<b>032U4900</b>
G 1/8	FKM	2.0	0.15	0 – 16	-10 – 100	<b>032U4901</b>
G 1/8	FKM	3.0	0.30	0 – 7	-10 – 100	<b>032U4902</b>
G 1/4	FKM	1.5	0.08	0 – 20	-10 – 100	<b>032U4903</b>
G 1/4	FKM	2.0	0.15	0 – 16	-10 – 100	<b>032U4904</b>
G 1/4	FKM	3.0	0.30	0 – 7	-10 – 100	<b>032U4905</b>
G 1/4	FKM	3.5	0.40	0 – 5	-10 – 100	<b>032U4906</b>
G 3/8	FKM	2.0	0.15	0 – 16	-10 – 100	<b>032U4907</b>
G 3/8	FKM	3.0	0.30	0 – 7	-10 – 100	<b>032U4908</b>
G 3/8	FKM	3.5	0.40	0 – 5	-10 – 100	<b>032U4909</b>

Brass valve body, NO



Connection ISO 228/1	Seal material	Orifice size [mm]	K <sub>v</sub> - value [m <sup>3</sup> /h]	Differential pressure, min. to max. [bar]	Media temperature min. to max. [°C]	Code number
G 1/8	FKM	1.5	0.08	0 – 20	-10 – 100	<b>032U4926</b>
G 1/8	FKM	2.0	0.15	0 – 16	-10 – 100	<b>032U4927</b>
G 1/4	FKM	1.5	0.08	0 – 20	-10 – 100	<b>032U4929</b>
G 1/4	FKM	2.0	0.15	0 – 16	-10 – 100	<b>032U4930</b>
G 1/4	FKM	3.0	0.30	0 – 7	-10 – 100	<b>032U4931</b>
G 3/8	FKM	2.0	0.15	0 – 16	-10 – 100	<b>032U4933</b>
G 3/8	FKM	3.0	0.30	0 – 7	-10 – 100	<b>032U4934</b>

Brass valve body, NC MAN



Connection ISO 228/1	Seal material	Orifice size [mm]	K <sub>v</sub> - value [m <sup>3</sup> /h]	Differential pressure, min. to max. [bar]	Media temperature min. to max. [°C]	Code number
G 1/4	FKM	2.0	0.15	0 – 16	-10 – 100	<b>032U4919</b>

Brass valve body, NO MAN



Connection ISO 228/1	Seal material	Orifice size [mm]	K <sub>v</sub> - value [m <sup>3</sup> /h]	Differential pressure, min. to max. [bar]	Media temperature min. to max. [°C]	Code number
G 1/4	FKM	2.0	0.15	0 – 16	-10 – 100	<b>032U4944</b>

Brass valve body, NC FL MAN



Connection ISO 228/1	Seal material	Orifice size [mm]	K <sub>v</sub> - value [m <sup>3</sup> /h]	Differential pressure, min. to max. [bar]	Media temperature min. to max. [°C]	Code number
Flange 32x32	FKM	2.0	0.15	0 – 16	-10 – 100	<b>032U4923</b>

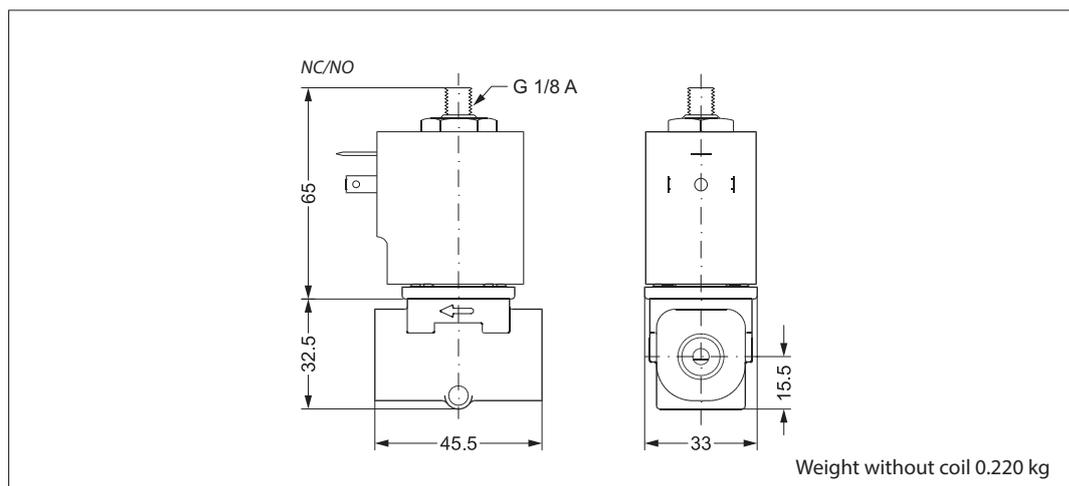
Technical data  
NC / NO / NC MAN / NO MAN / NC FL MAN

Main type	EV310B NC / NO / NC MAN / NO MAN / NC FL MAN
Time to open [ms] <sup>1)</sup>	10 – 20
Time to close [ms] <sup>1)</sup>	10 – 20

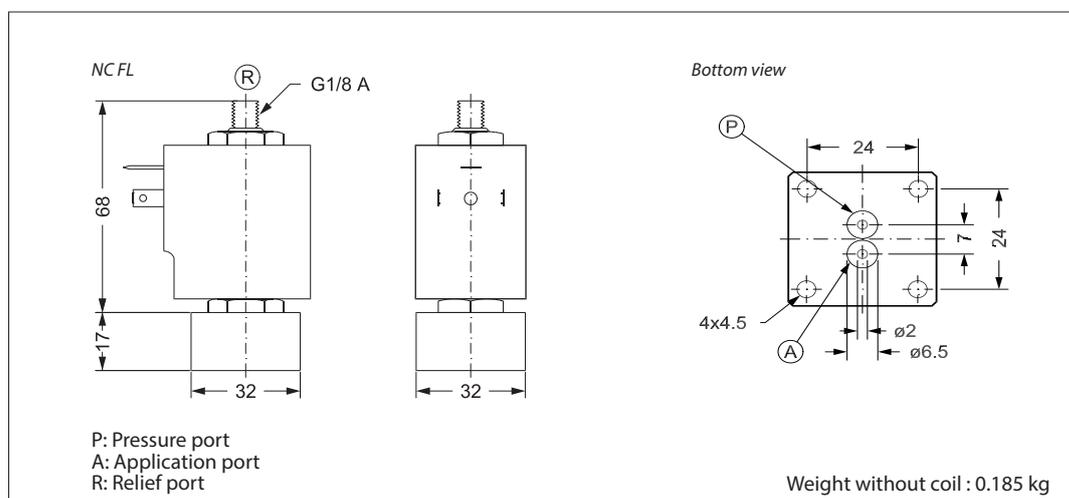
<sup>1)</sup> The times are indicative.

Type	EV310B NC / NO / NC MAN / NO MAN / NC FL MAN		
Installation	Vertical solenoid system is recommended		
Max. test pressure	50 bar		
Pressure range	0 – 20 bar		
Ambient temperature	Up to 40 °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
	Spring:	Stainless steel	W.no. 1.4310/AISI 301
	Seal material:	FKM	-

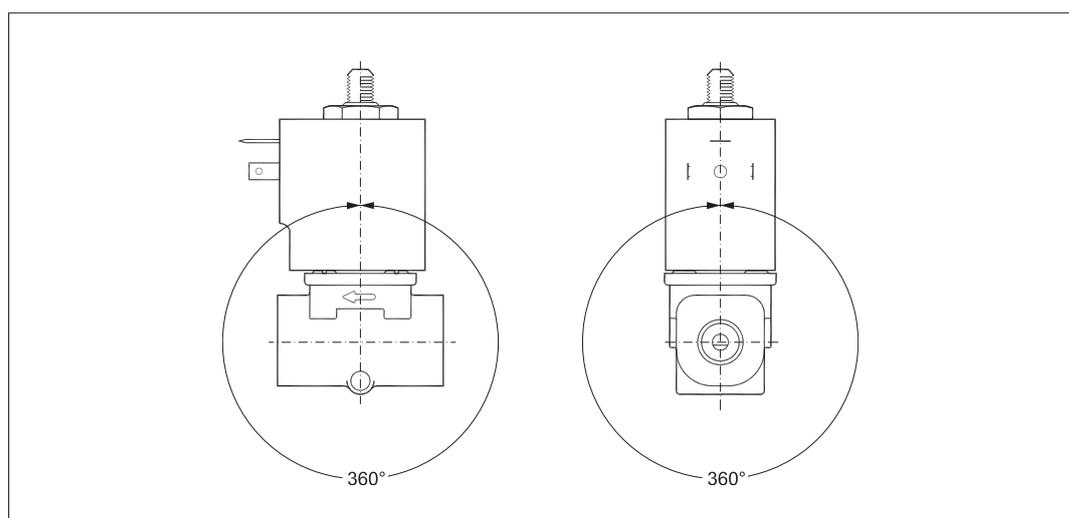
**Dimensions and weight**  
NC / NO / NC MAN / NO MAN



**Dimensions and weight**  
NC FL MAN



**Mounting angle**

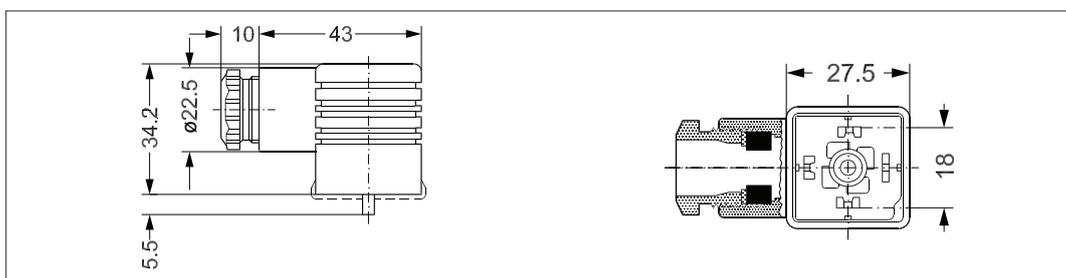


**Below coil can be used with EV310B**

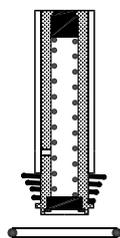
Coil	Type	Power consumption	Enclosure	Features
	BA / BD, screw on	9 W a.c. 15 W a.c. 15 W d.c.	IP00 with spade connector	IP20 with protective cap, IP65 with cable plug

**Accessories:  
Cable plug**

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



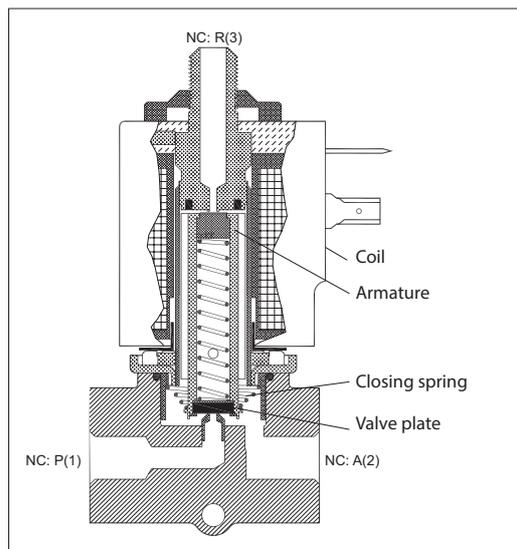
**Spare parts kit**



Connection	Type	Seal material	Code number
Thread	NC	FKM	<b>032U2033</b>
Thread	NO	FKM	<b>032U2035</b>

**The spare parts kit comprises:**  
An armature with mounted spring  
O-ring

**Function, NC**



P: Pressure port (stamped: 1)  
 A: Application port (stamped: 2)  
 R: Relief port (stamped: 3)

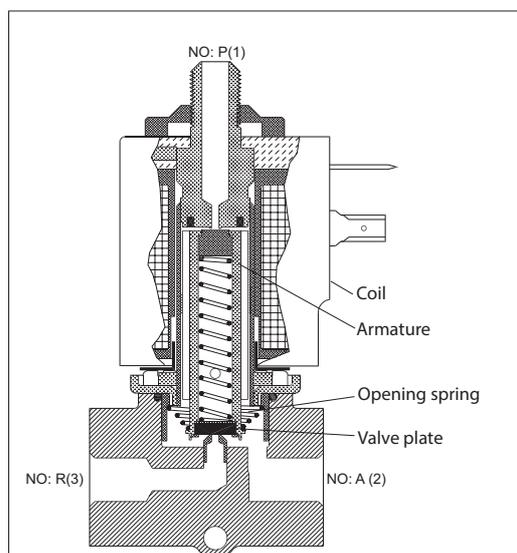
*Coil voltage disconnected (closed):*

When the voltage to the coil is disconnected, the armature with the valve plates is pressed down by the closing spring 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 with the valve plates 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.

**Function, NO**



P: Pressure port (stamped: 1)  
 A: Application port (stamped: 2)  
 R: Relief port (stamped: 3)

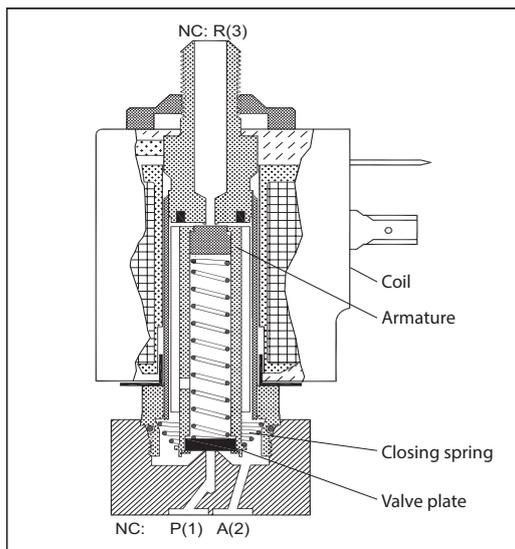
*Coil voltage disconnected (open):*

When the voltage is disconnected, the armature with the valve plates is pressed down by the opening spring 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, the armature with the valve plates 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.

Function, NC FL MAN



P: Pressure port (stamped: 1)  
 A: Application port (stamped: 2)  
 R: Relief port (stamped: 3)

*Coil voltage disconnected (open):*

When the voltage to the coil is disconnected, the armature, with the valve plates, is pressed down by the closing spring 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 (closed):*

When voltage is applied, the armature with the valve plates 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.