Data sheet

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

EV310A covers a wide range of small competitive, direct-operated 3/2-way solenoid valves for use within industrial applications, for example as pilot valve.

Features

- For water, oil, compressed air and similar neutral media
- Differential pressure: Up to 20 bar
- Ambient temperature: Up to 50 °C
- Media temperature from -10 – 100 °C
- Coil enclosure: Up to IP65
- Viscosity: Up to 20 cSt
- K_v values up to 0.08 m^3/h
- Thread connection: NC, NO, NC MAN G 1/8 – G 1/4
- Flange connection: NC FL 32 x 32 mm
- NC, NO, NC Manual override (MAN) and NC Flange versions

Brass valve body, NC

Connection ISO 228/1	Seal material	Orifice size	kv - value [m³/h]	Differential pressure, min. to max. [bar] AC/AM			Media temperature min. to max. [°C]	Code number
				Water	Oil	Air		
G 1/8	FKM	1.2	0.04	0 – 18	0 – 9	0 – 20	-10 – 100	**032H8085**
	FKM	1.5	0.07	0 – 10	0 – 5	0 – 12	-10 – 100	**032H8087**
	FKM	2	0.08	0 – 6.5	0 – 4	0 – 8	-10 – 100	**032H8089**
G 1/4	FKM	1.2	0.04	0 – 18	0 – 9	0 – 20	-10 – 100	**032H8095**
	FKM	1.5	0.07	0 – 10	0 – 5	0 – 12	-10 – 100	**032H8097**
	FKM	2	0.08	0 – 6.5	0 – 4	0 – 8	-10 – 100	**032H8099**

Brass valve body, NO

Connection ISO 228/1	Seal material	Orifice size	kv - value [m³/h]	Differential pressure, min. to max. [bar] Coil type							Media temperature min. to max. [°C]	Code number
				AB a.c.	AB d.c.	AC a.c.	AC d.c.	AM a.c.	AM d.c.	AK d.c.		
G 1/8	FKM	1.2	0.04	0 – 6	0 – 4	0 – 9	0 – 7	0 – 13	0 – 9	0 – 4	-10 – 100	**032H8125**
	FKM	1.5	0.07	0 – 3	0 – 2	0 – 5	0 – 3.5	0 – 7	0 – 5	0 – 2	-10 – 100	**032H8127**
G 1/4	FKM	1.2	0.04	0 – 6	0 – 4	0 – 9	0 – 7	0 – 13	0 – 9	0 – 4	-10 – 100	**032H8133**
	FKM	1.5	0.07	0 – 3	0 – 2	0 – 5	0 – 3.5	0 – 7	0 – 5	0 – 2	-10 – 100	**032H8135**

Technical data

Main type	EV310A NC/NO
Time to open [ms] [1])	7 – 10
Time to close [ms] [1])	7 – 10

[1]) The times are indicative.

Type	EV310A NC/NO		
Installation	Vertical solenoid system is recommended		
Max. test pressure	50 bar		
Ambient temperature	Up to 50 °C		
Medium temperature	-10 – 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	–

Brass valve body, NC MAN

Connection ISO 228/1	Seal material	Orifice size	kv - value [m^3/h]	Differential pressure, min. to max. [bar]			Media temperature min. to max. [°C]	Code number
				AC/AM				
				Water	Oil	Air		
G 1/8	FKM	1.2	0.04	0 – 18	0 – 9	0 – 20	-10 – 100	**032H8141**
	FKM	1.5	0.07	0 – 10	0 – 5	0 – 12	-10 – 100	**032H8143**
G 1/4	FKM	1.2	0.04	0 – 18	0 – 9	0 – 20	-10 – 100	**032H8151**
	FKM	1.5	0.07	0 – 10	0 – 5	0 – 12	-10 – 100	**032H8153**

Technical data

Main type	EV310A NC Man
Time to open [ms] [1])	7 – 10
Time to close [ms] [1])	7 – 10

[1]) The times are indicative.

Type	EV310A NC Man		
Installation	Vertical solenoid system is recommended.		
Max. test pressure	50 bar		
Ambient temperature	Up to 50 °C		
Medium temperature	-10 – 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	–
	Manual override	Polymer	Polysulfon black

Brass valve body, NC FL

Connection ISO 228/1	Seal material	Orifice size	kv - value [m³/h]	Differential pressure, min. to max. [bar]			Media temperature min. to max. [°C]	Code number
				AC/AM				
				Water	Oil	Air		
32 x 32	FKM	1.2	0.05	0 – 18	0 – 9	0 – 20	-10 – 100	**032H8181**
	FKM	1.5	0.08	0 – 10	0 – 5	0 – 12	-10 – 100	**032H8183**

Technical data

Main type	EV310A NC FL
Time to open [ms] [1])	7 – 10
Time to close [ms] [1])	7 – 10

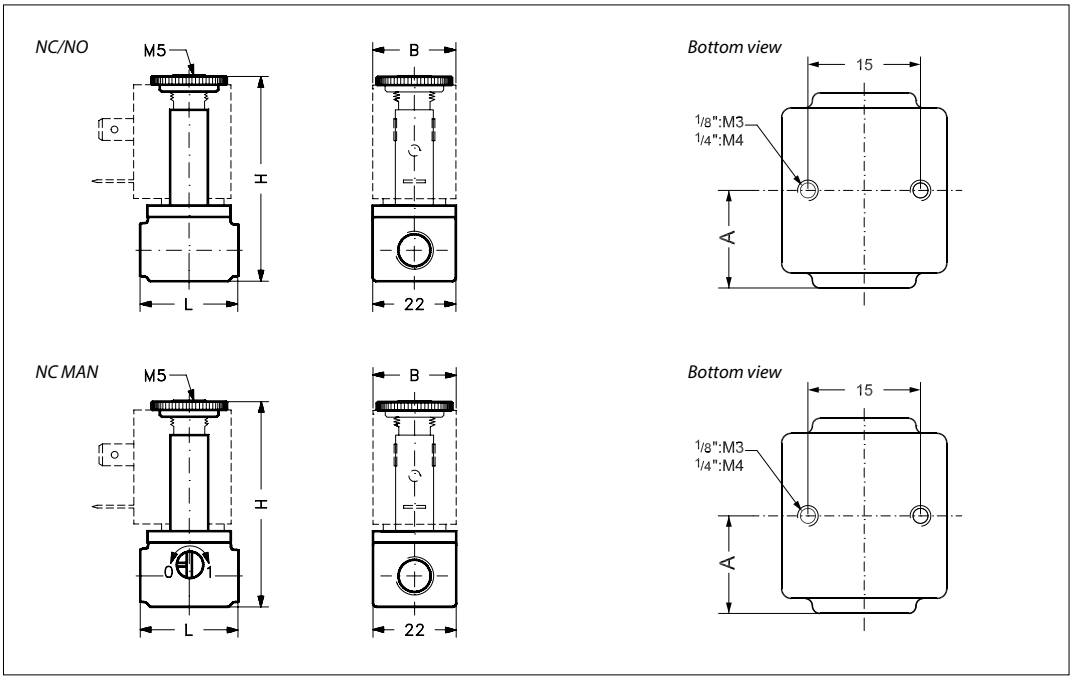
[1]) The times are indicative.

Type	EV310A NC FL		
Installation	Vertical solenoid system is recommended.		
Max. test pressure	50 bar		
Ambient temperature	Up to 50 °C		
Medium temperature	-10 – 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
	Springs:	Stainless steel	W.no. 1.4310/AISI 301
	O-rings/valve plate:	FKM	–

Dimensions and weight, NC, NO and NC MAN

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

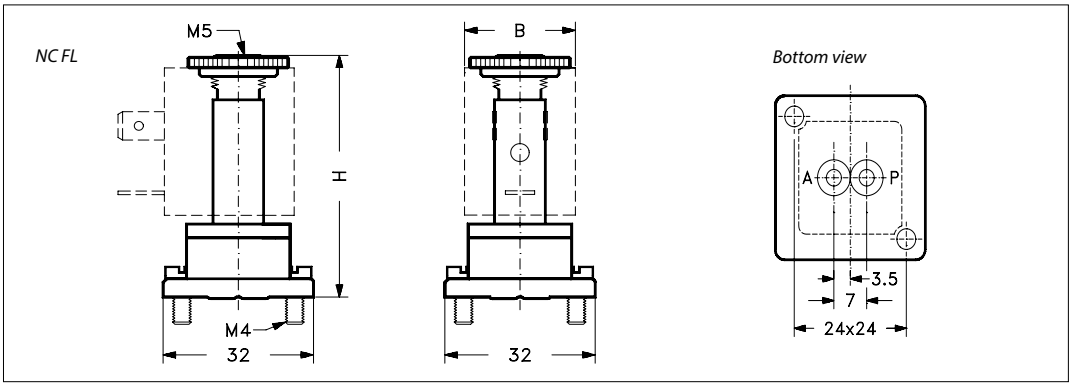
Dimensions



Dimensions and weight, NC FL

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

Dimensions



Below coils can be used with EV224B

Coil	Type	Power consumption	Enclosure	Features
	AM	7.5 W a.c. 9.5 W d.c.	IP00 with spade connector, IP65 with cable plug	Cable plug
	AC	7 W a.c. 10 W d.c.	IP00 with spade connector, IP65 with cable plug	Industrial plug
	AB	4.5 W a.c. 5 W d.c.	IP00 with spade connector, IP65 with cable plug	Industrial plug
	AK	3 W d.c.	IP00 with spade connector, IP65 with cable plug	Cable plug

Accessories:

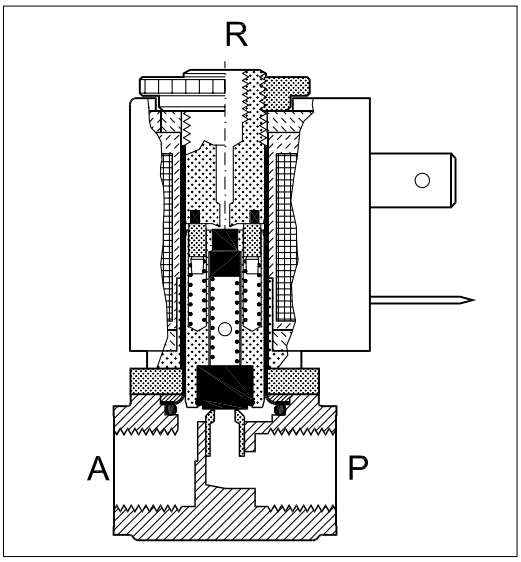
Cable plug

Application	Code number
GDM 2011 (grey) cable plug according to DIN 43650-A PG11	**042N0156**

Industrial plug

Application	Code number
GM 209 (Black) cable plug according to DIN 43650-B PG9	**042N0139**

Function, NC / NC MAN

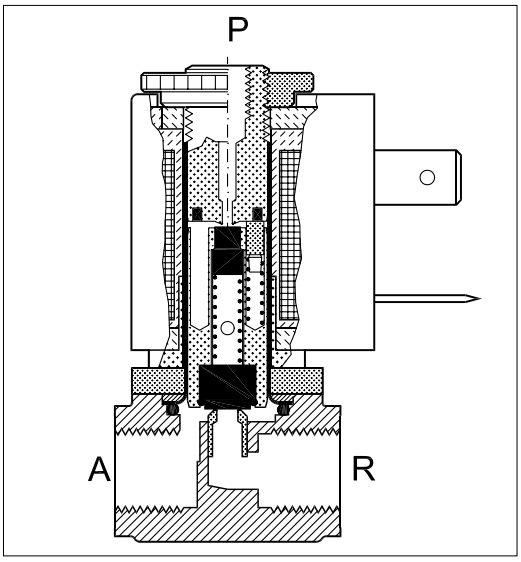


1.Opening spring
2.Armature
3.Valve plate
4.Coil
P:Pressure gate
A:Working gate
R:Relief gate

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.

Function, NO

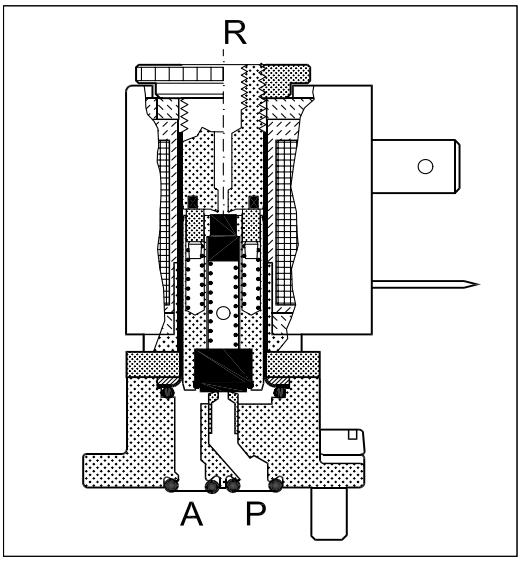


1.Opening spring
2.Armature
3.Valve plate
4.Coil
P:Pressure gate
A:Working gate
R:Relief gate

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.

Function, NC FL



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

Coil voltage disconnected (open):
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 (closed):
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.