

Data sheet

## Solenoid valves with FKM isolating diaphragm 2/2-way direct-operated

Type EV212B



The isolating diaphragm design ensures that no fluid enters the armature area which means valves can be used for

- aggressive fluids
- fluid with impurities
- fluid with risk of lime stone build up

Applications

- Dosing in fx.
- Marine ballast water treatment systems
- Washing systems (Alkaline)
- Pump cooling fx. vacuum systems

### Features

- Stainless steel body
- Differential pressure: up to 12 bar
- Viscosity: up to 50 cSt
- Ambient temperature: up to 50 °C
- Media temperatures up to 50°C
- Coil enclosure: up to IP67
- Thread connection: from G1/8, G1/4, G3/8
- Kv: up to 0.55 m<sup>3</sup>/h

**Data sheet | Solenoid valves with FKM isolating diaphragm 2/2-way direct-operated, type EV212B**

**EV212B DN 2; 3; 4; 4,5 mm**  
**FKM seal**  
**NC SS body**



- In accordance with:
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8
  - Pressure Equipment Directive 2014/68/EU
- RoHS Directive 2011/65/EU

Connection ISO228/1	Orifice size	K <sub>v</sub> - value	Media temper- ature	MOPD Max differential pressure					Code no.
				230 V 50 Hz / 24 V 50 Hz BB230AS / BB024AS 018F7351 / 018F7358	220-230 V BB230CS 018F7363		208-230 V AC 50/60 Hz EEC BE240CS 018F6783	12 / 24 VDC BB 018F7396/ 018F7397	
					[Bar]	50 Hz [Bar]			
G 1/8	2	0.15	0-50	12	12	10	12	12	032U3576
G 1/4	2	0.15	0-50	12	12	10	12	12	032U3578
G 1/8	3	0.3	0-50	12	12	10	12	12	032U3581
G 1/4	3	0.3	0-50	12	12	10	12	12	032U3751
G 3/8	4	0.38	0-50	7.5	7.5	6	12	10	032U3754
G 1/4	4.5	0.55	0-50	6	6	5	10	10	032U3590
G 3/8	4.5	0.55	0-50	6	6	5	10	10	032U3762

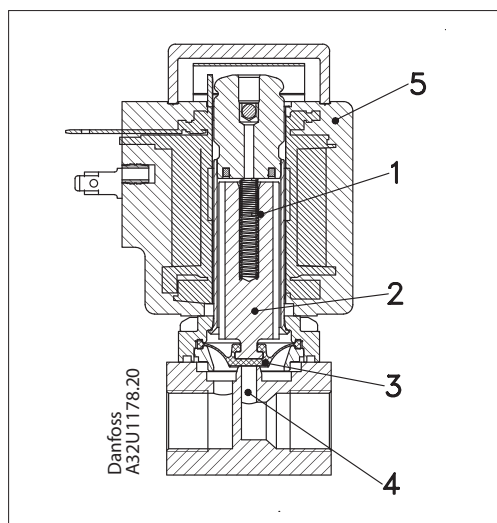
**Technical data**

<b>Type</b>	EV212B		
<b>Installation</b>	Optional, but vertical solinoid system is recommended		
<b>Max working pressure (MWP)</b>	12 bar		
<b>Differential pressure</b>	See table		
<b>Max. test pressure</b>	16 bar		
<b>Ambient temperature</b>	Max. 25 °C		
<b>Medium temperature</b>	0 – 50 °C		
<b>Viscosity</b>	Max. 50cSt		
<b>Materials</b>	Valve body:	Stainless steel	W.no. 1.4404 / AISI 316L <sup>1)</sup>
	Flange for isolating diaphragm:		W.no. 1.4404 / AISI 316L <sup>1)</sup>
	Isolating diaphragm:	FKM	
	O-rings:	FKM	
	Fluid above isolating diaphragm:	Silicone oil	

<sup>1)</sup> W. no. according to DIN 17440

**Function**

- 1. Closing spring
- 2. Armature
- 3. Isolating diaphragm
- 4. Orifice
- 5. Coil



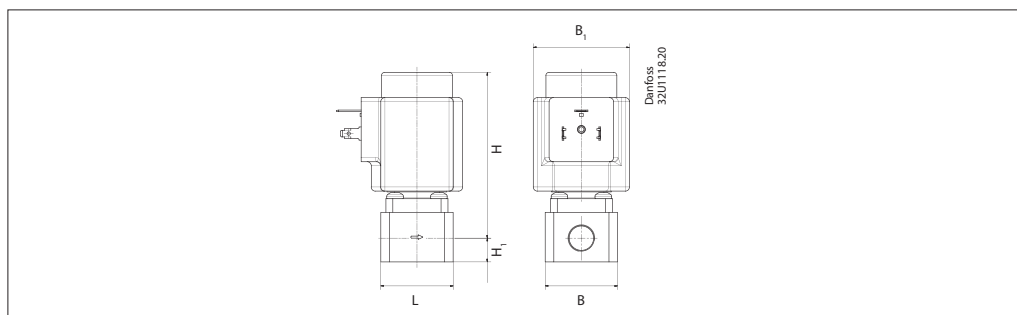
**2/2-way direct-operated**

When voltage is applied to the coil (5), the armature (2) with the isolating diaphragm (3) is lifted clear of the valve orifice (4) and opens for flow through the valve. The valve is open as long as there is voltage to the coil.

When voltage is disconnected, the isolating diaphragm (3) is pressed down against the orifice by the spring (1). The valve will be closed for as long as the voltage to the coil is disconnected. The isolating diaphragm keeps the medium away from the actuator.

The space above the isolating diaphragm is filled up with silicone oil.

**Dimensions and weight**



Type	L	B	B1 [mm]	H1	H	"Connection ISO 228/1"	Weight without coil
	[mm]	[mm]	Coil type BB/BY/BE	[mm]	[mm]	G	[kg]
EV212B 2SS G1/8	35	35	46	11,5	85	1/8	0,30
EV212B 2SS G1/4	35	35	46	11,5	85	1/4	0,29
EV212B 3SS G1/8	35	35	46	11,5	85	1/8	0,30
EV212B 3SS G1/4	35	35	46	11,5	85	1/4	0,29
EV212B 4SS G3/8	38	38	46	13	87	3/8	0,33
EV212B 4.5SS G1/4	35	35	46	11,5	85	1/4	0,29
EV212B 4.5SS G3/8	38	38	46	13	87	3/8	0,33

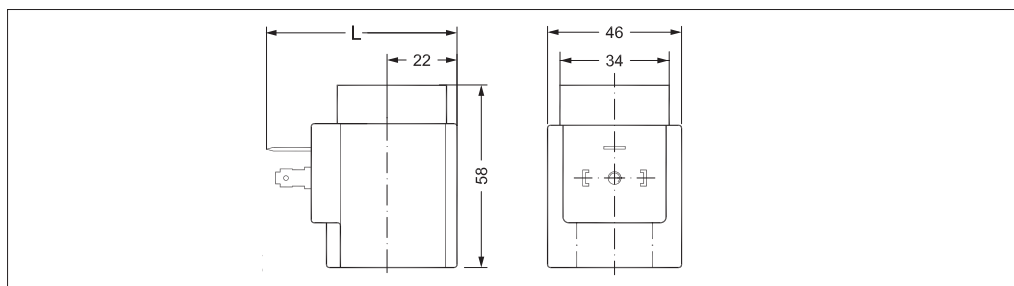
**BB / BY,  
High performance coils**


- Enclosure:
  - IP00 version with DIN 43650 A spade connectors
  - IP20 version with protective cap
  - IP65 version with mounted cable plug
- In accordance with:
  - RoHS Directive 2011/65/EU
  - Low Voltage Directive 2014/35/EU
  - EN60730-1
  - EN60730-2-8

Type	Tambient	Supply voltage	Voltage variation	Frequency	Control	Power consumption		Code no.
	[°C]	[V]				[W]	[VA]	
BB024AS	-40 – 80	24	-15%, +10%	50	NO, NC	11	19	018F7358
BB230AS	-40 – 80	220 - 230	-15%, +10%	50	NO, NC	11	19	018F7351
BB012DS	-40 – 50	12	±10%	DC	NC, NO, UN (Latching)	13	–	018F7396
BB024DS	-40 – 50	24	±10%	DC	NC, NO, UN (Latching)	16	–	018F7397

**Technical data**

<b>Design</b>	In accordance with VDE 0580
<b>Insulation of coil windings</b>	Class H according to IEC 85
<b>Connection</b>	Spade connector in accordance with DIN 43650 form A
<b>Enclosure, IEC 529</b>	IP00 with spade connector, IP20 with protective cap, IP65 with cable plug
<b>Duty rating</b>	Continuous
<b>Plug type</b>	Cable plug (042N0156)

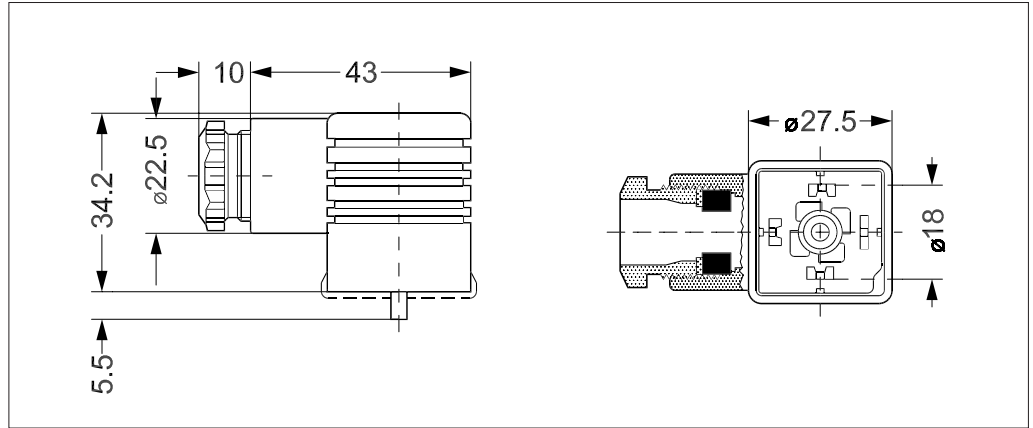
**Dimensions and weight**


L without cable plug	L with protective cap	L with cable plug	Weight
[mm]	[mm]	[mm]	[kg]
62	77	85	0.24

**Accessories:**  
**Cable plug**



Type, Form A	Code no.
GDM 2011 (grey) cable plug according to DIN 43650-A PG11	042N0156



**EEC Electronic coil controller**



EEC electronic coil controller for solenoid valves, type EV220B.

The EEC gives the coil a short over-boost, and controls the armature speed:

- Low power consumption (holding power: 4 W)
- Reduced noise during operation
- Increased MOPD compared to standard coils
- Increased lifetime of the solenoid valve
- Enclosure:
  - IP67 version
- In accordance with:
  - Low Voltage Directive 2014/35/EU
  - EN60730-1

Type	Tambient	Supply voltage	Voltage variation	Frequency	Control	Power consumption	Code no.
	[°C]	[V]		[Hz]		[W]	
BE240CS	-25 - 55	208 - 240	±10%	60	NC, NO	4	018F6783
		208 - 240	±10%	50		4	