

Data sheet

# Direct-operated 2/2-way solenoid valves for steam

## Type EV215B



EV215B is a direct-operated 2/2-way solenoid valve for use in steam applications.

The design is based on a PTFE valve plate, ensuring high reliable function even in connection with contaminated steam.

Valve body in stainless steel for ensuring a long life even in connection with aggressive steam media.

### Features and versions

- 2/2-way
- Specifically designed for steam applications, 160 °C or 185 °C
- Direct operated
- Ambient temperature: Up to 40 °C
- Thread connections: G 1/4"
- Stainless steel valve body
- DN 3
- NC (normally closed)
- EV215B used with BQ coil  
AC voltage up to 185 °C
- EV215B used with BN coil  
DC voltage up to 160 °C
- EV215B used with BB coil  
AC voltage up to 160 °C  
DC voltage up to 140 °C
- Connection: ISO 228/1

### Approvals

All valves are UL/UR approved:



## Data sheet | Direct-operated 2/2-way solenoid valves for steam, Type EV215B

### Stainless steel valve body, NC



Connection ISO228/1	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 no.
				Coil type BQ AC	Coil type BN DC	Coil type BB AC	Coil type BB DC	BQ	BN DC BB AC	BB DC	
G 1/4	PTFE	3	0.3	0 - 10	0 - 5	0 - 5	0 - 3.6	0 - 185	0 - 160	0 - 140	032U3801

### Technical data, NC

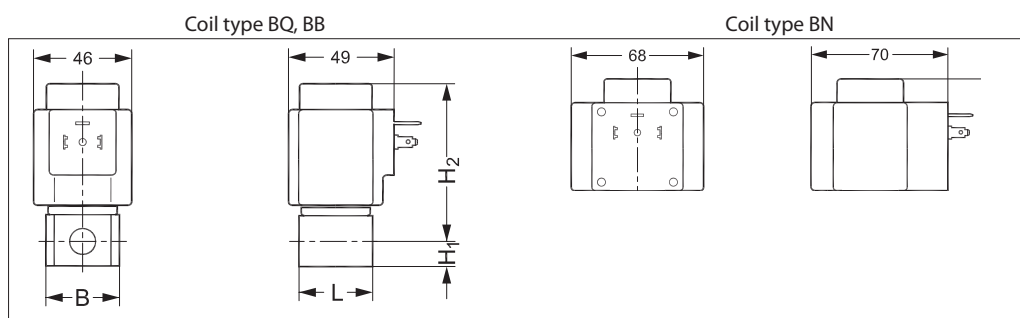
Main type	EV215B
Time to open [ms] <sup>1)</sup>	20
Time to close [ms] <sup>1)</sup>	20

<sup>1)</sup> The times are indicative. The exact times will depend on the pressure conditions.

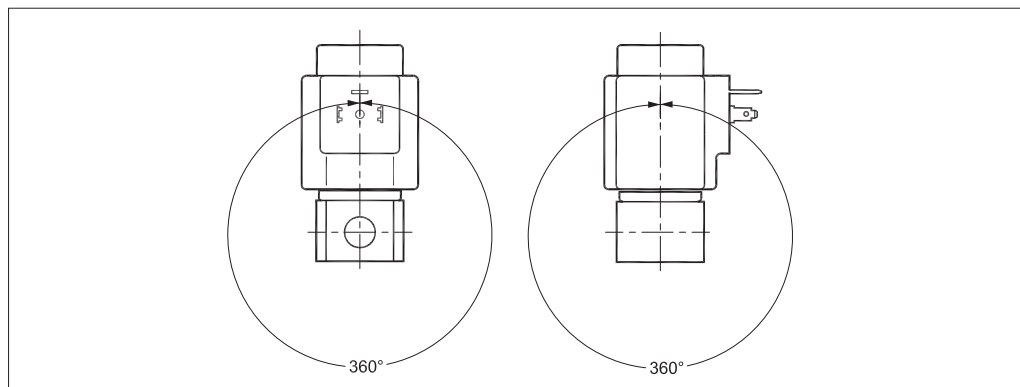
Installation	Vertical solenoid system is recommended		
Max. working pressure (MWP)	10 bar		
Max. test pressure	25 bar (UL 429: 24.1 bar)		
Ambient temperature	Max. 40 °C at a medium temperature of 185 °C		
Viscosity	Max. 50 cSt		
Materials	Valve body	Stainless steel	W. no. 1.4404
	Armature / armature stop	Stainless steel	W. no. 1.4105 / AISI 430FR
	Spring	Stainless steel	W. no. 1.4306 / AISI 304L
	Armature tube	Stainless steel	W. no. 1.4310 / AISI 301
	Valve plate	PTFE	
	External gasket	O-ring: AFLAS	

### Dimensions and weight

Type	L [mm]	B [mm]	H [mm]	H1 [mm]	H2 [mm]	Weight with coil BQ, BB [Kg]	Weight with coil BN [Kg]
EV215B 3	35	35	87	12.5	74.5	0.51	0.79



### Mounting angle



**Data sheet | Direct-operated 2/2-way solenoid valves for steam, Type EV215B**
**Coil type BQ AC  
Steam coil to 185 °C**


Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Approval	Code no.
					[W]	[VA]		
BQ024CS	-40 – 40	24	-15%, 10%	50	10	17	C RU US	018F4517
		24	-15%, 10%	60	9.0	16		
BQ120BS	-40 – 40	110 / 120	-15%, 6%	60	13.5	19	C RU US	018F4519
BQ240CS	-40 – 40	230	-15%, 6%	50	10	17	C RU US	018F4511
		208 / 240	-6%, 6%	60	9.5	16		

**Coil type BN DC  
Steam coils to 160 °C**


Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Approval	Code no.
					[W]	[VA]		
BN024DS	-40 – 50	24	±10%	DC	20	–	C RU US	018F6968

**Coil type BB AC  
Steam coils to 160 °C**


Type	Tambient [°C]	Supply voltage [V]	Voltage variation	Frequency [Hz]	Power consumption		Code no.
					[W]	[VA]	
BB024AS	-40 – 80	24	-15%, 10%	50	11	19	018F7358
BB115AS	-40 – 50	115	-15%, 10%	50	11	19	018F7361
BB230AS	-40 – 80	220 / 230	-15%, 10%	50	11	19	018F7351
BB240AS	-40 – 80	240	-15%, 10%	50	11	19	018F7352
BB440CS	-40 – 80	400	±10%	50	14	24	018F7353
		440	±10%	60	15	24	
BB024BS	-40 – 80	24	-15%, 10%	60	14	23	018F7365
BB110CS	-40 – 50	110	±10%	50	15	28	018F7360
		110	±10%	60	13	22	
BB230CS	-40 – 50	220 / 230	±10%	60	13	24	018F7363
		220 / 230	±10%	50	16	31	

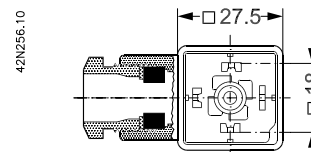
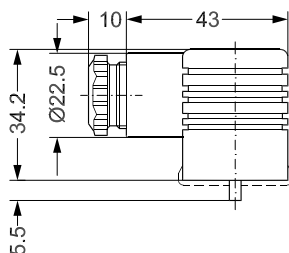
**Type BB DC  
Steam coils to 140 °C**

BB012DS	-40 – 50	12	±10%	DC	14	–	018F7396
BB024DS	-40 – 50	24	±10%	DC	16	–	018F7397

Technical data	Type BQ, BN, BB
Insulation of coil windings	Class H according to IEC 85
Connection	GDM 2011 (grey) Cable plug according to DIN 43650-A PG11
Coil enclosure, IEC 529	IP65
Ambient temperature	Max. 40 °C
Duty rating	Continuous

**Accessories:  
Cable plug**


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



**Spare part kit**

Type	Code number
EV215B	032U3170

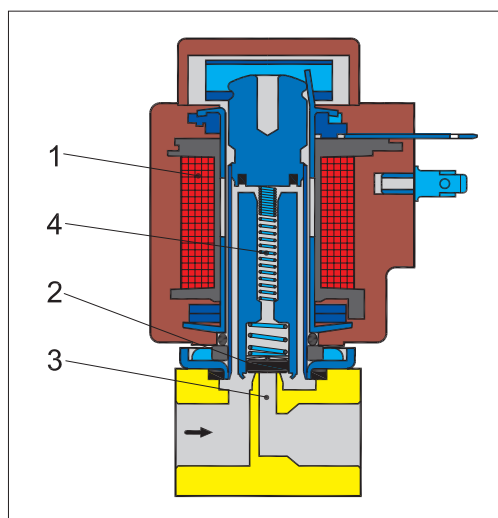
**Spare parts kit comprises:**

- Armature with valve plate
- Spring
- O-ring



**Function NC**

EV215B



**Coil voltage disconnected (closed):**

When the voltage is disconnected, the closing spring (4) with the valve plate (2) is pressed down against the pilot orifice (3) by the closing spring (4) and the medium's pressure. The valve will be closed for as long as the voltage to the coil is disconnected.

**Coil voltage connected (open):**

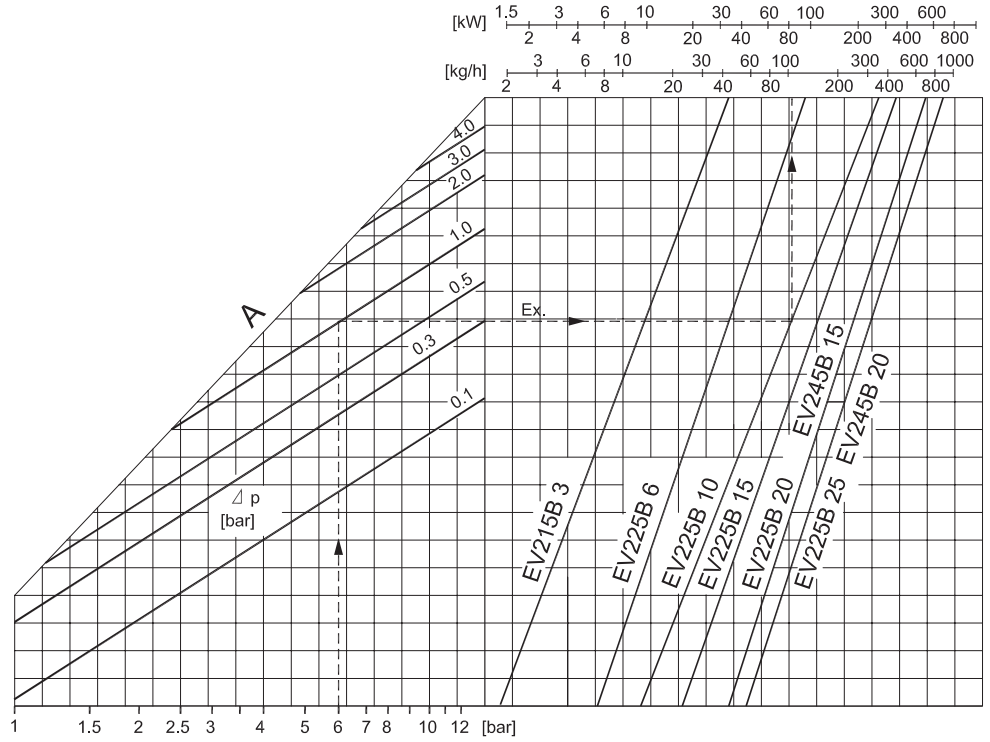
When voltage is applied to the coil (1), the closing spring (4) with the valve plate (2) is lifted clear of the the orifice (3). The valve is now open for flow and will be open for as long as there is voltage to the coil.

1. Coil
2. Valve plate
3. Orifice
4. Closing spring

### Steam capacity diagrams

*Example*

Capacity for EV225 10 BD;  
inlet pressure ( $p_1$ ) of 6 bar absolute;  
differential pressure at 1 bar;  
Approx. 100 kg/h / 80 kW



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 consequential 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.