3-Way Solenoid Valve

Ex d Flameproof Type

These Ex d solenoid valves are equipped with a heavy-duty enclosure of flameproof design, suited for use where hazardous materials are present intermittently as defined by zones 1 or zone 2, Group II apparatus category according to the ATEX 94/9/EC Directive.

Suitable for outdoor industrial applications, the solenoid's enclosure and construction is designed to withstand and contain an internal explosion. The coil is IP66 (minimum) ingress protection rated, continuous duty design with class H high temperature insulation rating. These solenoid valves are suitable for activating BERMAD Deluge and water control valves, for use with filtered firewater or a pneumatic pressure supply.

Model BE370D-SS

Model BE370D-U-CON

Features

- FM approved for use with BERMAD deluge valves, using firewater / air
- 25 bar / 365 psi max working pressure, refer to selection table
- Integral Terminal Box
- IP66 or 67 ingress protection
- Heavy Duty construction
- Seawater construction option, refer to selection table
- Class H coil insulation with suppression diode as standard

Power

- 8 Watts, 24 VDC or 120, 220 VAC/50-60 Hz.
- Voltage Tolerance: +10% -35% for BE370D and ±10% for other models

Materials

- Body: Brass, Stainless steel 316 or Al.Bronze
- Internals: Stainless steel, NBR seals, Al. Bronze in Al. Bronze versions
- Enclosure: Epoxy Coated Aluminum or Stainless steel 316

Temperature

- Maximum Ambient[1]: 50°C (33° to 125°F)
- Maximum Fluid: 80°C (176°F)

Note: [1] Maximum ambient temperature is determined under continuously energized conditions

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Note: Images, illustrations and icons are for display only, refer to selection table for specific data

Installation and Maintenance

The Solenoid Valve is the most critical unit in the Deluge system. It should be installed and wired by qualified and trained personnel only. The coil should be wired in accordance with the requirements of the applied norm such as IEC or ATEX codes. Ensure that the voltage supply and frequency corresponds with the marking on the enclosure label.

Warning: This product shall be installed and wired by an authorized electrician only. The conduit hub on the enclosure must be supported against torque during the assembly by using appropriate tools. While tightening a fitting into the conduit hub, attention must be paid that a max. torque of 20Nm is not exceeded.

Maintenance: Proper operation of the Solenoid Valve should be periodically verified. Testing and Maintenance should be done according to the IOM (Installation Operation & Maintenance) manual for the specific BERMAD Valve in use. It is recommended that the Solenoid Valve be inspected monthly for proper wiring and for leakage. The Solenoid valve must be tested annually. It must be operated when maximum system working conditions are applied to simulate the extreme conditions. The unit should be replaced if a malfunction occurs.

Circuit Functions

Technical Data

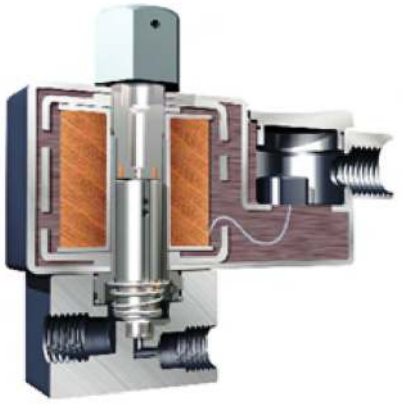
BERMAD Ex d solenoid valve, model BE370

This solenoid valve is ATEX certified for hazardous locations II 2 G Ex d IIC T4-T6, area classification for zone 1 or zone 2 according to ATEX directive 94/9/EC. The BE370 solenoid valve is specially designed to suit BERMAD deluge valves and BERMAD water control valves giving reliable and long life operation.

It is rated for IP66 ingress protection, continuous duty design with class H coil insulation.

The enclosure is Ex d flameproof design and is equipped with an integral epoxy coated aluminum or cast stainless steel 316 terminal box enclosure, including screw terminals.

The solenoid valve body is constructed of Brass or Stainless steel 316.



BE370 Cross Section

Special Applications

- Design for Corrosive Fluids
- Seawater construction
- Harsh environments / offshore Enclosure
- Low power types

For further details and options please refer to the solenoids selection table.

Solenoid Valve Selection Table

Ex d standard type

Model	Normally	Body Materials	Enclosure Type / Class	Code	Cable Entry	Port Size"	Orifice mm	bar / psi	Power Watts	Approval See Notes
BE370C-B2	N.C.	Brass	Ex d IIC T4-6	9	½" NPT	¼	1.6	20 / 300	8	ATEX (4)
BE370C-SS	N.C.	SS316	Ex d IIC T4-6 (1)	9K	½" NPT	¼	1.6	20 / 300	8	ATEX (4)
BE370D-B2	N.O.	Brass	Ex d IIC T4-6	9	½" NPT	¼	1.6	25 / 365	8	ATEX (2), (4)
BE370D-SS	N.O.	SS316	Ex d IIC T4-6 (1)	9K	½" NPT	¼	1.6	25 / 365	8	ATEX (2), (4)

Seawater and Corrosive Fluids

Model	Normally	Body Materials	Enclosure Type / Class	Code	Cable Entry	Port Size"	Orifice mm	bar / psi	Power Watts	Approval See Notes
SM1304U	UNI	Al. Bronze	Ex d IIC T6	FS-9	M20x1.5	¼	7	20 / 300	9.6	ATEX (3), (4)
SM1304S	UNI	SS316	Ex d IIC T6	FS-9	M20x1.5	¼	7	20 / 300	9.6	ATEX (3), (4)
BE370D-CON	N.O.	SS316	Ex d IIC T4-6 (1)	FS-9	½" NPT	¼	1.6	16 / 235	8	ATEX (2), (4)

Low Power Types

Model	Normally	Body Materials	Enclosure Type / Class	Code	Cable Entry	Port Size"	Orifice mm	bar / psi	Power Watts	Approval See Notes
EF8320A515	UNI	SS316	Ex d IIB T6	9K	½" NPT	¼	1.6	4 / 6	1.3	ATEX (3), (5)
SM1304S	UNI	SS316	Ex d IIC T6	9K	M20x1.5	¼	7	20 / 300	4.5	ATEX (3), (4)
SM1303S	UNI	SS316	Ex d IIC T6	9K	M20x1.5	¼	2	12 / 175	3	ATEX (3), (4)
SA130B102	UNI	SS316	Ex d IIC T6	9K	M20x1.5	¼	6	16 / 235	3.7	ATEX (4)

Notes:

(1) Add Jn suffix to the BERMAD deluge valve code for cast stainless steel 316 enclosure.
(2) FM approved for BERMAD Deluge valves, with 24V coil.
(3) Approved for hazardous locations Class I, Division 1, Groups A, B, C, D; Class II Gr. E, F, G.
(4) ATEX certified for hazardous locations II 2 G Ex d IIC (gas group A, B, C) T6, IP66 Ingress Protection to IEC Spec.
(5) Not including terminal box, for use only with pneumatic pressure supply.
(6) Specifications subject to change without notice.