

3-Way Solenoid Valve

BE370 Series Ex d Type

These BERMAD BE370, 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 IEC-Ex and ATEX Directives.

The BE370 solenoid valves are suitable for extreme industrial environmental conditions. The enclosure is IP67, as well as US Type 4X, 6, 6X rated, continuous duty design with class H high temperature insulation rating. The BERMAD BE370 models with suffix D are also UL listed in accordance with UL429A standard for Electrically Operated Valves for Fire protection Service with 365psi/25 bar rated working pressure. The unique safety design for this solenoid valve allows voltage tolerance of 35% below the rated voltage at the maximum working pressure enabling long wiring installation and compliance with the UL429A standard.



BE370D-B5-87-N, S.Steel Body

Features

- UL-Listed/FM approved for use with BERMAD deluge valves
- 25 bar /365 psi max working pressure, with firewater/air
- IP67 Enclosure, Integral Terminal Box with suppression diode
- Heavy Duty Construction - Suitable for Extreme Conditions
- Seawater construction option, refer to selection table
- Cable Entry: 1/2" NPT with adaptor from M25x1.5

Electrical Specifications

- Power: 8 Watts
- Voltage: 24 VDC, 110 VDC/110-120 VAC (50-60 Hz), 220 VDC/220-240 VAC (50-60 Hz)
- Insulation Class: Class H
- Ingress protection: IP67 and US type 3, 3S, 4, 4X, 6, 6P
- Maximum Duty Cycle (ED): 100% (continuous)
- Voltage Tolerance: +10% -35%

Materials

- Body: Brass or Stainless steel 316
- Internals: Stainless steel, HNBR seals
- Enclosure: Epoxy Coated Aluminum or Stainless steel 316

Temperature

- Ambient Temperature⁽¹⁾: -60° to 100°C (T4), -60 to 65°C (T6)
-76° to 212°F (T4), -60 to 149°F (T6)
- Fluid Temperature Rating: 70°C / 158°F

Note: ⁽¹⁾ Maximum ambient temperature is determined under continuously energized conditions
⁽²⁾ Minimum temperature shall be kept above the fluid freezing value

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.

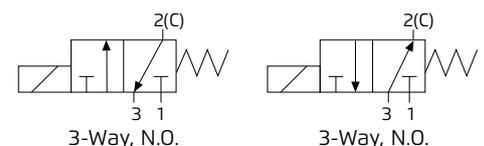
Warning: This product shall be installed and wired by an authorized electrician only. Certified fitting or cable gland shall be installed on the cable entry according to the applicable.

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.



Notes: Refer to selection table for specific data

Circuit Functions



Technical Data

Engineer Specifications for BE370D

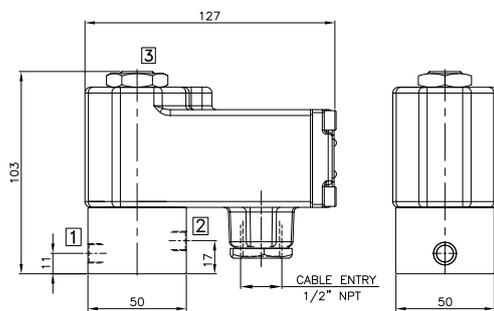
The solenoid valve shall be 3-way heavy-duty construction, UL Listed according to UL429A electrically operated valve for fire protection, complete with an Ex d flameproof enclosure suited for zones 1 group IIC hazardous locations and IEC-Ex and ATEX certified, including 8 Watts power consumption with safety factor of 65% of the rated voltage.

The solenoid valve rated working pressure shall be certified to 365 psi / 25 bar, brass or stainless steel 316 body material with epoxy coated aluminum or stainless steel 316 enclosure.

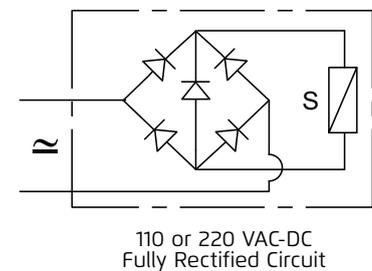
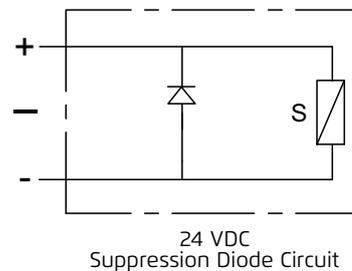
The electrical enclosure shall be Ex d with class H high temperature insulation, continuous duty rated and shall include an integrated terminal box with suppression diode and terminal blocks.

Certifications: IEC-Ex, CE, ATEX, UL/FM approved to be installed on the selected fire protection deluge valve.

Dimensions



Wiring Circuit Diagrams



Solenoid Valve Selection Table

Ex d standard type

Model	Normally	Body Material	Code	Cable Entry	Port Size"	Orifice mm	bar / psi	Power Watts	Certifications		
									IEC-Ex, ATEX ⁽⁴⁾	UL429A ⁽³⁾	FM ⁽²⁾ Approved
BE370C-B2-87	N.C.	Brass	9	½" NPT	¼	1.6	20 / 300	8	✓	-	-
BE370C-B5-87	N.C.	SS316	9K	½" NPT	¼	1.6	20 / 300	8	✓	-	-
BE370C-B5-87N	N.C.	SS316	9KJn	½" NPT	¼	1.6	20 / 300	8	✓	-	-
BE370D-B2-87	N.O.	Brass	9	½" NPT	¼	1.6	25 / 365	8	✓	✓	✓
BE370D-B5-87	N.O.	SS316	9K	½" NPT	¼	1.6	25 / 365	8	✓	✓	✓
BE370D-B5-87N	N.O.	SS316	9KJn	½" NPT	¼	1.6	25 / 365	8	✓	✓	✓

Seawater and Corrosive Fluids

Model	Normally	Body Material	Code	Cable Entry	Port Size"	Orifice mm	bar / psi	Power Watts	Certifications		
									IEC-Ex, ATEX ⁽²⁾	UL429A ⁽³⁾	FM ⁽²⁾ Approved
BE370D-B5-C0-87	N.O.	SS316	FS-9	½" NPT	¼	1.6	25 / 365	8	✓	✓	✓
BE370D-B5-C0-87N	N.O.	SS316	FS-9Jn	½" NPT	¼	1.6	16 / 235	8	✓	✓	✓

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⁾ UL-Listed for BERMAD deluge valves accordance with UL429A for Electrically Operated Valves for Fire Protection Service.
- ⁽⁴⁾ IEC-Ex and ATEX certified for hazardous locations II 2 G Ex d IIC (gas group A, B, C) T6.
- ⁽⁵⁾ Specifications subject to change without notice.

