

2-Way Solenoid Valve

These 2-Way solenoid valves are pilot operated diaphragm type, requiring a minimum differential pressure to operate. They have an integrated pressure operated pilot valve, affording a high flow capacity.

The solenoid valve's design allows a small overall dimension with a relatively high flow-capacity. The solenoid coil is continuous duty design, with an epoxy molded or integral terminal box.

These 2-Way solenoid valves are suitable for activating BERMAD Deluge valves, Preaction Valves and other Water Control Valves. The 5282 models have a media separated pilot, making them insensitive to corrosive fluids.



Model 5282A-UL-N



Notes:

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

Features

- High flow capacity, 12 mm orifice min.
- Internal pilot operated
- One-piece molded epoxy enclosure as standard
- Class H coil and suppression diode (model BE270CW)
- Ex d type with integral terminal box (model BE270CW)
- Seawater capability available (5282 SS316 version)

Power

- 24V DC or 120, 220 VAC/50-60 Hz, refer to selection table for wattage rating
- Voltage Tolerance: +10% -35% for BE270CW and $\pm 10\%$ for other models

Materials

- Body: Brass
- Internals: Stainless steel
- Diaphragm: NBR
- Enclosure: Molded Epoxy
Epoxy Coated Aluminium or SS316 Terminal Box on BE270CW
- Optional: Stainless Steel 316 body/Enclosure

Installation and Maintenance

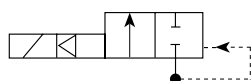
The Solenoid Valve is the most critical unit in the Deluge system, it should be installed and wired by qualified and trained personnel only.

The coil should be wired in accordance with the requirements of the applied norm such as NEC/NFPA, NEMA, IEC or other code and standards. Ensure that the voltage supply and frequency corresponds with the markings that appear on the enclosure label. A conduit hub on the enclosure side must be supported against torque during the assembly. Use appropriate tools while tightening a fitting into the conduit connector. After installation, the cable or conduit must be well supported to avoid excessive load on the conduit hub.

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

Maintenance: Proper operation of the Solenoid Valve should be periodically verified. Testing and Maintenance should be performed 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



2/2-Way, normally closed

Technical Data

UL-Listed, FM Approved model 5282A-UL and 5282A-EX

The 5282A is a N.C. solenoid valve, it is UL-Listed and FM approved for BERMAD Deluge valves and also approved to be used in Class I Division 2, Groups A, B, C, D hazardous locations. The 5282A-UL has an epoxy molded enclosure construction rated for IP65/NEMA-4, continuous duty design with class F coil insulation, it is equipped with an integral cable plug of polyamide, with 0.75mm² screw terminals and ½" NPT cable entry.

The 5282A-EX Explosion Proof version is FM approved to be used in Class I Div. 1 and 2 Groups A, B, C, D and Class II Groups E, F, G hazardous locations according to ANSI/NFPA 70, NEC 500, where hazardous materials are present intermittently. The solenoid enclosure is watertight, NEMA 4, 7 and 9, epoxy molded enclosure construction rated for IP65/NEMA-4, continuous duty design class F coil insulation with flying leads and ½" NPT cable entry.

The 5282B is a N.C. solenoid valve and has the same technical characteristics, refer to the selection table for further data. All 5282 solenoid valves series have a media separated pilot valve with no wetted mechanical moving parts, this makes it insensitive to contaminated and/or corrosive fluids, the 5282 stainless steel 316 version is also suitable for saline firewater and seawater.

UL-Listed, model 6281-EVA, 8210G207 and EF8210G207

The 6281-EVA, 8210G207 solenoid valves are UL-Listed and FM approved, it has an epoxy molded enclosure construction rated for IP65/NEMA-4 or 4X, continuous duty design class F coil insulation with flying leads with. These solenoid valves are pilot operated diaphragm plunger type, suitable for normal non-corrosive conditions.

The EF8210G207 Explosion Proof version is also UL-Listed to be used in Class I Div. 1 and 2 Groups A, B, C, D and Class II Groups E, F, G hazardous locations according to ANSI/NFPA 70, NEC 500, where hazardous materials are present intermittently. The solenoid enclosure is watertight, NEMA4, 4X, 6, 6P, 7 and 9, epoxy molded with ½" NPT cable entry.

ATEX, Ex em II T4, model 6281A-EM

This solenoid valve is ATEX certified for hazardous locations II 2 G Ex em II T4, area classification for zone 1 or zone 2 according to ATEX directive 94/9/EC.

It is rated for IP 65 ingress protection, continuous duty design with class F coil insulation.

This enclosure is of the encapsulated type of protection and is equipped with a 3 meter cable.

ATEX, Ex d IIC T6, model BE270CW

This solenoid valve is ATEX certified for hazardous locations II 2 G Ex d d IIC T6, area classification for zone 1 or zone 2 according to ATEX directive 94/9/EC.

It is rated for IP 66 ingress protection, continuous duty design, with a includes class H coil insulation and suppression diode as standard. This enclosure is "Ex d" Flame Proof design and is equipped with an integral epoxy coated aluminum terminal box, including screw terminals, with ½" NPT cable entry.

This solenoid valve body is constructed of stainless steel 316 as standard, also a stainless steel 316 enclosure is available as an option.

Solenoid Valve Selection Table

Model	Normally	Body Materials	Enclosure Type / Class	Code	Cable Entry	Port Size"	Orifice mm	bar / psi	Power Watts	Approval See Notes
8210G207	N.C.	Brass	NEMA-4X	-	½" NPT	½	12	0.5-12 / 7.3-175	10.6	UL/FM ⁽²⁾
6281-EVA		Brass	NEMA-4	-	½" NPT Plug	½	13	0.3-20 / 4.6-300	8	UL/FM ⁽²⁾ , GP ⁽¹⁾
BE270CW		SS316	Ex d IIC T6	9	½" NPT	½	12	0.5-20 / 7.3-300	8	ATEX ⁽⁴⁾
EF8210G207		Brass	Div. 1	7	½" NPT	½	12	0.5-12 / 7.3-175	10.6	UL/FM ⁽³⁾
6281A-EM		Brass	Ex em II T4	8	Gland	½	13	0.3-16 / 4.6-235	9	ATEX ⁽⁵⁾
5282A-UL-N		SS316	Div. 2	-	½" NPT Plug	½	13	0.3-16 / 4.6-235	8	UL/FM ⁽²⁾ , FM ⁽⁶⁾
5282A-EX-N	N.O.	SS316	Div. 1	7	½" NPT	½	13	0.3-16 / 4.6-235	8	FM ^{(2),(3)}
BE24202		SS316	Ex d IIC T6	9	½" NPT	½	12	0.5-20 / 7.3-300	8	ATEX ⁽⁴⁾
5282B-UL-N		SS316	Div. 2	-	½" NPT Plug	½	13	0.3-16 / 4.6-235	8	FM ⁽⁶⁾
5282A-EX-N		SS316	Div. 1	7	½" NPT	½	13	0.5-20 / 7.3-300	8	FM ⁽³⁾

Notes:

⁽¹⁾ General purpose / watertight, IP65 Ingress Protection to IEC spec, suitable for Safe Area.

⁽²⁾ UL-Listed for Fire Protection Special Systems (UL429A) and FM approved.

⁽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, IP 66 Ingress Protection to IEC Spec.

⁽⁵⁾ ATEX certified for hazardous locations II 2 Ex em II T4, IP 65 Ingress Protection to IEC Spec.

⁽⁶⁾ Approved for Class I, Div 2, Groups A, B, C, D.

