

Solenoid Valve - Normally Open - High Pressure

Benefits & Features

- Installation in any position
- Suitable for gaseous and liquid media
- Brass or nickel plated brass body
- High pressure applications up to 30 Bar
- Safe Area IP65 & IP67. Versions for EExd IIB and EExd IIC
- Special model for Liquid CO2 with UREPAN seals
- Special model with stainless steel internal orifice and piston



EExd IIB or EExd IIC
Hazardous Area

Specification

Configuration	Pilot Piston
Port Sizes	3/8" BSP
Orifice	8.7mm
Body	Brass or Nickel Plated Brass
Media	Air, gases, liquids etc. Subject to material compatibility
Pressure ranges	See individual data tables below
Seals	UREPAN, RULON

Technical Data

L21	A	87	B	C	D	E	Port Size BSP	Orifice mm	Min. /Max. Operating Differential Pressures. BAR.			KV Flow Factor L/min.
									Min.	Maximum		
										AC	DC	
							3/8"	8.7	0.5	30	30	20



IP67 with optional
Nickel plated body

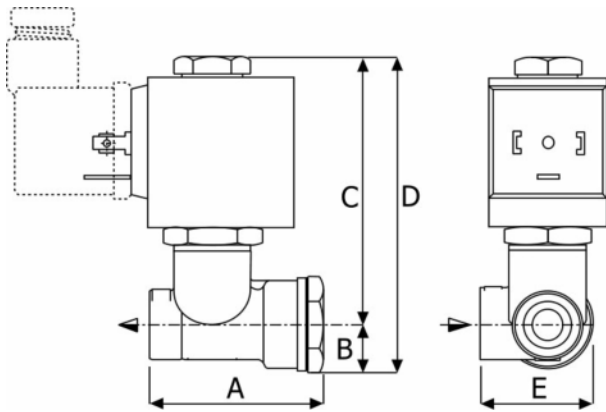


IP65 with brass body

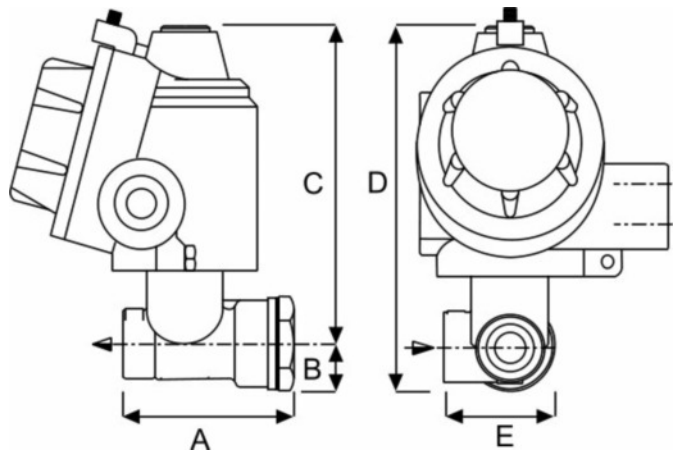
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Weights & Dimensions

IP65 safe area



IP67 safe area & EExd



Weight Kg	Dimensions mm				
	A	B	C	D	E
0.5	58	15	74	89	38

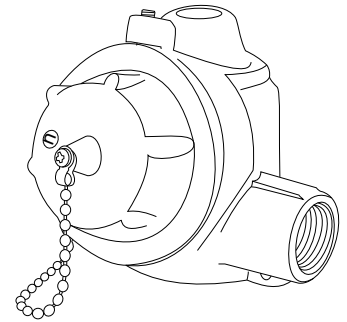
Weight Kg	Dimensions mm				
	A	B	C	D	E
1.2	58	15	122	86	87

Order Codes

A	Body	B	Port	C	Seals (fluid temp. min / max)	D	Protection	E	Options
T	Brass	E	3/8" BSP	2	UREPAN (-10°C to + 90°C)	P	IP65 Safe Area		
N	Nickel Plated Brass			3	RULON (-10°C to + 120°C)	S	IP67 Safe Area		
						B	II 1/2 GD Ex-d IIB T6 (-20 to +40°C)		
						C	II 1/2 GD Ex-d IIC T6 (-20 to +40°C)		
						/LT	II 1/2 GD Ex-d IIC T6 (-60 to +60°C)		
						H	Ex-d c IIB IP67 IECEX		
						T	Ex-d c IIC IP67 IECEX		
						R	Ex-d IIC EAC Ex		

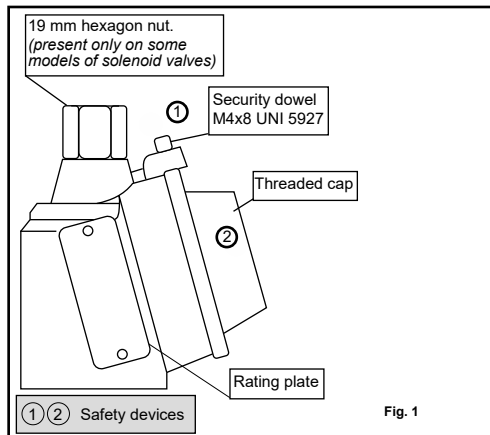
Electrical Wiring - IP67 Housing

Installation Procedures & Methods

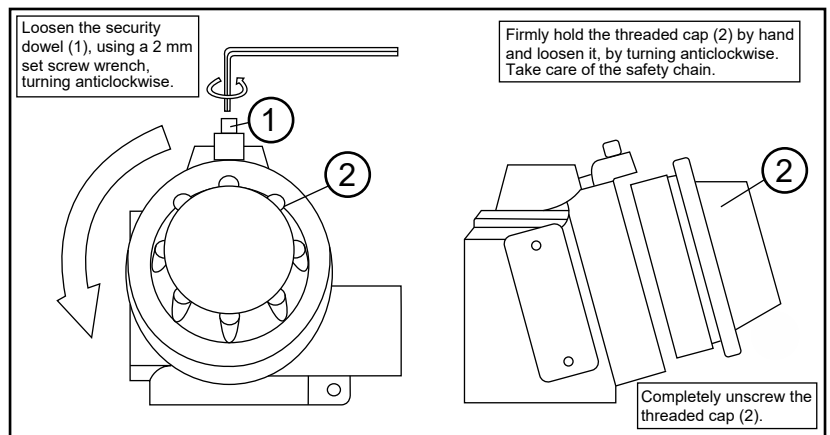


Attention: For safety purposes, always ensure that the power supply is disconnected. After de-energising, allow 15 minutes before continuing the following procedures

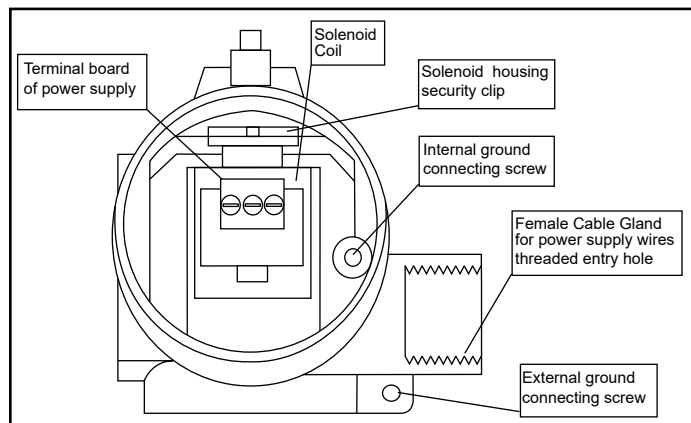
A



B

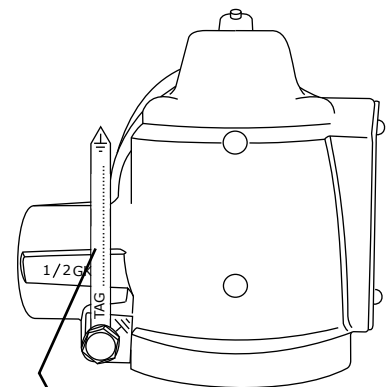
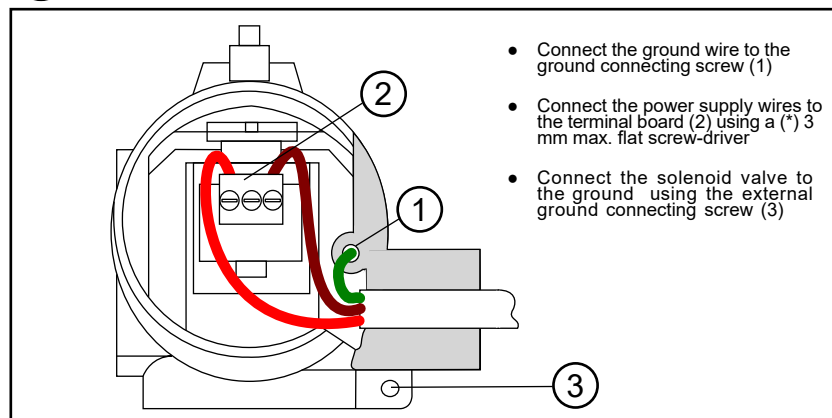


C



Pipe fittings used for cable entry (Cable, duct, conduit etc) are NOT supplied by the manufacturer. Installation engineers should ensure that the use of fittings are of the correct diameter and suitable to secure the tightness of the cable used. Where site conditions indicate, cable duct, conduit etc. must be ATEX approved, for a protection degree equal or greater than the protection degree indicated on the rating plate. The thread type is indicated on the housing: M20*1.5mm, 1/2"NPT or 1/2"GK

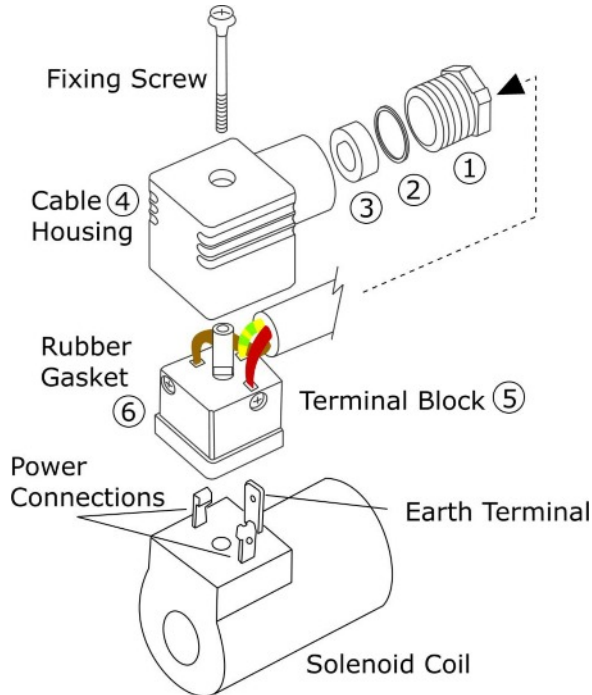
D



Earth Tag. Can be customised with Tag number, part number etc.



DIN electrical socket connectors to protect solenoid coil terminals and wiring.



Section 1: DIN Connector Assembly

- Insert the electrical power cable through the gland assembly (1,2,3)
- Push the cable through cable housing (4)
- Connect power and earth cables to terminal block 5
- Push terminal block (5) backwards, inside cable housing (4)
- Place rubber gasket (6) on terminal block (5) front face
- Push terminal block onto solenoid coil terminals
- Push fixing screw through complete assembly
- Tighten fixing screw with small screwdriver
- Do not over tighten
- Tighten cable gland (1,2,3) by hand

Section 2: How to install Solenoid Valves

Solenoid Valves can normally be installed and operate in any orientation. However, certain models are designed to operate in horizontal installations. Please contact Red Dragon for further information.

Installation Procedure:

Check that the Solenoid Valve is the correct product ordered for the application:

- Isolate the site electrical power supply
- Isolate the site media supply (dependant on the application)...air, water, steam etc. Leave until cool/safe.
- Insert the valve onto the pipe, ensuring that the flow direction is observed.....IN for incoming media, or an arrow stamped on the valve body.
- Ensure that the pipe connections are free from burrs or loose pipe thread tape
- Tighten all pipe joints
- Connect electrical power supply via DIN electrical socket connector, as detailed in section 1
- Ensure that DIN connector is properly connected to solenoid coil and the gasket is installed correctly
- Apply media pressure and check for leaks

Section 3: Maintenance Procedure for Solenoid Valves

In the unlikely event of a valve malfunction, or routine maintenance, follow these instructions:

- Isolate the site electrical power supply
- Isolate the site media supply (dependant on the application)...air, water, steam etc.
- Remove the solenoid coil by unscrewing the coil retention nut anti-clockwise
- Remove the coil tube stem by unscrewing anti-clockwise
- Carefully remove the plunger assembly (inside the coil stem)
- Check the plunger assembly for damage or worn seals
- Check the face inside the coil stem for foreign particles that could prevent correct operation
- For Pilot Diaphragm Solenoid Valves: remove the top cover housing and check the diaphragm for damage and blocked transfer port.
- Re-assemble the valve in reverse order, ensuring that all parts are cleaned and assembled correctly