

## Solenoid Valve - 5 Way - Double Solenoid - Bistable

### Benefits & Features

- Five way three position, double solenoid valve. Bistable
- Suitable for gaseous media
- High dependency applications
- Compact design
- Brass body 3/8" and 1/2"
- 316 stainless steel body 1/2" only
- Ex-d IIC -60°C to +60°C ambient versions
- ATEX, EAC Ex (CU TR 012) and IECEx, Ex-d approved

### Specification

<b>Configuration</b>	Internal pilot operation
<b>Port Sizes</b>	3/8" & 1/2" BSP or NPT
<b>Orifice</b>	11.0mm
<b>Kv</b>	see table below
<b>Media</b>	gaseous media, subject to material compatibility
<b>Pressure ranges</b>	3 - 10 Bar
<b>Seals</b>	NBR, VITON, HNBR

### Configuration



D15.d Double Solenoid Bistable

IN: E

Coil 1 Energised: From E to U1  
From U2 to S2

Coil 2 Energised: From E to U2  
From U1 to S1

Coils De-energised: Latched on the last position



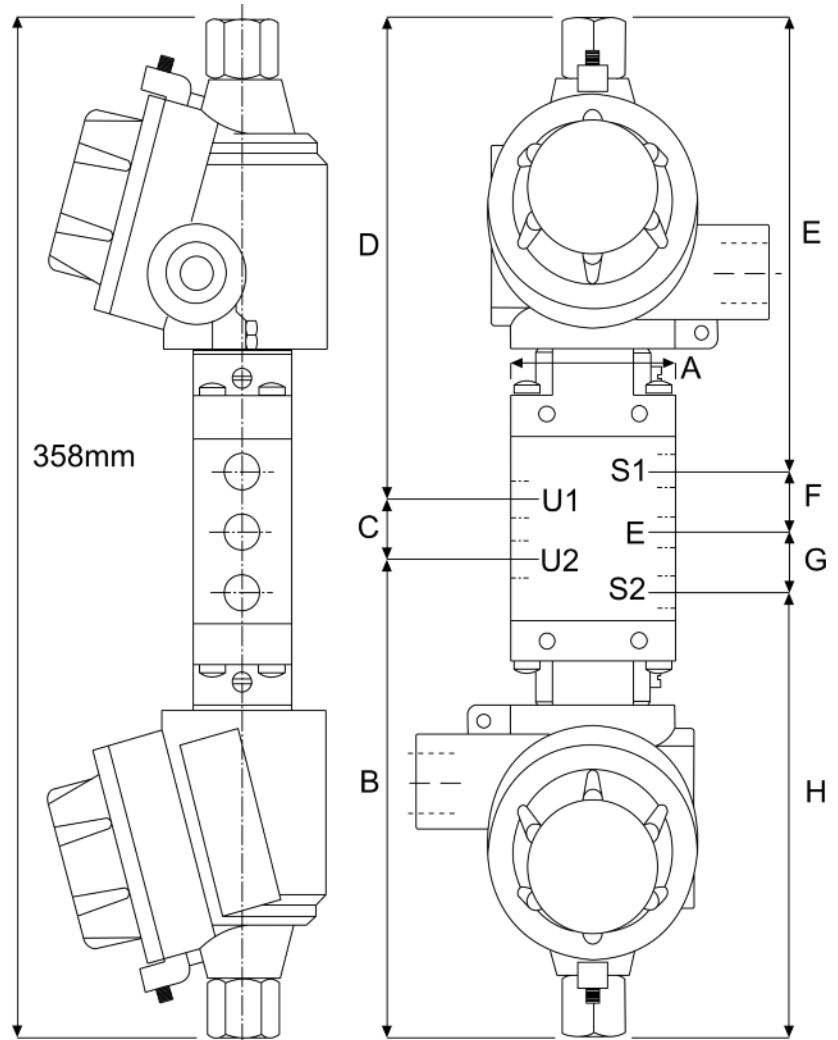
### Technical Data

MODEL	A	11	B	C	D	E	Port Size BSP or NPT	Body Rating	Orifice mm	Min. /Max. Operating Differential Pressures.			KV Flow Factor L/min.
										Min. BAR	Maximum BAR		
											AC	DC	
D15							3/8" or 1/2"	10	11	3	10	10	30

- 1/2" Stainless Steel, Manual Override, EExd IIC

## Solenoid Valve - 5/2 - Single Solenoid - Monostable

### Weights & Dimensions



Weight Kg	Dimensions mm							
	A	B	C	D	E	F	G	H
2.2	60	164	30	164	149	30	30	149

### Order Codes

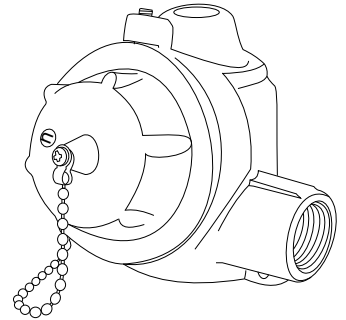
A	Body	B	Port	C	Seals (fluid temp. min / max)	D	Protection	E	Options		
T	Brass	E	3/8" BSP	T	3/8" NPT	0	NBR (-10°C to +70°C)	B	II 1/2 GD Ex-d IIB T6 (-20 to +40°C)	X	Manual Override
I	316 Stainless Steel*	F	1/2" BSP	G	1/2" NPT	1	VITON (-10°C to +90°C)	C	II 1/2 GD Ex-d IIC T6 (-20 to +40°C)	/SG	Degreased for oxygen
	* 1/2" body only					7	HNBR (-10°C to +90°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		
								S	IP67 (Safe Area)		

# Electrical Wiring - IP67 Housing

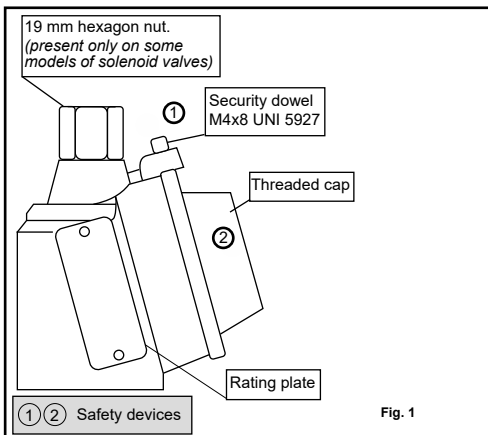
## Installation Procedures & Methods



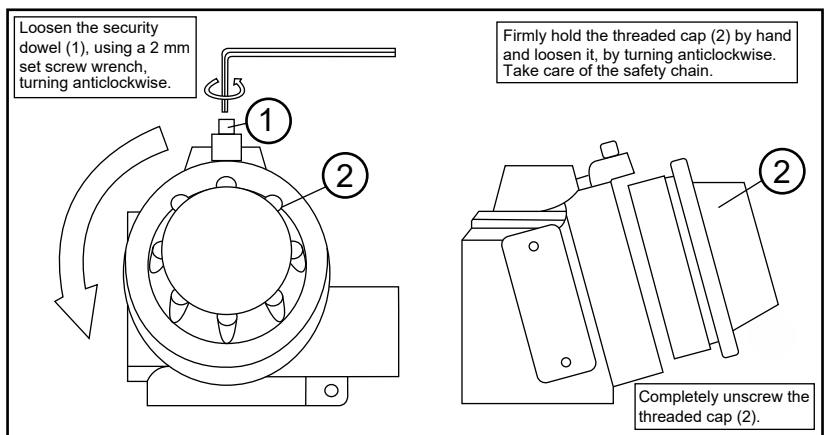
**Attention: For safety purposes, always ensure that the power supply is disconnected. After de-energising, allow 15 minutes before continuing the following procedures**



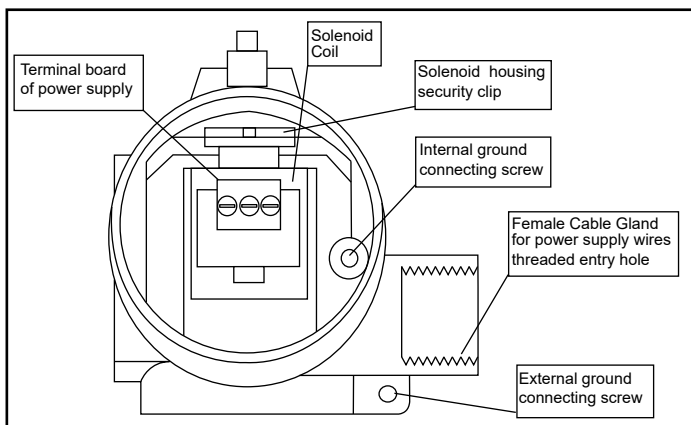
**A**



**B**

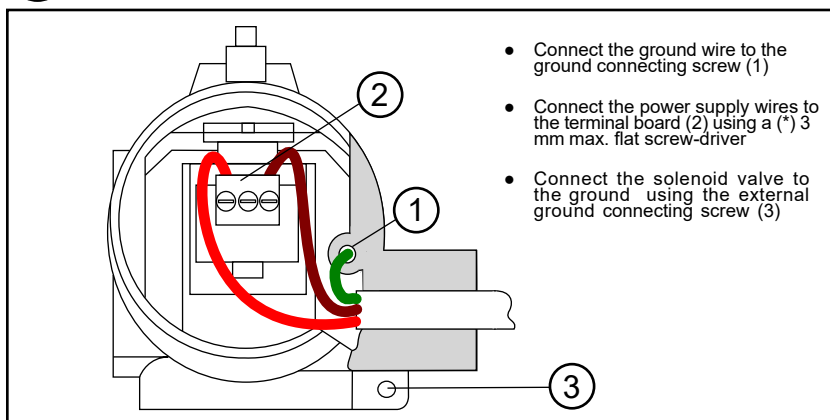


**C**

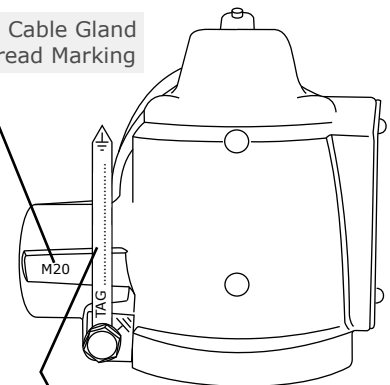


Pipe fittings used for cable entry (Cable, duct, conduit etc) are NOT supplied by the manufacturer. Installation engineers should ensure that the use of fittings are of the correct diameter and suitable to secure the tightness of the cable used. Where site conditions indicate, cable duct, conduit etc.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

**D**



Electrical Cable Gland Entry Thread Marking



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

### Section 1: 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 (safe area valves) or cable gland (ATEX & IP67 valves) is properly connected to solenoid coil and the gasket (IP65 safe area models) is installed correctly
- Apply media pressure and check for leaks
- Operate Solenoid Valve electrically and ensure the valve is working correctly

### 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