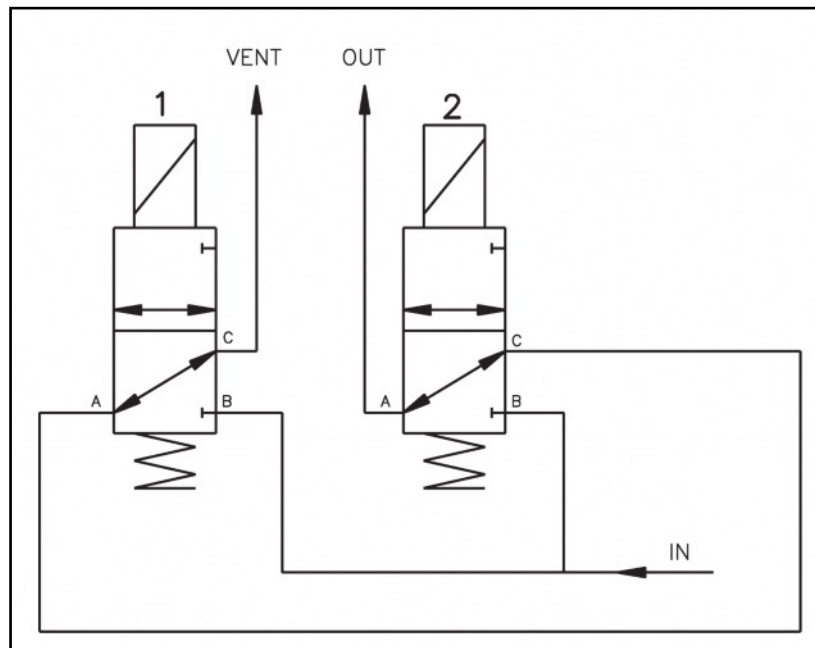


Solenoid Valve - Model C90 - 1/4" Dual 3/2 Redundant



- Specification & Dimensions: **Pages 2-3**
- Installation & Maintenance Procedures: **Page 4**
- Wiring Details IP65 Solenoid Coil: **Page 5**

Solenoid Valve - 3/2 NC - Redundant

Benefits & Features

- High dependency redundant safety circuit applications
- Twin solenoid coils. If one coil fails, the valve continues to operate
- Brass or 316 Stainless Steel bodies
- IP65, IP67, Ex-d IIB, Ex-d IIC versions
- Ex-d IIC -60°C to +60°C ambient versions
- ATEX, EAC Ex (CU TR 012) and IECEx, Ex-d approved



Specification

Configuration	Direct Acting, all ports in the base		
Port Sizes	1/4" BSP or 1/4" NPT		
Orifice	6.0mm		
Kv	see table below		
Body	Brass or 316 Stainless Steel		
Media	Liquid/gaseous media compatible with the seal/body materials		
Pressure ranges	See individual data tables below		
Seal options	NBR -10 to +70°C VITON (-10 to +90°C) EPDM -10 to +90°C HNBR -45 to +90°C		



Technical Data

							Port Size BSP or NPT	Nominal Max. Bar	Orifice mm	Min. /Max. Operating Dif- ferential Pressures. BAR.			KV Flow Factor L/min.
										Min.	Maximum		
											AC	DC	
C90	A	60	B	C	D	E	¼"	10	6.0	0	10	10	9
C90	D	60					¼"	10	6.0	0	10	10	9

Order Codes

A	Body	B	Port	C	Seals (fluid temp. min / max)	D	Protection	E	Options
I	316 Stainless steel	C	1/4" BSP	D	1/4" NPT	0	NBR (-10°C to + 70°C)	P	IP65 Safe Area
T	Brass					1	VITON (-10°C to + 90°C)	S	IP67 Safe Area
						6	EPDM (-10°C to + 90°C)	B	II 1/2 GD Ex-d IIB T6 (-20 to +40°C)
						7	HNBR (-45°C to + 90°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

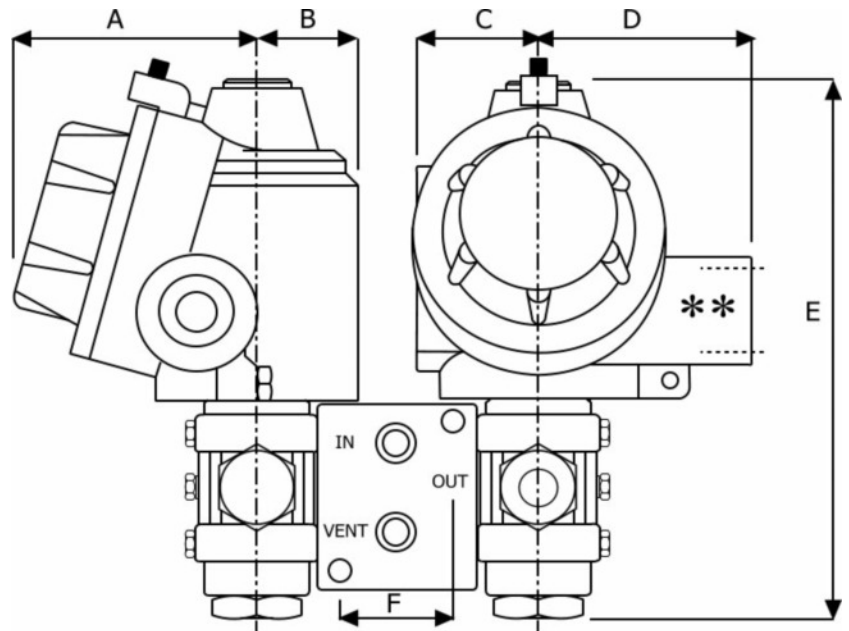


Solenoid Valve - 3/2 - Redundant

Weights & Dimensions

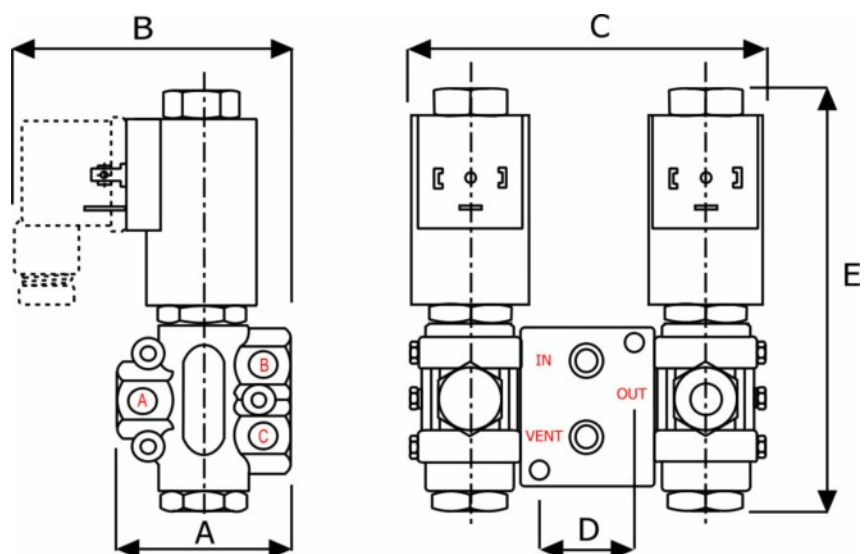
EExd & IP67 models

Weight Kg	Dimensions mm				
	A	B	C	D	E
3	52	86	86	27	140



IP65 safe area models

Weight Kg	Dimensions mm				
	A	B	C	D	E
3	52	79	113	27	121

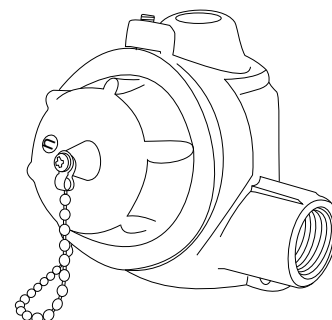


Electrical Wiring - IP67 Housing

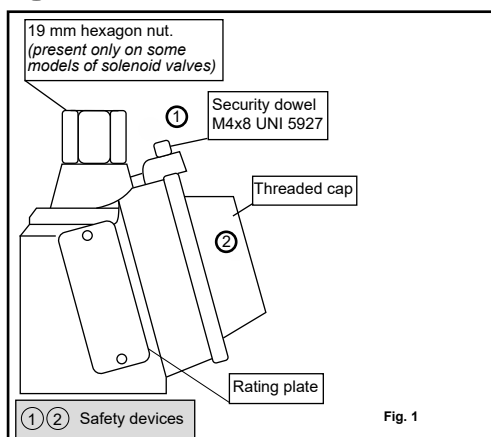
Installation Procedures & Methods



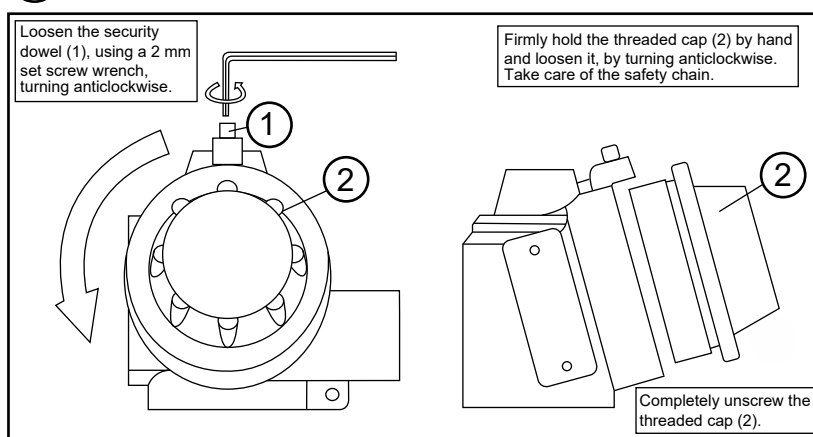
Attention: For safety purposes, always ensure that the power supply is disconnected. After de-energising, allow 15 minutes before continuing the following procedures



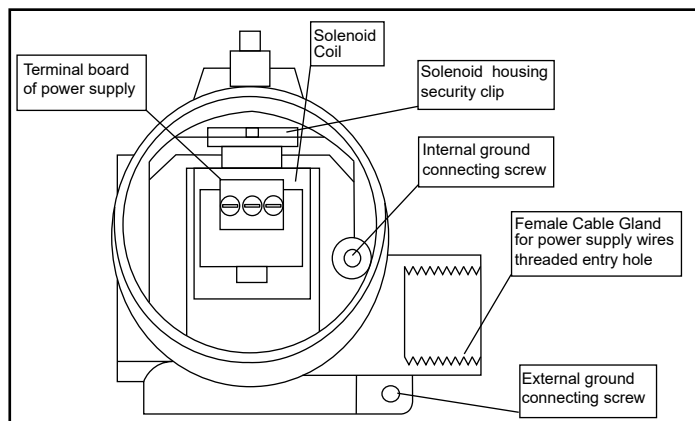
A



B

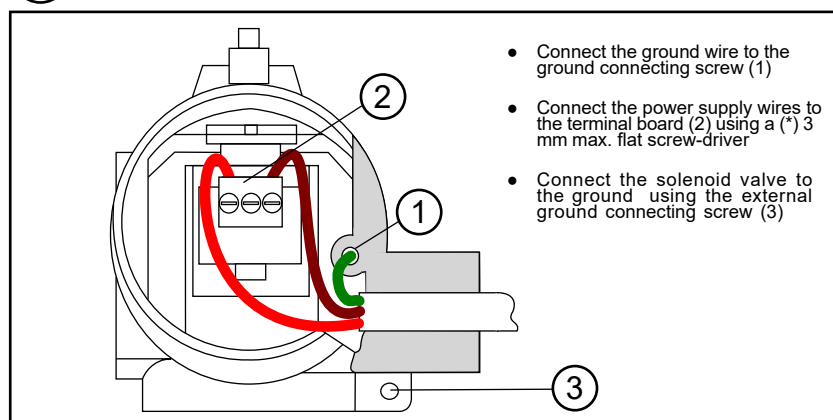


C

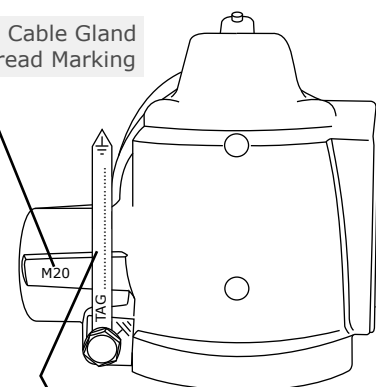


Pipe fittings used for cable entry (Cable, duct, conduit etc) are NOT supplied by the manufacturer. Installation engineers should ensure that the use of fittings are of the correct diameter and suitable to secure the tightness of the cable used. Where site conditions indicate, cable duct, conduit etc. 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



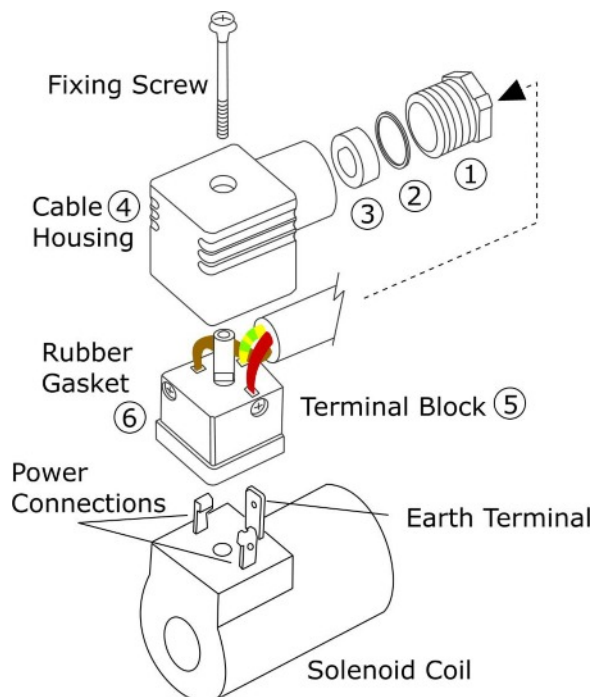
Electrical Cable Gland Entry Thread Marking



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



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