

## Solenoid Valve - Model L03 - 3/8"-2" 2/2 Normally Closed



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## Solenoid Valve - 2/2 - Normally Closed

### Benefits & Features

- High dependency applications
- Pilot diaphragm design
- High flow applications
- Internal moving parts available as spares kit
- Brass or nickel plated brass bodies
- IP65 solenoid coil protection



### Specification

<b>Configuration</b>	Pilot Diaphragm
<b>Port Sizes</b>	3/8" BSP to 2" BSP
<b>Orifice</b>	see table below
<b>Kv</b>	see table below
<b>Body</b>	Brass or nickel plated brass
<b>Media</b>	Air, light oils, water etc. Subject to material compatibility
<b>Pressure ranges</b>	See individual data tables below
<b>Seal options</b>	NBR   VITON   EPDM   RULON   TEFLON

### Technical Data

A	L03	B	C	D	E	Port Size	Orifice mm	Body Rating	Min. /Max. Operating Differential Pressures. BAR.			KV Flow Factor L/min.
									Min.	Maximum		
										AC	DC	
				13		3/8"	12.7	25	0.15	18	16	35
				13		1/2"	12.7	25	0.15	18	16	40
				19		3/4"	19	25	0.15	16	13	87
				25		1"	25	25	0.15	12	10	170
				37		1 1/4"	37	20	0.15	10	10	300
				37		1 1/2"	37	20	0.15	10	10	340
				50		2"	50	20	0.15	10	10	600

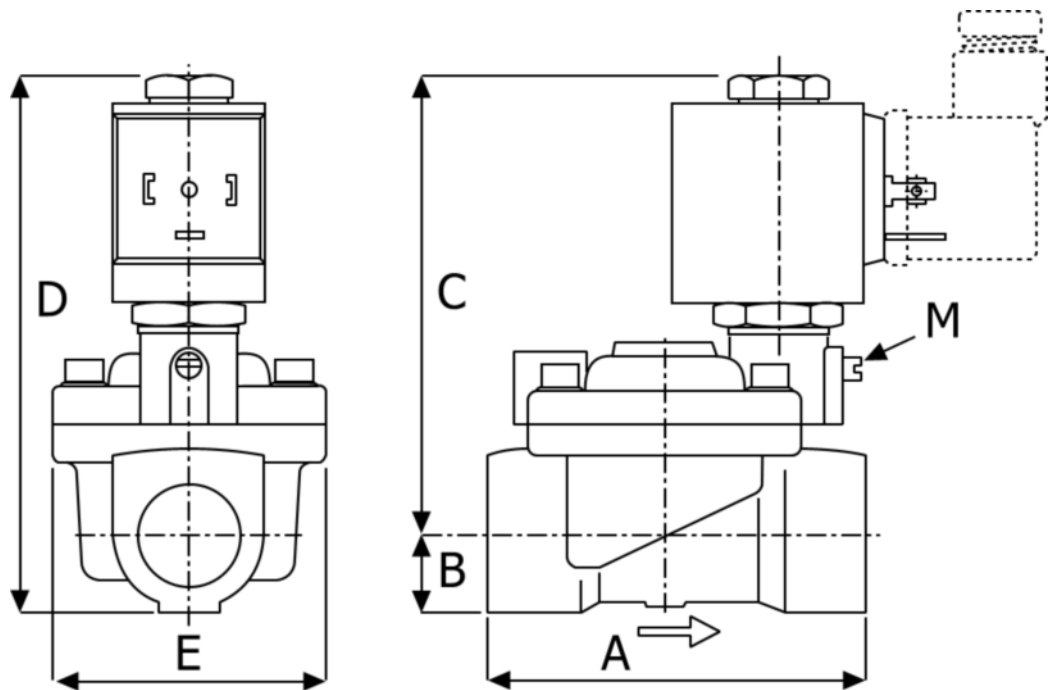
### Options

Manual Override (screwdriver slot)

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## Weights & Dimensions

Port Size	Weight Kg	Dimensions mm					
		Brass Body	Stainless Steel Body	B	C	D	E
		A	A				
3/8"	1	64	/	14	119	133	45
1/2"	1	64	66	14	119	133	45
3/4"	1.3	82		17	128	145	55
1"	1.8	100	/	20	135	155	70
1 1/4"	3.3	144	/	28	142	170	98
1 1/2"	3.1	144	/	28	142	170	98
2"	4.9	152	/	35	153	188	120



## Order Codes


A	Coil Voltage	B	Port Connection	C	Seals (fluid temp. min / max)	D	Body Material	E	Options		
A	AC	D	3/8" BSP	I	1 1/2" BSP	B	NBR (-10°C to + 90°C)	T	Brass	M	Manual Override
C	DC	E	1/2" BSP	L	2" BSP	V	VITON (-10°C to + 130°C)	N	Nickel Plated Brass		
		F	3/4" BSP			E	EPDM (-10°C to + 130°C)	I	316 Stainless Steel*		
		G	1" BSP			R	RULON (-10°C to + 120°C)		* 1/2" & 3/4" Body only		
		H	1 1/4" BSP			T	TEFLON (-10°C to + 140°C)				

## Solenoid Valve - Model L03 - Spare Parts



### Pilot Assembly

Seal Material	Port Size (AC power supply)		Port Size (DC Power Supply)	
	3/8" - 1"	1 1/4" - 2"	3/8" - 1"	1 1/4" - 2"
NBR	AP81UBI	AP85UBI	CP81UBI	CP85UBI
VITON	AP81UVI	AP85UVI	CP81UVI	CP85UVI
EPDM	AP81UEI	AP85UEI	CP81UEI	CP85UEI




### Diaphragm Assembly

Seal Material	Port Size				
	3/8", 1/2"	3/4"	1"	1 1/4"-1 1/2"	2"
NBR	20170001	20171001	20172001	20173001	20174001
VITON	20170002	20171002	20172002	20173002	20174002
EPDM	20170003	20171003	20172003	20173003	20174003



### Solenoid Coil




**C1 Solenoid Coil**  
H=31mm, W=22mm, D=28mm



**C3 Solenoid Coil**  
H=39mm, W=30mm, D=38mm

Voltage	Port Size (AC power supply)		Port Size (DC Power Supply)	
	3/8" - 1"	1 1/4" - 2"	3/8" - 1"	1 1/4" - 2"
12	1AN01	3AN03	10N06	30N08
24	1BN01	3BN03	11N06	31N08
48	1CN01	3CN03	12N06	32N08
110	1DN01	3DN03	13N06	33N08
220	1EN01	3EN03	14N06	34N08
415	1GN01	3GN03		




**C1 & C3 Solenoid Connector**  
22mm & 30mm

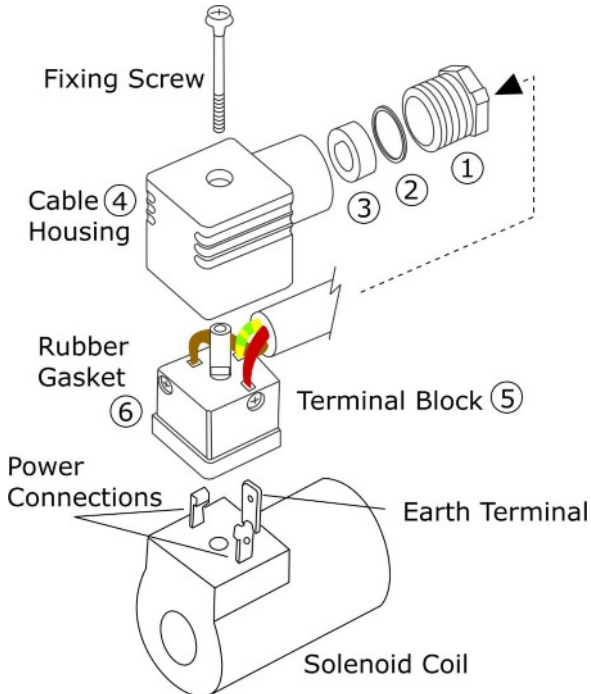
### Solenoid Connector

Voltage	Code (30mm)	Code (22mm)	RED LED
Any	20221000	20220000	NO
24	20222002	20220005	YES
115	20222004	20220006	YES
230	20222005	20220007	YES





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