Measure Monitor Control

N03

Solenoid Valve - 2/2 - Normally Open

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

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

Technical Data

MODEL:							Port Size BSP	Orifice mm	Body Rating	Min . /Max. Operating Differential Pressures. BAR.			KV Flow Factor L/min.	Weight Kg
A		B	C		D	E				Min.	Maximum			
											AC	DC		
	N03			12			⅜”	12.7	25	0.15	16	10	35	0.55
	N03			12			½”	12.7	25	0.15	16	10	40	0.55
	N03			18			¾”	18	25	0.15	12	10	87	0.85
	N03			25			1”	25	25	0.15	9	5	170	1.35
	N03			37			1 ¼”	37	20	0.15	10	10	300	2.85
	N03			37			1 ½”	37	20	0.15	10	10	340	2.65
	N03			50			2”	50	20	0.15	10	10	600	4.45

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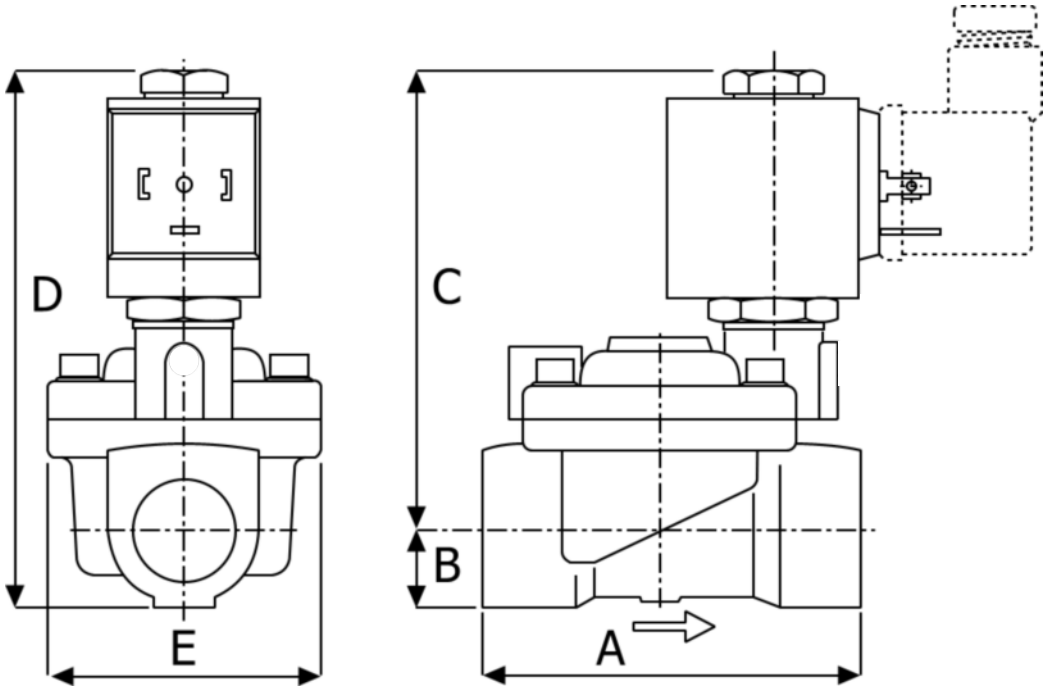
Weights & Dimensions

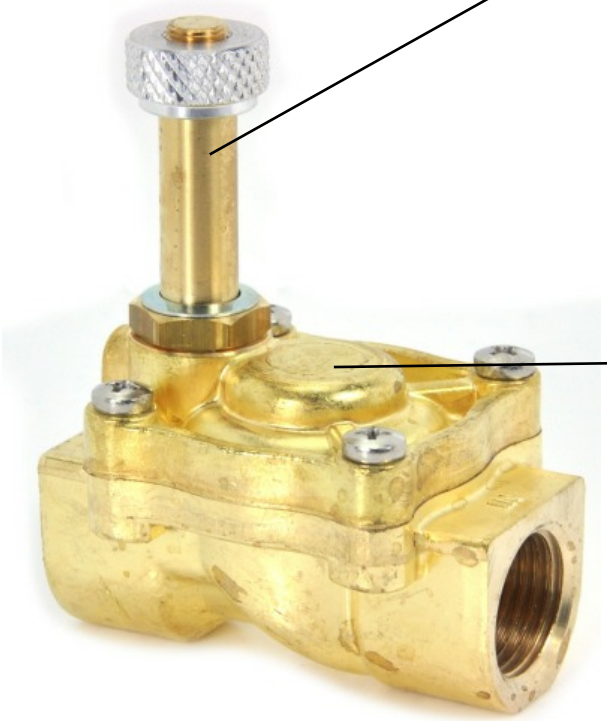
Port	Weight Kg	Dimensions mm				
		A	B	C	D	E
⅜"	0.55	64	14	87	101	45
½"	0.55	64	14	87	101	45
¾"	0.85	82	17	96	113	55
1"	1.35	100	20	103	123	70
1 ¼"	2.85	134	28	110	138	98
1 ½"	2.65	134	28	110	138	98
2"	4.45	152	35	121	156	120



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		
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 N03 - Spare Parts



Pilot Assembly

Seal Material	Port Size (AC power supply)		Port Size (DC Power Supply)	
	⅜"-1"	1 ¼" - 2"	⅜"-1"	1 ¼" - 2"
NBR	AP82UBI	AP86ZB30T	CP82UBI	CP86ZB30T
VITON	AP82UVI	AP86ZV30T	CP82UVI	CP86ZV30T
EPDM	AP82UEI	AP86ZE30T	CP82UEI	CP86ZE30T

Diaphragm Assembly

Seal Material	Port Size				
	⅜", ½"	¾"	1"	1 ¼"-1 ½"	2"
NBR	20170001	20171001	20172001	20173001	20174001
VITON	20170002	20171002	20172002	20173002	20174002
EPDM	20170003	20171003	20172003	20173003	20174003

Solenoid Coil

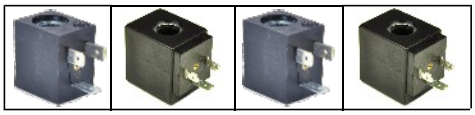
C1 Solenoid Coil (port sizes: ⅜"-1")

H=31mm, W=22mm, D=28mm

C3 Solenoid Coil (port sizes: 1 ¼" - 2")

H=39mm, W=30mm, D=38mm

Voltage	Port Size (AC power supply)		Port Size (DC Power Supply)	
	⅜"-1"	1 ¼" - 2"	⅜"-1"	1 ¼" - 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		



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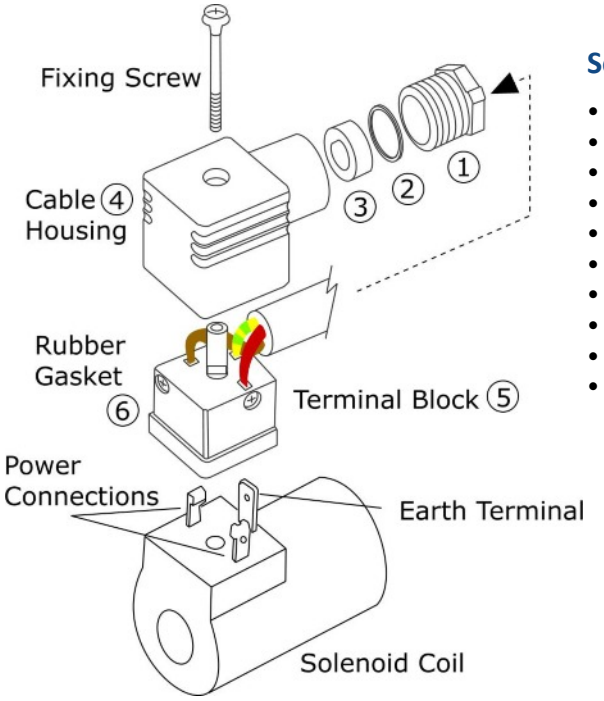
IP65 SAFE AREA INSTALLATION & MAINTENANCE

SAFE AREA SOLENOID VALVES
DIN 43650-A (Large)
DIN 43650-B (Small)

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