Measure Monitor Control

BX320

Solenoid Valve - 2/2 - High Pressure - Normally Closed

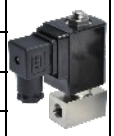
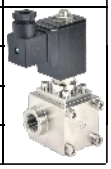
Benefits & Features

- High pressure liquids, gases & light oil <20CST
- Media temperature: -5°C to +130°C
- Two way normally closed
- Ideal for high pressure with high flow applications
- 304 Stainless Steel bodies
- IP65 protection
- ES solenoid coil with 20% power saving DIN 43650-A

Specification

Configuration	Lift assisted piston design
Port Sizes	1/4", 3/8", 1/2", 3/4" & 1" BSP or NPT
Orifice	see table below
Cv	see table below
Body	304 Stainless Steel
Media	Air, water, liquids etc. Subject to material compatibility
Pressure ranges	See individual data tables below
Seals	PTFE -5 to +130°C
Voltage	24, 110, 220, 230VAC. 24VDC. Other voltages upon request

Technical Data

	A		B	C	D		Orifice mm	Min . /Max. Operating Differential Pressures. BAR				CV Flow Factor	Model Type
								Min.	Maximum AC		Max. DC		
									110, 220, 230	24			
BX320	H	1	C/D/ E/T	3	P	¼" or ⅜"	1	0	300	300	200	0.04	
BX320	H	1.5		3	P		1.5	0	250	250	200	0.08	
BX320	H	2		3	P		2	0	180	150	120	0.15	
BX320	H	2.5		3	P		2.5	0	110	90	80	0.2	
BX320	H	3		3	P		3	0	80	55	40	0.25	
BX320	H	4		3	P		4	0	40	25	15	0.6	
BX320	H	10	E/T	3	P	⅜"	10	6	160	160	120	3.5	
BX320	H	15	F/G	3	P	½"	15	6	160	160	120	4.7	
BX320	H	20	H/I	3	P	¾"	20	6	160	160	120	7	
BX320	H	25	L/M	3	P	1"	25	6	160	160	120	11	

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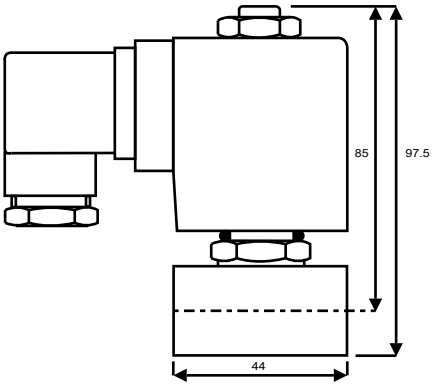
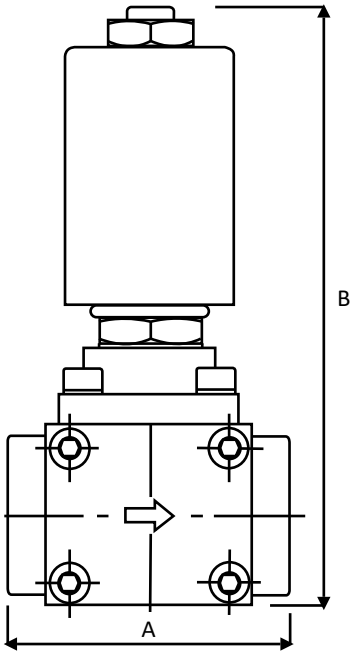
Dimensions

Port Size	Dimensions mm	
	A	B
¼"	44	97.5
⅜"	44	98



Port Size	Dimensions mm	
	A	B
⅜"	60	125
½"	70	138
¾"	80	144
1"	90	154



ES Power Saving Solenoid Coil Data & Codes

Model: ES05-450A/B

Standard Voltages: AC220, AC110 50/60Hz, DC24V, 12V						
ES05-450A			ES05-450B		ES05-450C	
Voltage	Power (AC 50Hz)		Power (AC 50Hz)		Power (AC 50Hz)	
	Inrush	Holding	Inrush	Holding	Inrush	Holding
AC220V	80VA	4VA	155 VA	8VA	130VA	6VA
AC110V	69VA	5VA	95VA	9VA		
DC24V	28W	4W	44W	6W		
Waterproof to IP65, Class H insulation, DIN 43650-A						

Order Codes

A	Body	B	Port			C	Seals (fluid temp. min / max)	D	Protection
H	304 Stainless Steel	C	1/4" BSP	D	1/4" NPT	3	PTFE (-5°C to + 130°C)	P	IP65
		E	3/8" BSP	T	3/8" NPT				
		F	1/2" BSP	G	1/2" NPT				
		H	3/4" BSP	I	3/4" NPT				
		L	1" BSP	M	1" NPT				

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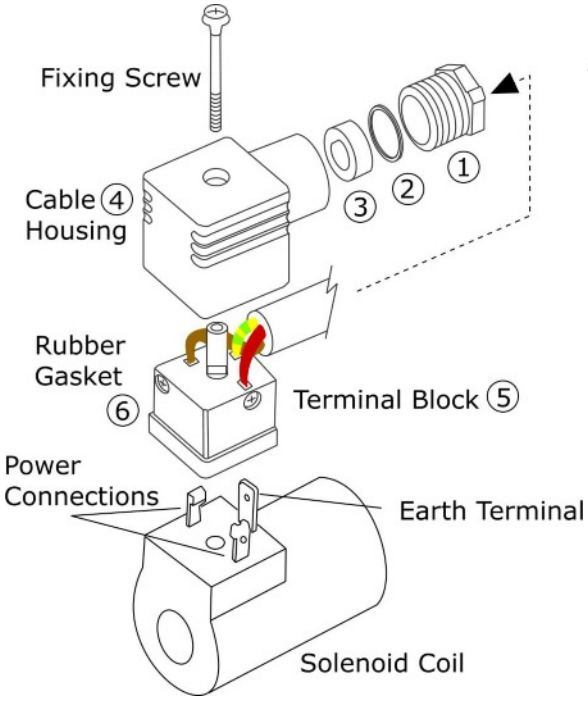
IP65 SAFE AREA INSTALLATION & MAINTENANCE

IP65

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

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