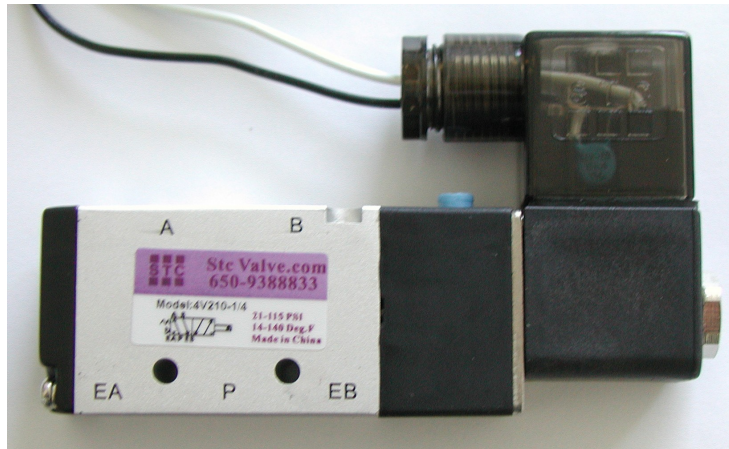


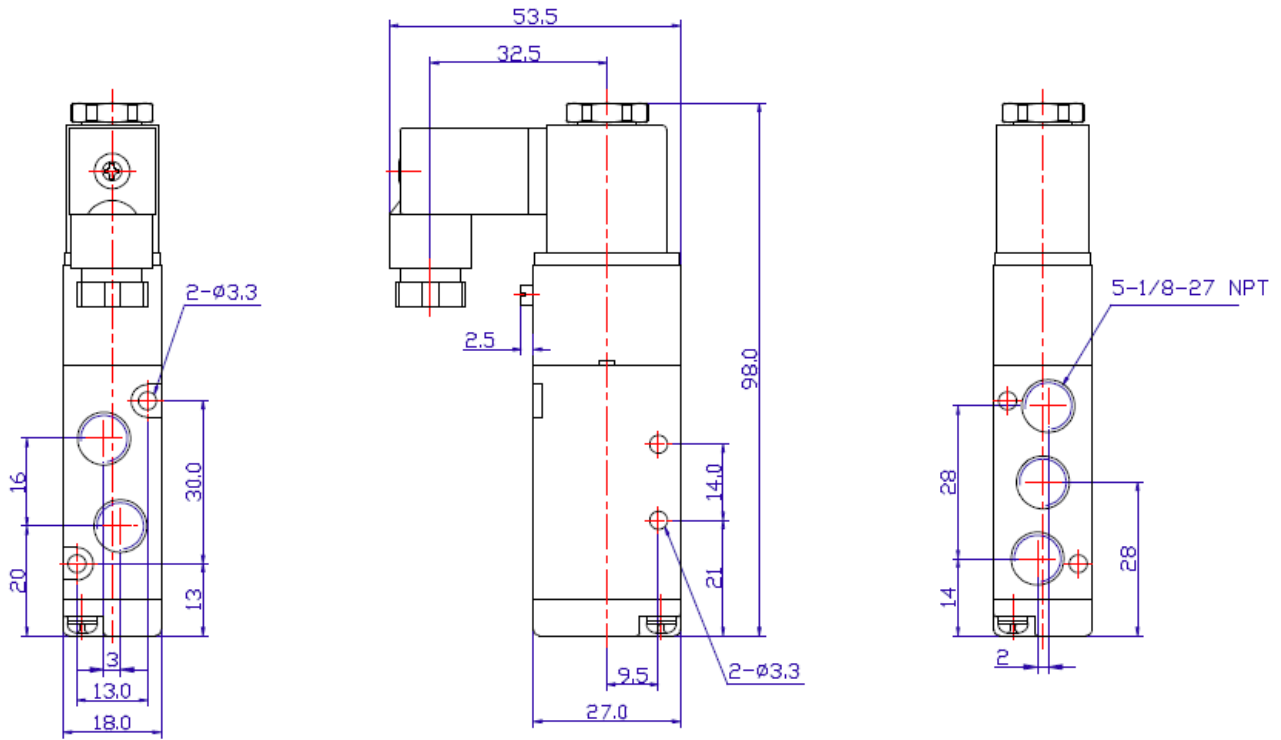
4V110-410 SERIES SOLENOID VALVE



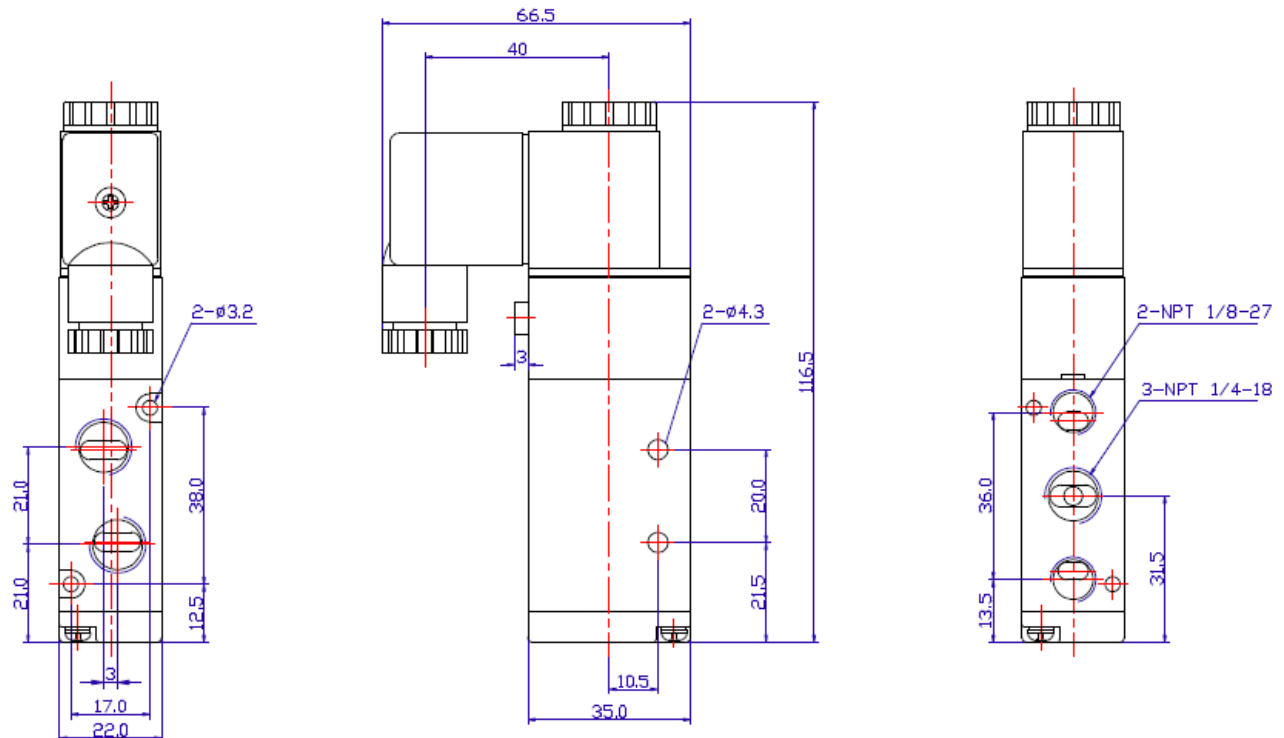
| Valve Model | 4V110-1/8 | 4V210-1/4 | 4V310-1/4 | 4V310-3/8 | 4V410-1/2 |
|------------------------------------|--|----------------------------------|----------------------------------|----------------------------------|-----------|
| Port & Mounting | Body Ported, 4-way, 2-position | | | | |
| Action & Motion | Air Pilot, Spool Design, 4-way, 2-position, Response Time <20 ms | | | | |
| Operating Pressure | 21 to 115 PSI | | | | |
| Port Sizes | 1/8 NPT | 1/4 (in/outlet) 1/8 (exhaust) | 1/4 (in/outlet) 1/4 (exhaust) | 3/8 (in/outlet) 1/4 (exhaust) | 1/2 NPT |
| Operating Temp. | 14 to 140 °F | | | | |
| C _v | 0.67 | 0.89 | 1.68 | 1.68 | 2.79 |
| SFCM @ 100PSI | 25 | 53 | 80 | 80 | 160 |
| Manual Override | Detentable | | | | |
| Electrical Connection | Grommet, DIN | | | | |
| Working Medium | 40 micron filtered air or inert gas | | | | |
| Coil Insulation & Protection Class | IP 65, Class F | | | | |
| Coil Duty Cycle | 100% ED | | | | |
| Coil Voltage Options | Options: 12, 24 VDC; 24,110/120, 220/240 VAC (50/60Hz) | | | | |
| Coil Power | 2.5W | 3/4.8W | | | |
| Valve Body Material | Anodized Aluminum | | | | |
| Seal Material | NBR (Buna N) | | | | |
| Lubrication | Not Required | | | | |

4V110-410 SERIES SOLENOID VALVE DIMENSIONS

MODEL: 4V110-1/8

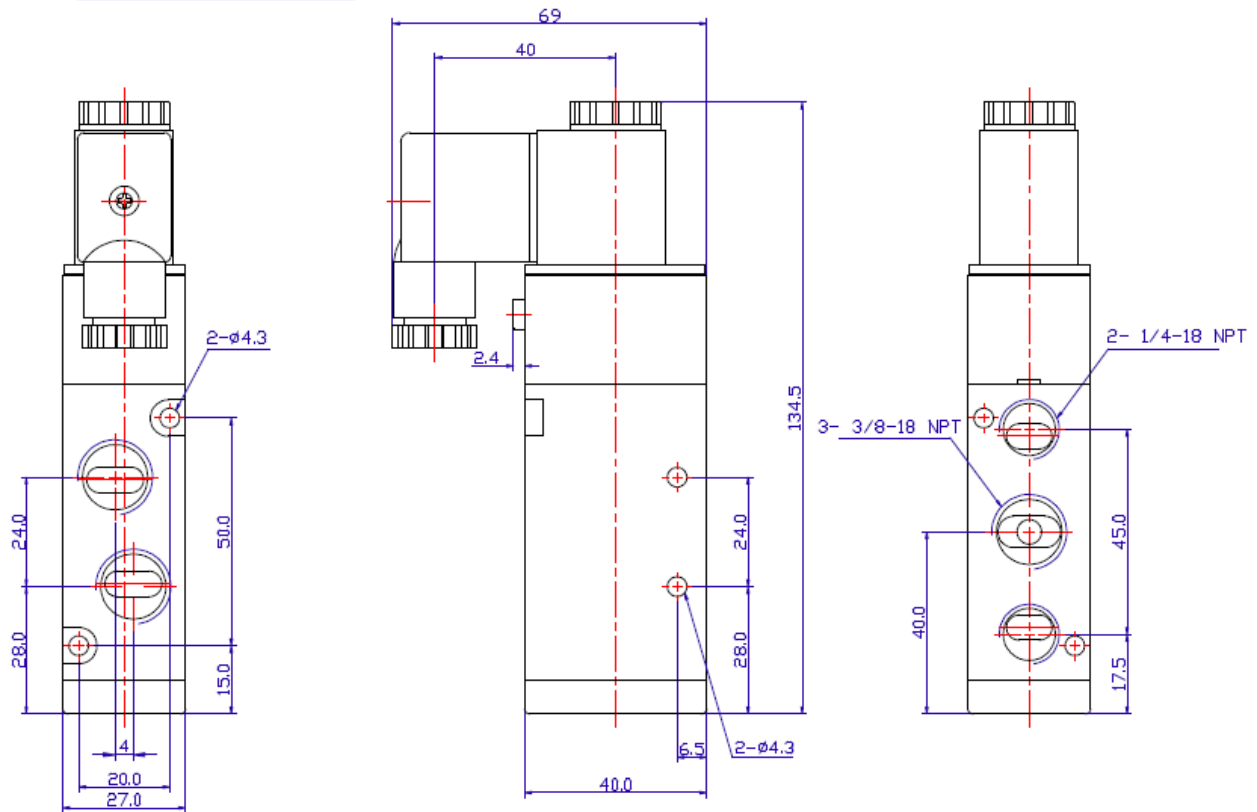


MODEL: 4V210-1/4

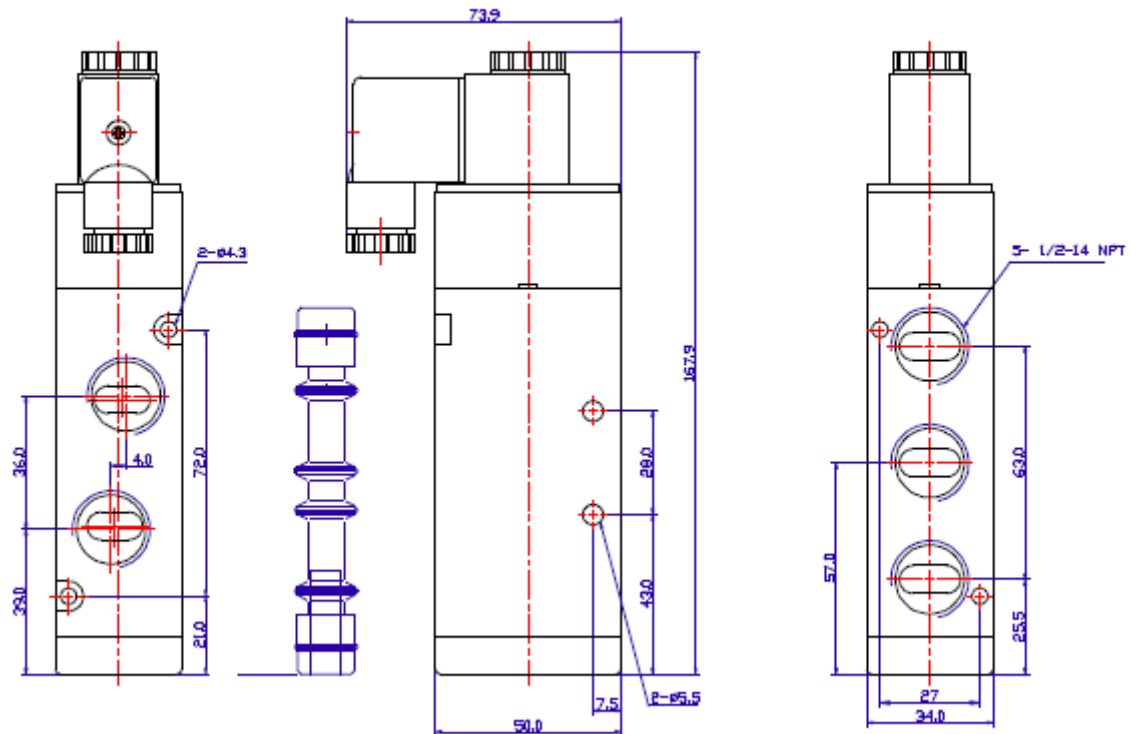


4V110-410 SERIES SOLENOID VALVE DIMENSIONS

MODEL: 4V310-3/8



MODEL: 4V410-1/2



4-Way Solenoid Valve

Models 4V110-4V410

Installation Procedure

Note: This valve is designed for air flow only.

Warning: Do NOT over tighten the nut holding the coil to the armature tube. Over tightening may result in damage to the welded joint.

Attaching a Coil to a Valve:

1. After wiring the coil, fit the coil assembly over the armature tube. Ensure that the threads of the tube are accessible.
2. Fit the spring or lock washer over the assembly.
 - For spring washers, the concave side should be oriented toward the coil.
3. Tighten the nut over the washer by hand.
 - For spring washers, tighten the nut further until the spring coil is almost completely flat.
 - For lock washers, tighten the nut another quarter turn.

Installing Valve onto Manifold:

Note:

- Manifolds can fit 2, 4, 6, 8 and 16 valves.
- Secure screws until the component will not move freely, and tighten another quarter turn.

Procedure:

1. Place a rubber seal over the manifold openings.
2. Line up the valve with port “P” and corresponding pilot holes for the screws.
3. Secure the valve into place.
4. Cover the remaining holes with the provided gaskets.

Installation:

1. Connect the source to the port labeled “P”.
2. Connect the first outlet to the port labeled “A”.
3. Connect the first exhaust to the port labeled “EA”.
4. Connect the second outlet to the port labeled “B”.
5. Connect the second exhaust to the port labeled “EB”.

Maintenance and Troubleshooting

Note: After an extended period of operation, if you do not hear a clicking sound when the valve is operational, and the wiring is correct, the coil may be burned out and must be replaced. This commonly occurs when input voltages are higher than the coil’s specifications.

Procedure:

1. Remove any coils attached to the valve.
2. Unscrew the holding plate and the armature tube and remove it from the valve body. Remove the piston and the spring.
3. Check for any debris that may have collected on the piston and the hole in the center of the valve.
4. Insert the piston and spring back into the valve body.
5. Screw the armature tube and holding plate back into the valve.

Reference Figures

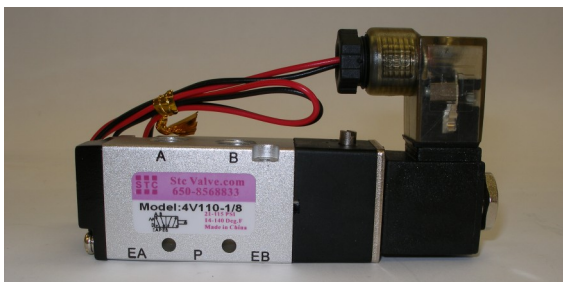


Figure 1: Model 4V110 with port labels shown.

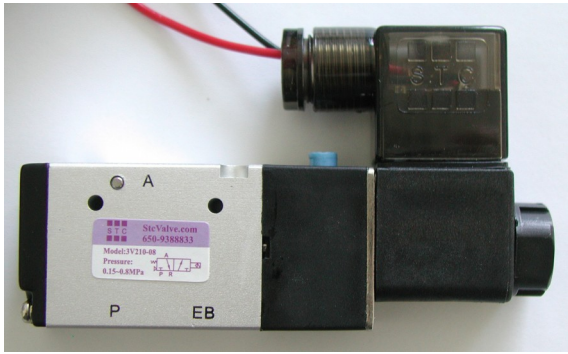


Figure 2: 4-way valve with cutout, showing piston.

Installation of 3V100-400 and 4V100-400 Solenoid Valves

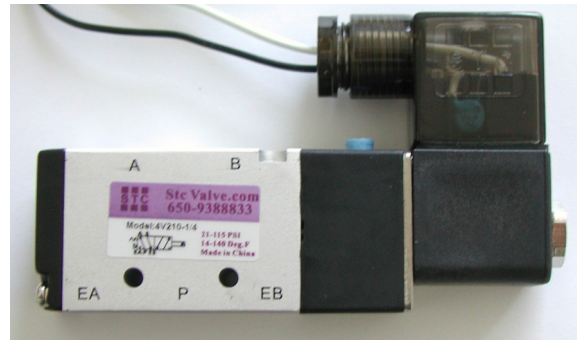
Connect the 3V100-400 3 way valve inlet and out as shown in the diagram :

P = Air Supply Port
A = Outlet A Port
EA/EB = Exhaust Outlet A
(Connection Optional)



Connect the 4V100-400 4 way valve inlet and out as shown in the diagram :

P= Air Supply Port
A = Outlet A Port
B = Outlet B Port
EA = Exhaust Outlet A Port
(Connection Optional)
EB = Exhaust Outlet B Port
(Connection Optional)



Connection of 3V100-400 & 4V100-400 Solenoid Coils

Electrical Connections

To connect DIN coils:

1. Remove the Philip screw from the plastic housing and unplug it from the DIN coil.
2. From the screw opening, use the screw to push the terminal block out of the plastic housing.
3. Note the 1, 2 and ground markings on underside of DIN enclosure.
4. For DC DIN Coil, Connect 1 to Positive, 2 to Negative.
5. For AC DIN Coil, connect 1 to HOT wire, 2 to Neutral wire, and if required connect ground to ground wire.

To connect Grommet coils or Lead Wire DIN coils:

DC Coil:

1. If the DC solenoid coil has a red and a black wire, Connect Positive to RED wire and Negative to Black wire.
2. If the DC solenoid has two same color wires, connect Positive to one of the two wires and Negative to the other wire.

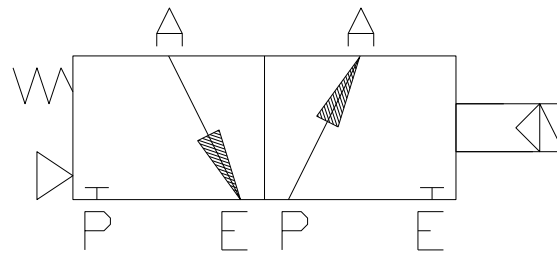
AC Coil:

1. If the AC solenoid coil has a black a white wire, Connect the HOT wire to BLACK wire and Neutral to WHITE wire.
2. If the AC solenoid has two same color wires, connect HOT wire to one of the two wires and NEUTRAL wire to the other wire.

STC Installation and Operation Procedure

3V110-3V410 & 4V110-4V410 Solenoid Valves

3V110-3V410 (3 way valve)



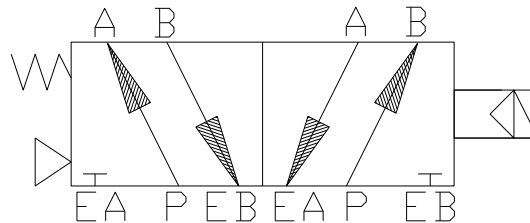
SOLENOID

VALVE POSITION 1 2

Operations:

1. When Solenoid is OFF (Position 1), Port A is connected to Port E. Port P is closed
2. When Solenoid is ON (Position 2), Port P is connected to Port A. Port E is closed.

4V110-4V410 (4 way valve)



SOLENOID

VALVE POSITION 1 2

Operations:

1. When Solenoid is OFF (Position 1), Port P is connected to Port A. Port B is connected to Port EB.
2. When Solenoid is ON (Position 2), Port P is connected to Port B. Port A is connected to Port EA.

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Sizto Tech Corporation

892 Commercial Street
Palo Alto, CA 94303 USA

Tel: 650-856 8833 | Fax: 650-856 8811

Email: Sales@StcValve.com; www.StcValve.com