APTech Miscellaneous Instructions **#123625C0**
AP3625, Panel Mount
Revision 5
April 4, 2018

Note: This procedure is intended for panel mount of AP/AZ/AK/3625/4625 Series valves.
Note: Recommended panel hole diameter: 0.78 inch (19.8 mm).
Note: The AP3625 (except 1 $^{1}/_{8}$ inch surface mount models) and AP4625 series valves have five available handle designs, one standard and four optional. The option designators are included at the end of the model number, such as AP3625SM 2PW FV4 FV4 BB with the "BB" specifying the option. The standard handle does not require a designator. The other four are BB, TN, LT and FK. The 1 $^{1}/_{8}$ inch surface mount AP3625 valves have the FA handle standard and are designated with an "FA" at the end of the model number (e.g., AP3625S 2P FA). The FA and FK handles are identical.

A. Required Tools and Equipment

- 1/8 inch hex bit and 50 in·lbf (5.6 Nm) torque wrench. Optionally a 1/8 inch hex key may be used if an appropriate torque wrench cannot be obtained.
- 5/64 inch hex bit and 20 in·lbf (2.3 Nm) torque wrench. Optionally a 5/64 inch hex key may be used if an appropriate torque wrench cannot be obtained.
- 1 inch wrench (open end or adjustable).

B. Handle Removal (Refer to Figure 1)

1. Remove the valve from the double plastic bag.
5 2. Carefully peel off the model number label which covers two set screws (#4) on the side of the indicator plate (#5). To preserve the label for later re-use, temporarily apply it to the plastic bag valve was packaged in.
3. Close the valve by turning the handle fully clockwise.
   Note: Remember the orientation of the handle in the "closed" position so that it may be re-oriented in the same position during re-assembly.
4. Use a 1/8 inch hex key to loosen the pointer (#1) (used in standard or "BB" handles only) and both set screws (#2) a couple of turns.
   Note: Be careful not to rotate the stem (#3) counter-clockwise. If the stem accidentally rotates, re-tighten both set screws and start from the step B.2. again.
5. Lift up the handle assembly to remove it from the valve.
6. Use a 5/64 inch hex key to loosen both set screws (#4).
7. Lift up the indicator plate (#5) to remove it from the valve.

C. Panel Mount (Refer to Figure 1)

1. Remove the panel mount nut (#6) from the unit.
2. Place the valve through the panel hole, position the valve as desired, connect the valve into piping system and replace the panel mount nut onto the unit.
3. Using a 1 inch wrench, tighten the panel mount nut firmly against the panel.

D. Handle Replacement (Refer to Figure 1)

1. Place the indicator plate (#5) on top of the cap (#7).
2. Place the handle assembly on top of the stem (#3).

Note: Ensure the pin on the bottom of the handle assembly fits into the quarter-circular slot on the top of the indicator plate.

3. Turn the handle clockwise until it drags the indicator plate. Then, continue rotating clockwise until the handle is oriented in the proper closed position.
4. Tighten the two setscrews (#2) to 50 in·lbf (5.6 Nm) using a 1/8 inch hex bit.
5. For standard or "BB" handles only, tighten the pointer (#1) using a 1/8 inch hex key.
6. Verify that the indicator plate did not move out of position by rotating it counter-clockwise until it stops. Holding the indicator plate down, tighten both setscrews (#4) to 20 in·lbf (2.3 Nm) using a 5/64 inch hex bit.

E. Valve Testing

1. Open and close the valve several times to verify the actuator operates correctly. The valve actuator should have no excessive friction. Leave the valve in the closed position.
2. Connect the valve inlet to 60-100 psig (4.1 - 6.9 bar) pressure nitrogen source line. Pressurize the valve inlet. Verify there is no audible leakage across-the-seat. Open the valve and verify there is no flow restriction in the valve. Close the valve.
3. Perform a helium leak test to verify that the valve does not leak across-the-seat. Leak test procedures depend greatly on equipment and operator preference. Refer to SEMI F1 for typical leak testing protocols. If it is not possible to perform a helium leak test, then a pressure decay test could be performed using inert gas.

5 F. Labeling

1. Re-apply the model number label around the indicator plate (#5).

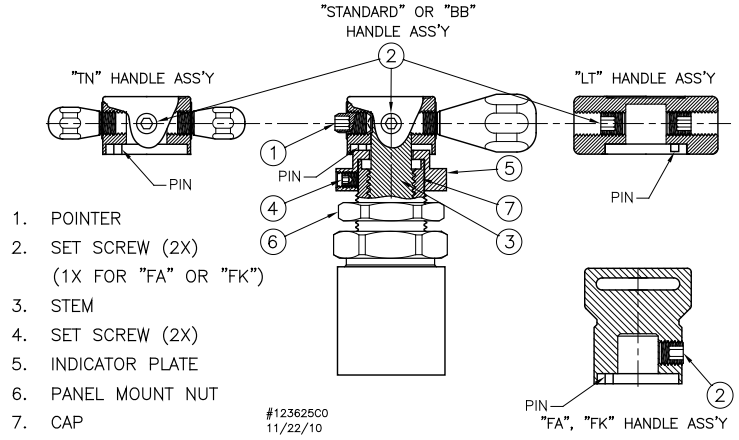

Figure 1. AP3625 Valve Assembly Diagram.

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