

V27200-M

2-Way Normally Open or Normally Closed Shut-Off Miniature Coaxial Solenoid Valve



Valcor Engineering Corporation



DESCRIPTION

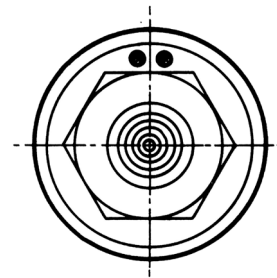
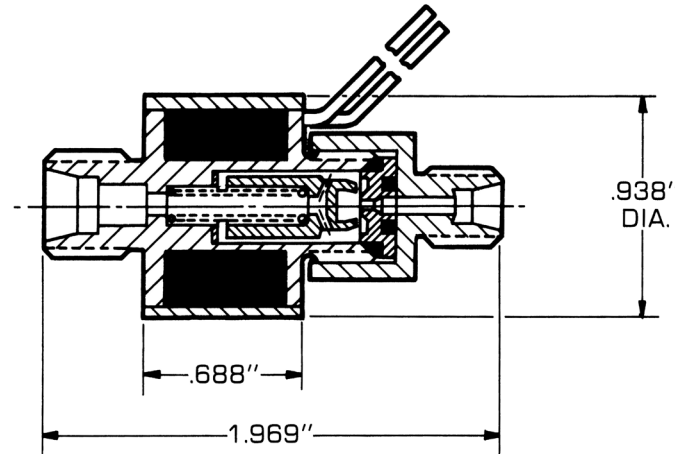
V27200-M miniature coaxial direct acting solenoid valves are designed for use with non-corrosive gases and liquids. They are well-suited for the extreme vibration, temperature, and cycle life requirements found in the most severe aircraft operating conditions. The compact size and low weight allow these valves to be used in the tightest space available. Its coaxial design allows for minimal pressure drop and use a poppet with a resilient seal for tight shut-off. These valves are direct acting, and do not require system pressure to operate. The V27200-M is available in a normally closed or normally open configuration.

APPLICATION

V27200-M valves are extensively used for missile and satellite applications where size and weight limitations are critical.

FEATURES

- Maximum Operating Pressure: 0-1500 PSIG
- Proof Pressure: 2250 PSIG
- Burst Pressure: 3000 PSIG
- Flow Rate: ESEO 0.033-0.125; Cd=0.65
- Leak Rate: Internal is 3.0 cc/hr liquid, 15 cc/min gas. External is 0 cc/min at 1500 PSIG.
- Temperature: -65°F to +350°F
- Current: 0.68 amps at 30 VDC at 70°F; 18-30 VDC
- Electrical Connection: 36" 22 AWG pigtails standard; MIL-W-1678A Type EE connector available.
- Wetted Materials: CRES 303, 430F, 302, Fluorosilicone
- 1/4" OD Line
- Weight: 0.22 lbs.
- Solenoid and body are safety wired for additional structural integrity
- Fully customizable for your application



Custom designs are our specialty. Contact us today to see how we can help on your next project.

Valcor Engineering Corporation
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V27200-Miniaturized

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Operating Pressure & Flow Ranges

| Equiv. Sharp Edged Orifice CD=0.65 | Cv | Operating Pressure (PSIG) | | Ambient Temp. | Min. Volts DC |
|---------------------------------------|------|---------------------------|--------|---------------|---------------|
| | | Closed | Open | | |
| 0.033 | 0.02 | 1-1000 | 0-1500 | 165°F | 18 |
| 0.045 | 0.04 | 1-350 | 0-525 | 165°F | 18 |
| 0.062 | 0.07 | 1-230 | 0-350 | 165°F | 18 |
| 0.093 | 0.15 | 1-75 | 0-150 | 165°F | 18 |
| 0.125 | 0.30 | 1-20 | 0-40 | 165°F | 18 |

| Temperature | Derating Factor |
|-------------|-----------------|
| 250°F | 0.71 |
| 350°F | 0.62 |

These ratings are based on using JP4 Aviation Fuel. Other orifice sizes, both larger and smaller, are available. However, ratings would change accordingly. For higher temperatures, the pressure rating must be reduced. The following table approximates the derating required.

Electrical Data

| | |
|-----------------------|---|
| Voltage | 18 to 30 VDC |
| Duty | Continuous |
| Current | 0.65 amps max. at 30 VDC and at 70°F |
| Other Available Coils | Coils can be made with higher or lower resistance, specifically 80 or 32 ohms. A 32 OHM coil would berated intermittent, but the valve pressure rating could be increased by as much as 25%. An 80 OHM coil will reduce the current draw, but will also reduce the pressure rating by as much as 25%. |
| Electrical Connector | Pigtail leads (36" long) made of #22 or #24 wire to MIL-W-1687A Type EE are standard. MS receptacles mounted on the solenoid shell can be provided. |

Leakage

| | |
|----------|---|
| External | Zero over range of 0 to 1500 PSIG |
| Internal | Liquid Service: 3.0 cc/hr. Gas Service: 15 cc/min. |

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