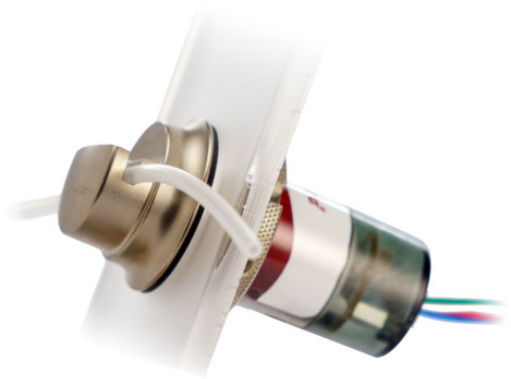




## NPV Electronic Pinch Valves

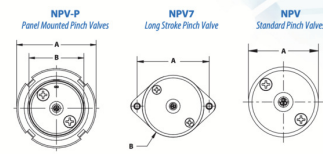
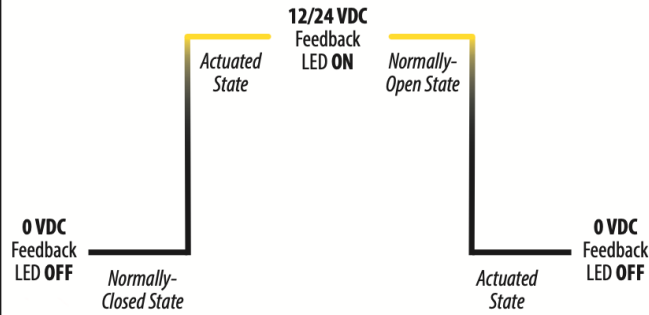
### FPV4L-1CP-27-24-2



The NPV Series Pinch Valve is a solenoid-operated device that is designed to open and close tubes for controlling flow of liquids and gases. Other valve types have internal passages that may cause small amounts of fluid to remain in the valve. Pinch valves have no areas or dead volume where fluid can become trapped. Only the inside of the tubing contacts the fluid. Energizing the solenoid retracts or attracts the plunger, which opens or closes the tube. De-energizing the solenoid will allow the plunger to return to its original state.

|                                          |                                                                                                                                           |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Applications Form</b>                 | <a href="#">Applications Form</a>                                                                                                         |
| <b>Circuitry Option</b>                  | State Feedback                                                                                                                            |
| <b>Connection</b>                        | 18" (45 cm) Wire Leads                                                                                                                    |
| <b>Data Sheet</b>                        | <a href="#">Data Sheet</a> , <a href="#">Hit &amp; Hold Info</a> , <a href="#">State Feedback Info</a> , <a href="#">Panel Mount Info</a> |
| <b>Documentation</b>                     | CE, RoHs ( <a href="#">Download</a> )                                                                                                     |
| <b>Function</b>                          | 2-Way Normally-Closed (1 Tube)                                                                                                            |
| <b>Material, Tubing</b>                  | Sanitary Platinum-Cured Silicone                                                                                                          |
| <b>Material, Wetted</b>                  | Silicone Tubing (no wetted areas in valve)                                                                                                |
| <b>Max PSI</b>                           | 9 psig (0.6 bar)                                                                                                                          |
| <b>Medium</b>                            | Air, Water, Gas & Compatible Fluids                                                                                                       |
| <b>Mount</b>                             | Panel                                                                                                                                     |
| <b>Mounting</b>                          | #2-56 or #4-40 manifold. M3 also available.                                                                                               |
| <b>Operating Pressure</b>                | 0 to 30 psig (0 to 2 bar) with standard medical/lab grade silicone tubing                                                                 |
| <b>Operating Temperature Range</b>       | -20 to 158°F (-29 to 70°C)                                                                                                                |
| <b>Product Line Brochure</b>             | <a href="#">Isolation Valves</a>                                                                                                          |
| <b>Response Time</b>                     | 50 ms                                                                                                                                     |
| <b>State Feedback Voltage</b>            | 24                                                                                                                                        |
| <b>Thread Depth</b>                      | #4-40 (max. 0.125")                                                                                                                       |
| <b>Tubing</b>                            | 1/4" ID-3/8" OD, Food Grade                                                                                                               |
| <b>Tubing, Durometer Hardness</b>        | 50 Shore A                                                                                                                                |
| <b>Tubing, Elongation at Break</b>       | 770%                                                                                                                                      |
| <b>Tubing, Length</b>                    | Comes with 12" (30 cm) of selected tubing. Additional tubing available separately.                                                        |
| <b>Tubing, Modulus at 200%</b>           | 280 psi (19,3 bar)                                                                                                                        |
| <b>Tubing, Tear Strength</b>             | 200 ppi                                                                                                                                   |
| <b>Tubing, Tensile Strength at Break</b> | 1,450 psi (100 bar)                                                                                                                       |
| <b>Tubing, Wall Thickness</b>            | 0.0625" (1.6 mm)                                                                                                                          |
| <b>Unit</b>                              | Imperial                                                                                                                                  |
| <b>Voltage</b>                           | 24 VDC                                                                                                                                    |
| <b>Wattage</b>                           | 7.2 Watts                                                                                                                                 |
| <b>Weight (lbs.)</b>                     | 0.4000                                                                                                                                    |

# FEEDBACK SIGNAL LEVELS



DIMENSIONS, NPV-P (Panel Mounted Pinch Valves)

| Model | 2                    | 3                    | 4                    | 7                    |
|-------|----------------------|----------------------|----------------------|----------------------|
| A     | 1.45" dia.<br>(36.8) | 1.70" dia.<br>(43.1) | 1.94" dia.<br>(49.4) | 1.75" dia.<br>(44.5) |
| B     | 1.00" dia.<br>(25.4) | 1.25" dia.<br>(31.7) | 1.50" dia.<br>(38.1) | 1.50" dia.<br>(38.1) |
| C     | 2.63" (66.9)         | 3.04" (77.2)         | 3.42" (87.0)         | 5.33" (125.4)        |
| D     | 0.83" (21.2)         | 1.04" (26.4)         | 1.32" (33.6)         | 1.18" (30.0)         |
| E     | 0.72" (18.3)         | 0.72" (18.3)         | 0.84" (20.8)         | 0.84" (20.8)         |

DIMENSIONS, NPV (Standard Pinch Valves)

| Model | 2                    | 3                    | 4                    |
|-------|----------------------|----------------------|----------------------|
| A     | 1.00" dia.<br>(25.4) | 1.25" dia.<br>(31.7) | 1.50" dia.<br>(38.1) |
| B     | 2.04" (51.8)         | 2.44" (61.9)         | 2.79" (70.8)         |
| C     | 0.72" (18.3)         | 0.72" (18.3)         | 0.84" (20.8)         |

Dimensions shown are in inches (millimeters listed in parentheses) and are for reference purposes only. Visit [clippard.com](http://clippard.com) for more detailed 2D and 3D drawings and installation instructions.

WIRING DIAGRAM

- State Feedback—12 or 24 VDC (valve VDC)
- Ground
- Trigger—Hit Hold triggering input, 3.3-24 VDC
- Valve Voltage—12 or 24 VDC depending on valve coil selected



## ORDERING INFORMATION

**F P V L - - - -**

**Model**

- 2 1.00" dia., 1.5 W
- 3 1.25" dia., 4.2 W
- 4 1.50" dia., 7.2 W
- 7 1.50" dia., 7.2 W

**Function**

- 1O 2-Way Normally-Open
- 1C 2-Way Normally-Closed

**Mount**

- (blank) Standard
- P Panel Mount

**Valve Voltage**

- 12 12 VDC
- 24 24 VDC

**SF Voltage**

- 1 12 VDC
- 2 24 VDC

**Example Part Number:** FPVZL-1O-03-12-1

Refer to NPV data sheet or online configurator for tubing info

For more info, scan the QR code or visit [clippard.com/link/state-feedback](http://clippard.com/link/state-feedback)