



neptronic[®]
www.neptronic.com

■ Humidifiers ■ HVAC Controls ■ Electric Heaters ■ Electric Actuators ■ Actuated Valves

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Positive Pressure:

How Neptronic's SPC works in a variety of applications

Have a requirement to control the static pressure for a small VAV system with a bypass damper, a VFD or an ECM motor? Our SPC controller is the perfect device for the job. This low-cost, stand alone controller is easy to install and set up.

Technical Specifications of the SPC

There are four models available up to a maximum of 5 inches of water column. For space pressurization we offer an ultra sensitive SPC 0.1 full range model. All models come complete with the following features.

- LCD Display
- Simple installation and configuration
- Displays actual pressure reading
- Adjustable setpoint and dead band
- Adjustable response speed
- Selectable output signal
- Direct or reverse action outputs
- Fully calibrated
- Real-time pressure output for remote monitoring
- Accuracy of +/- 3%

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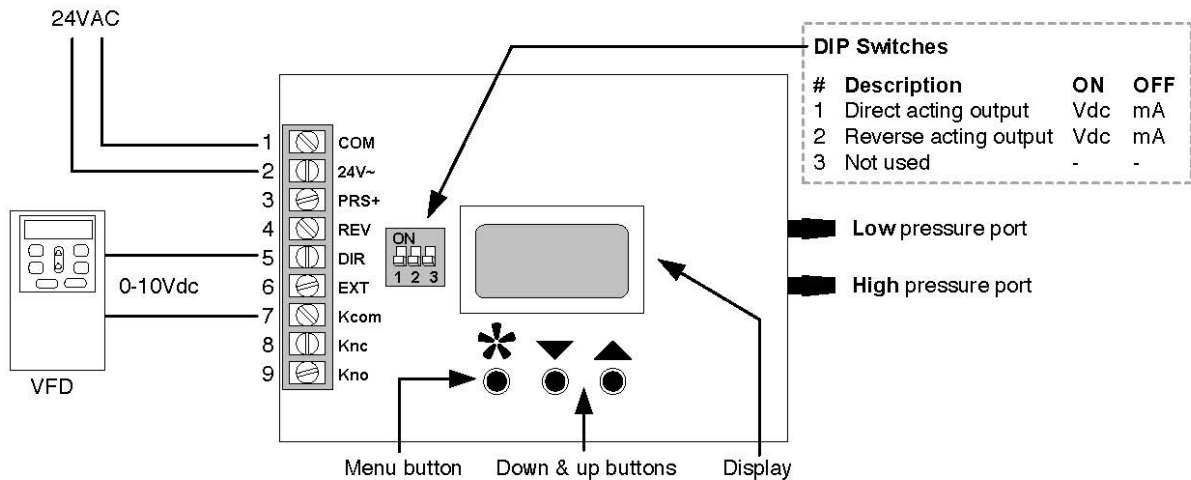
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Typical applications of the SPC:

1. Maintain Stairwell pressurization and drive the VFD based on the pressure setpoint.

- a. Do you have an application that needs the stairwell to be pressurised via a vis the occupied zone. Install the SPC at an appropriate location (typically 3/4 of the distance down the stairwell from the fan) and use the differential pressure input to determine the speed at which you need to run the VFD to be pressurized when the doors to the stairwell are opened.

Note: Fire and Safety interlocks need to be appropriately designed in this application according to local code.



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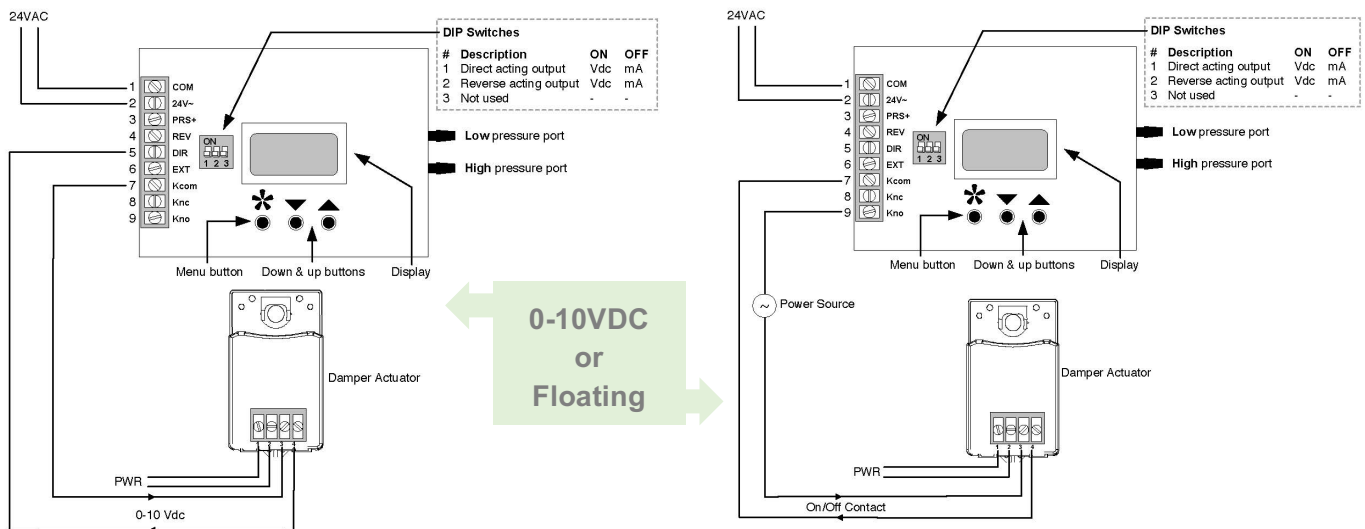
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2. Need to maintain pressure in the zone? Couple the SPC with Neptronic damper actuators!

Neptronic has a wide range of actuators from 2Nm to 450Nm and with the fastest actuator with a travel time of 1.5 seconds from 0-90 deg. Capitalize on the technological advantages to accurately control pressure in the zone by using the SPC and the damper appropriate for the application. This is especially significant in chemical and biological research facilities where chemical fumes and airborne biological agents must be prevented from migrating out of laboratory rooms to non-laboratory areas (negative pressure). Air must be prevented from flowing into spaces that require a high degree of cleanliness and purity, such as food and drug processing operations (positive pressure).

- a. The SPC has modulating outputs and contacts so it can be used with either a 0- 10VDC damper actuator or a floating damper actuator.



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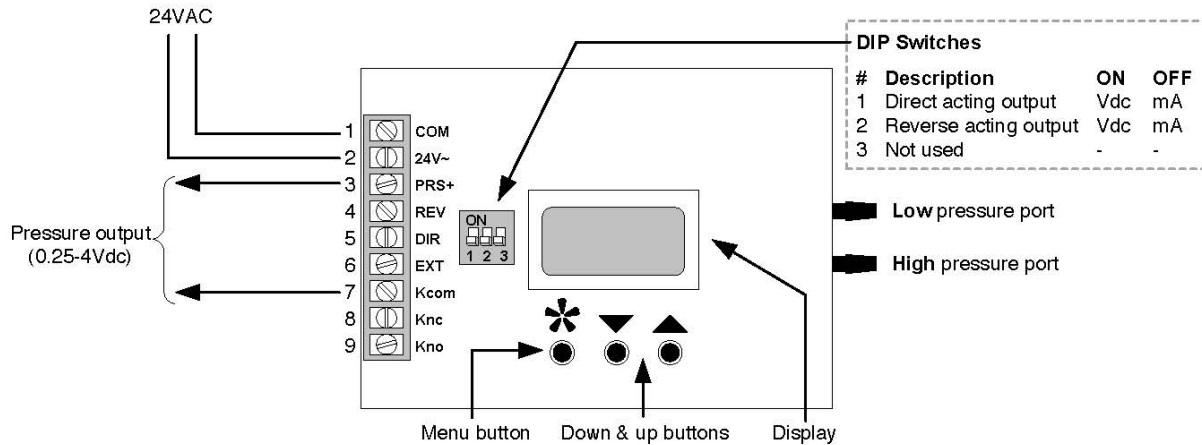
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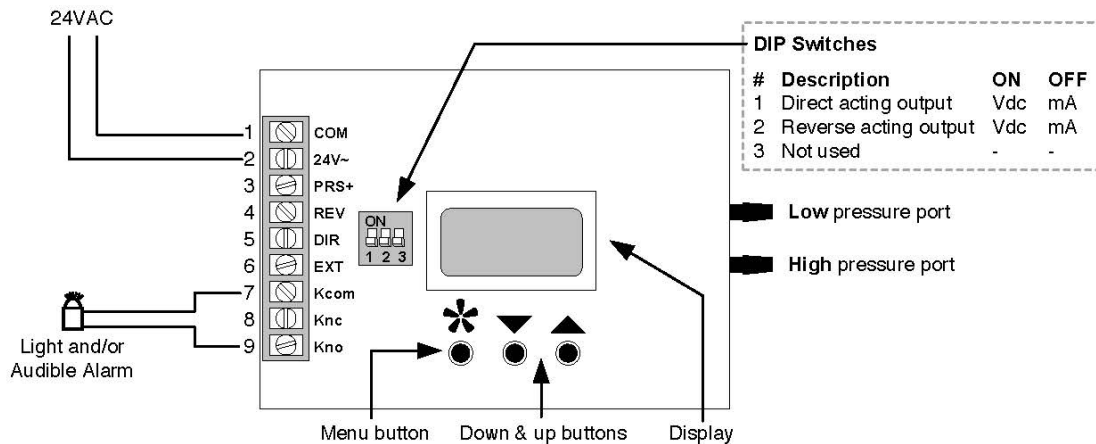
3. Have a remote site but need to monitor pressure? Not a problem!

- a. Use the built in output of the SPC to get the pressure reading in voltage. The pressure sensed by the SPC at the remote location can be fed back to the control unit as a 0.25-4VDC signal. In applications where there is a potential of drop in voltage, the signal can be converted to mA and transmitted out.



4. Generate alarms based on the pressure readings using the on-board NO/NC contact.

- a. Provide a local alarm and annunciation circuit to immediately notify personnel when there is a significant difference from the setpoint.



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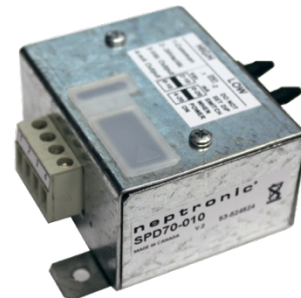
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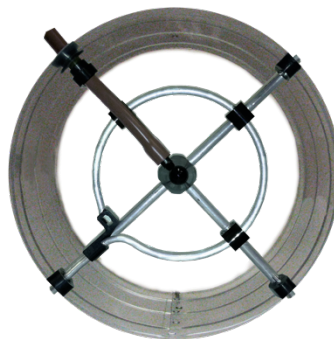
5. Need only a sensor to monitor differential pressure? No problem!

- a. Neptronic also provides a differential pressure sensor "SPD" with different pressure ranges that can be used in retrofit applications such as a faulty sensor on a VAV zone.
- b. The SPD can be packaged with Neptronic TRO/TROB thermostats to give a pressure independent VAV solution where existing pneumatic controls are replaced and turnaround time in commissioning is of great importance. Neptronic controls provide all the configuration parameters on the thermostat as a standard eliminating training and license costs that are typical with other manufacturers.



6. Want to upgrade your VAV boxes for energy efficient controls?

- a. Use the Neptronic Cross flow to retrofit existing pneumatic control boxes to pressure independent controls. With sizes from 6" to 16", the NEP Cross flow station lets you integrate the cross flow, VAV controller and actuator into one intelligent unit. With the BACnet/Modbus communication capability, this solution is the perfect fit.



Note:

1. It is important to note that the SPC can be used only in positive pressure applications.
2. The mounting and installation of the unit plays an important role in the accuracy of measurement. Please follow the installation instructions mentioned in the datasheet to ensure optimum performance.

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About Neptronic

Founded in 1976, Neptronic is a private corporation that designs, manufactures and distributes products for the HVAC industry. The Neptronic product line includes intelligent controllers, electronic actuators, actuated valves, humidifiers and electric duct heaters.

Products are designed and manufactured by over 200 dedicated employees in an 80,000 ft² (7,500 m²) state-of-the-art facility located in Montreal, Canada. Using a vertically integrated plant model, all R&D and manufacturing capabilities are located under one roof; from software and hardware development, to SMT circuit board assembly, to sheet metal fabrication, to product testing.

Neptronic is committed to research and development, provides innovative products and technologies and exports over 75% of its sales through an exclusive distribution network for the HVAC industry worldwide

For more information visit the Neptronic website at neptronic.com.

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