

# Tri-Stack® Smart System

## Technical Specifications



- Contributes to LEED Credits
- Controls fan speed to meet building demand while maintaining a minimum outlet velocity and stack height
- Reduces sound levels at off-peak loading
- Logs performance data for more than 5 years
- Stages fan operation and rotates redundant fan
- Can be retro-fit onto existing systems
- Easy to use touch screen controls
- Communicates with most building systems
- Detects failures and activates backup fan
- Controls isolation and bypass damper positions
- Optional wind speed optimizer adjusts minimum outlet velocity based on wind speed and direction to maximize system efficiency!

The Smart System maintains safe ventilation levels while minimizing facility energy costs and carbon footprint. Controlling to a static pressure set point in your ductwork, the Smart System dynamically measures fan performance, allowing it to safely control fan speed while never dropping below a minimum outlet velocity and stack height. Once fan speed is reduced to reach a minimum outlet velocity, bypass dampers are adjusted to meet lower building demand.



TECHNICAL SPECIFICATIONS				
Input Power	Operating Temp.	Static Pressure Accuracy	Communication Compatibility	Fan Functions Controlled
115 VAC/ 15A	32-122°F (0-50°C)	± 0.8%	<ul style="list-style-type: none"> <li>• BACnet</li> <li>• LonWorks®</li> <li>• MetaSYS N2</li> <li>• Apogee® P1</li> <li>• MODBUS®</li> </ul> <i>And many others!</i>	<ul style="list-style-type: none"> <li>• Fan operating frequency</li> <li>• Cycle fan on/off</li> <li>• Isolation damper position</li> <li>• Bypass damper position</li> <li>• Automatically rotates backup fan</li> </ul>

**Low Capital Cost!**

**Energy Saving Design!**

**Reduces Carbon Footprint!**

**Typical Two-Year Payback!**

**STROBIC AIR**  
Fans, Silencers & Systems

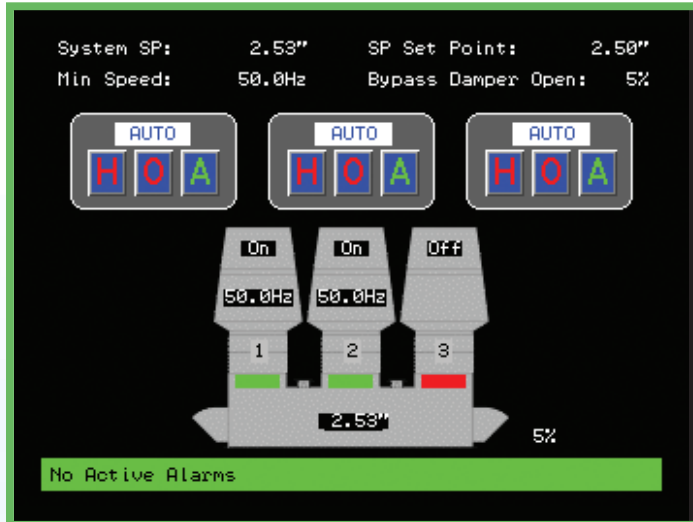
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## Features and Benefits

### System Response

The Smart System is designed to quickly respond to fan failures and other shocks to the system. In the event of a fan failure, a backup fan will immediately engage and ramp up to speed, restoring system pressure quickly. In addition, an alarm will be sent via email or text message to one or several people simultaneously to notify them of the failure.



### Fan Functions

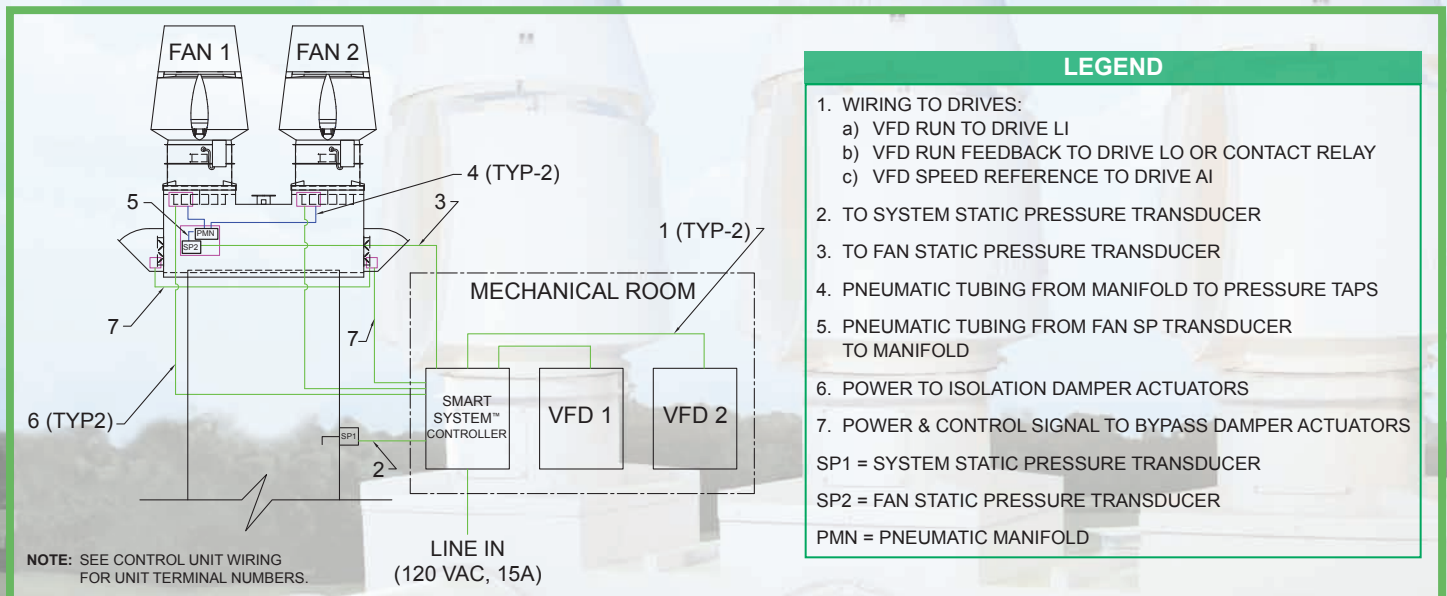
The Smart System will control all of the following fan functions:

- Maintains duct static pressure setpoint
- Fan operating frequency
- Cycles fans on/off every 30 days
- Isolation damper open/close
- Bypass damper position
- Automatically rotates backup fan
- Adjusts minimum outlet velocity based on wind speed and direction
- Detects failures and activates redundant fan
- Measures and records system performance
- Communicates with building system
- Maintains duct static pressure setpoint

### LEED

Installation of the Smart System can help your building obtain LEED points for overall building energy efficiency. The Smart System helps obtain points for "Optimizing Energy Performance" by reducing the energy consumption of your exhaust air, and for "Measurement and Verification" by providing the ability to trend performance of your exhaust system.

## Sample Wiring Diagram



**Tri-Stack® Smart System**  
**roof exhaust systems...**

First we invented the technology,  
 then we perfected it...AGAIN!



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