

# Tri-Stack<sup>®</sup> Smart System<sup>™</sup>

## 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

The Smart System<sup>™</sup> 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<sup>™</sup> 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.

### Flexibility

The Smart System<sup>™</sup> allows the user to input a static pressure setpoint and minimum outlet velocity, allowing the end user to adjust system requirements based on different laboratory and environmental conditions.

In addition, the Smart System<sup>™</sup> provides the end user with the ability to record system static pressure, fan runtime, VFD frequency, fan power consumption, and fault status.

### LEED

Installation of the Smart System<sup>™</sup> can help your building obtain LEED points for overall building energy efficiency. The Smart System<sup>™</sup> 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.

### 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<sup>®</sup></li> <li>• MetaSYS N2</li> <li>• Apogee<sup>®</sup> P1</li> <li>• MODBUS<sup>®</sup></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

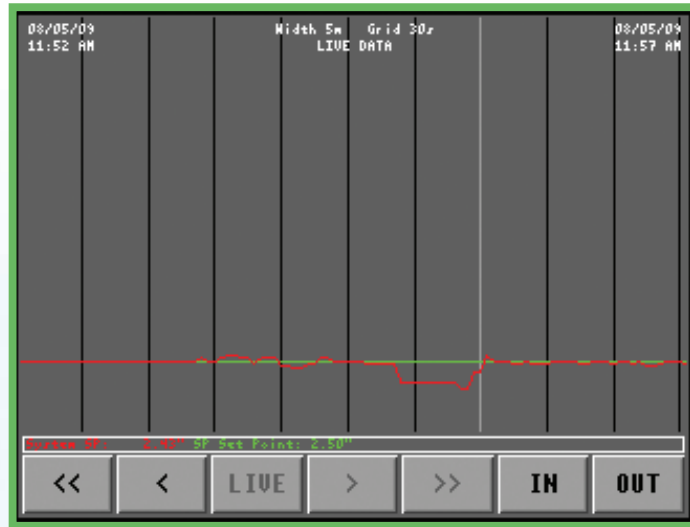
A Met-Pro Product Recovery/Pollution Control Technologies Business



## Features and Benefits

### System Response

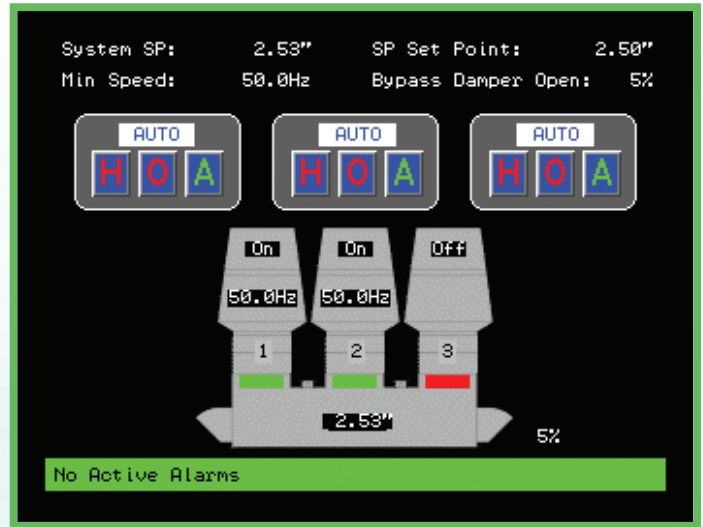
The Smart System™ is designed to quickly respond to fan failures and other shocks to the system. In the event of a fan failure, a backup fan will immediately engage and ramp up to speed, restoring system pressure quickly. In addition, an alarm will be sent via email or text message to one or several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



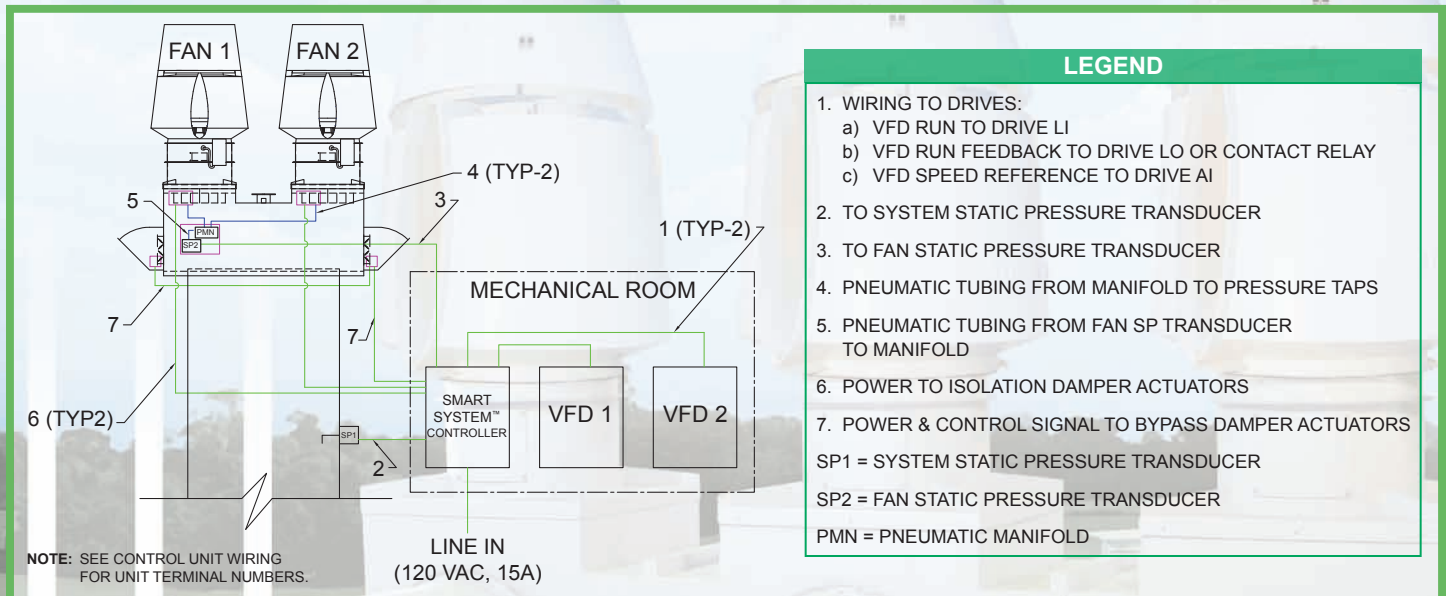
### Fan Functions

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

- Fan operating frequency
- Cycle fans on/off every 30 days
- Isolation damper open/close
- Bypass damper position
- Automatically rotates backup fan



## Sample Wiring Diagram



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

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



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