

# Model FHC50-03 Fume Hood Controller

## Description

The Model FHC50-03 fume hood controller combines sash position-based control with a sidewall sensor. The sidewall sensor can be used to monitor actual face velocity or to correct face velocity disturbances, providing the ultimate in safety and response.

The Model FHC50-03 easily integrates to the building management system, using digital communications, such as BACnet®, LonWorks® or Modbus®, and alarm relays.



## Features

- VAV fume hood control reduces operating expenses
- Stand alone face velocity control provides system reliability.
- Field-configurable sequence of operations to best meet needs of specific installations.
- Audible and visual alarms warn staff of unsafe conditions.
- Network communications allow for building-wide control efficiencies.
- Convenient keypad and display support local programming.
- Password prevents unauthorized access to controller functions.

## Selection Chart

	FHC50-01	FHC50-02	FHC50-03	FHC50-04
Constant face velocity control with sidewall sensor	•		•	
Constant face velocity control with sash position		•	•	
Constant flow control				•
BACnet® MS/TP communications	○	○	○	○
LonWorks® communications	○	○	○	○
Modbus® / N2 communications	○	○	○	○
Setback input	•	•	•	•
Emergency input	•	•	•	•
Low (velocity / flow) alarm contact	•	•	•	•
High (sash position / velocity / flow) alarm contact	•	•	•	•
Analog output	•	•	•	•
Venturi valve input and control	•	•	•	•
Flow station input with damper control	•			•

## Items Included

- Controller
- Sidewall sensor
- Vertical sash sensor
- Controller output cable, 25 ft (7.6 m)
- Transformer cable, 25 ft (7.6 m)

## Hardware Options

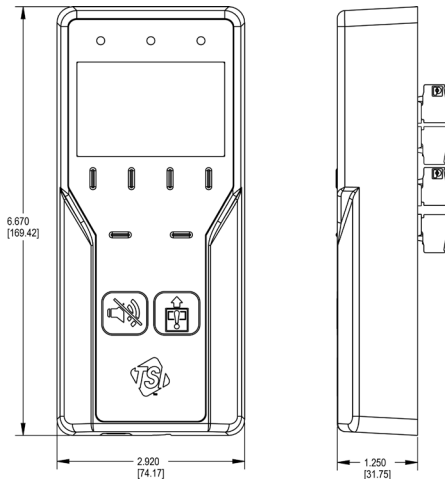
- Electric actuator/venturi valve assembly
- Vent kit
- Dual vent kit for 8-ft (2.4 m) and larger hoods
- 120:24V transformer, 50 VA
- Flush-mount bracket
- Slimline interface

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LonWorks is a registered trademark of Echelon Corporation.  
BACnet is a registered trademark of ASHRAE



## Digital Interface Module Specifications

<b>Display Range</b>	0 to 1000 fpm (0 to 5.08 m/s) 0 to 10,000 cfm (0 to 4720 l/s, 0 to 16,990 m <sup>3</sup> /hr)
<b>Low Alarm Range</b>	5 to 960 fpm (0.03 to 4.88 m/s) 0 to 10,000 cfm (0 to 4720 l/s, 0 to 16,990 m <sup>3</sup> /hr)
<b>High Alarm Range</b>	80 to 1000 fpm (0.41 to 5.08 m/s) 0 to 10,000 cfm (0 to 4720 l/s, 0 to 16,990 m <sup>3</sup> /hr)
<b>Control Output</b>	0 to 10 VDC
<b>Analog Output</b>	0 to 10 VDC or 4 to 20 mA Represents Face Velocity, Flow Rate or % Sash Open
<b>Inputs</b>	Sash Position, Night Setback, Emergency, Flow
<b>Communications</b>	Modbus <sup>®</sup> , N2, BACnet <sup>®</sup> MS/TP, LonWorks <sup>®</sup>
<b>Alarm Contacts</b>	SPST*, 60-W max 2A @ 30 VDC Nominal
<b>Input Power</b>	24 VAC, 50/60 Hz or 15-40 VDC 5 Watt Maximum (50 VA for system with TSI actuator)
<b>Operating Temp.</b>	32 to 120°F (0 to 48.9°C)
<b>Size (HxWxD)</b>	6.67 x 2.92 x 1.25 in (169 x 74 x 32 mm)
<b>Weight</b>	0.5 lb (0.2 kg)

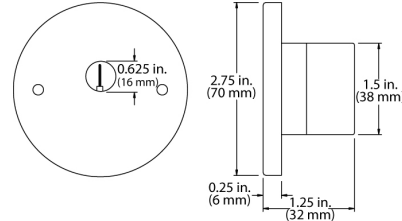


\*Relays close to indicate loss of power.

Specifications subject to change without notice.

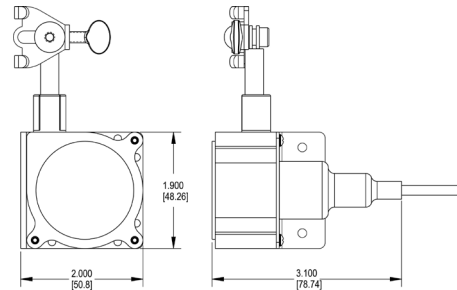
## Sidewall Sensor Specifications

<b>Range</b>	0 to 1000 fpm (0 to 5.08 m/s)
<b>Resolution</b>	1 ft/min
<b>Temp. Comp Range</b>	55 to 95°F (12 to 35°C)
<b>Power Dissipation</b>	0.09 W at 0 fpm (0 m/s) 0.14 W at 100 fpm (0.50 m/s)
<b>Size (DxH)</b>	2.75 x 1.25 in (70 x 32 mm)
<b>Weight</b>	0.2 lb (0.5 kg)



## Vertical Sash Sensor Specifications

<b>Cable Type:</b>	Nylon-coated stainless steel
<b>Maximum Retraction</b>	50 in (1,270 mm)
<b>Resistance</b>	0-10,000 Ω
<b>Electrical Cable</b>	2-conductor, 24 AWG 12-ft (3.6 m)
<b>Dimensions</b>	2.0 x 3.5 x 3.1 in (51 x 88 x 79 mm)



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