

# Instrument Solutions DATASHEET

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# FUME HOOD CONTROLLER MODEL FHC50

Fume hoods are a primary source of protection in laboratories. Face velocity measurements are often used to gauge the performance of a fume hood's ability to contain and exhaust harmful vapors. By measuring and controlling face velocity, TSI FHC50 Fume Hood Controllers provide a higher level of fume hood safety and energy efficiency.



## Applications

- + Research Laboratories
- + Life Science and Pharmaceutical
- + Universities and Academic
- + Vivariums
- + Healthcare Facilities

## Options

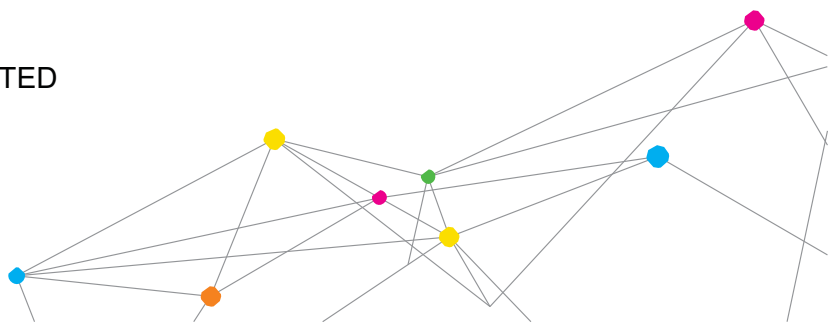
- + Fume Hood Control
  - Using side-wall velocity sensors
  - Utilizing sash sensors
  - Combining side-wall and sash sensors
- + Flow Control
  - Using pressure-based or thermal flow stations
  - Utilizing linear venturi valves
- + Controls dampers or valves with fast-acting actuator, depending on application

## Features and Benefits

- + Controls fume hood face velocity to provide containment and safety
- + Reduces laboratory air flow usage, optimizing energy savings
- + Assists in managing risk by communicating fume hood status information to Building Management System (BMS)
- + Visual, audible and remote alarms warn users of unsafe conditions
- + Seamless integration to BMS via BACnet®, LonWorks®, or Modbus™
- + Easy installation and wiring
- + Fast-acting actuator provides containment during sash movements
- + Easy configuration using keypad or configuration software
- + Large display provides detailed fume hood information
- + Surface or flush mount options available



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## SPECIFICATIONS

### FUME HOOD CONTROLLER MODEL FHC50

#### Display Range

0 to 1,000 fpm (0 to 5.08 m/s)  
0 to 10,000 cfm (0 to 4,720 l/s, 0 to 16,990 m<sup>3</sup>/hr)

#### Low Alarm Range

5 to 960 fpm (0.03 to 4.88 m/s)  
0 to 10,000 cfm (0 to 4,720 l/s, 0 to 16,990 m<sup>3</sup>/hr)

#### High Alarm Range

80 to 1,000 fpm (0.41 to 5.08 m/s)  
0 to 10,000 cfm (0 to 4,720 l/s, 0 to 16,990 m<sup>3</sup>/hr)

#### Control Output

0-10 VDC

#### Analog Outputs

0-10 VDC or 4-20 mA  
Represents Face Velocity, Flow Rate, or % Sash Open

#### Alarm Contact Outputs

SPST, 2A @ 30 VDC Nominal

#### Contact Inputs

Sash Position, Night Setback, Emergency, Flow

#### Communication Options

Modbus, N2, BACnet MS/TP, LonWorks

#### Input Power

24 VAC, 50/60 Hz or 15-40 VDC 5, Watt Maximum  
(50 VA for system with TSI actuator)

#### Operating Temperature

32 to 120° F (0 to 48.9° C)

#### Size (H x W x D)

6.67" x 2.92" x 1.25" (16.9 cm x 7.4 cm x 3.2cm)

#### Weight

0.5 lb (225 g)

#### Optional Accessories

800920 Slimline Monitor  
800926 Flush Mounting Bracket

	FHC50-01	FHC50-02	FHC50-03	FHC50-04
TSI's Sidewall Velocity Sensor	+		+	
Sash Position Sensor		+	+	
Flow Control				+
Damper Control	+		O	O
Venturi Valve Control	+	+	+	O
Visual and Audible Alarms	+	+	+	+
Flow Input	O	+	+	+
Contact Inputs	C	C	C	C
Analog Outputs	C	C	C	C
Alarm Contact Outputs	+	+	+	+
RS-485 (Modbus, Johnson N2)	+	+	+	+
BACnet MS/TP or LonWorks Compatible	O	O	O	O
+ = Feature of Instrument      O = Optional versions available      C = Configurable - see manual for options				

Specifications are subject to change without notice.

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