

SUREFLOW™ Model 8681 Adaptive Offset Controller

Description

The Model 8681 SUREFLOW room pressure controller is an excellent digital room controller for laboratories with hoods. A stand-alone device, the Model 8681 modulates the supply and general exhaust dampers in conjunction with the reheat valve to maintain laboratory balance, ventilation and comfort.

The Model 8681 easily integrates to the building management system, using digital communications, such as BACnet or Modbus®, and alarm relays.



Features

- Stand-alone room control provides system reliability
- Flow tracking control ensures stability in the HVAC system
- Direct pressure measurement provides continuous, closed-loop control of room pressure differential
- Audible and visual alarms warn staff of potentially unsafe conditions
- Network communications allow for building-wide control efficiencies
- Convenient integral keypad and display support local programming
- Passwords protect unauthorized access to controller functions

Selection Chart

	8681	8681-N2	8681-BAC
Controls Supply and General Exhaust for Flow Offset	•	•	•
Adjusts Flow Offset to Maintain Room Pressure Differential	•	•	•
Controls Reheat and Supply for Temperature	•	•	•
Unoccupied Mode Reduces Supply Volume	•	•	•
Controls Dampers	•	•	•
Flow Alarm Contact	•	•	•
Modbus Communications	•		
Johnson Controls' N2 Communications		•	
BACnet MSTP Communications			•

Items Included

Digital interface module
Through-the-wall pressure sensor
Controller output cable, 25 ft
Transformer, 120:24 VAC, 25 VA
Transformer cable, 25 ft

Hardware Options

Electric actuator/damper assembly
Pneumatic actuator/damper assembly
Electric actuator/venturi valve assembly
Supply and Exhaust Flowstations
1000 Ω platinum RTD temperature sensor
Remote alarms

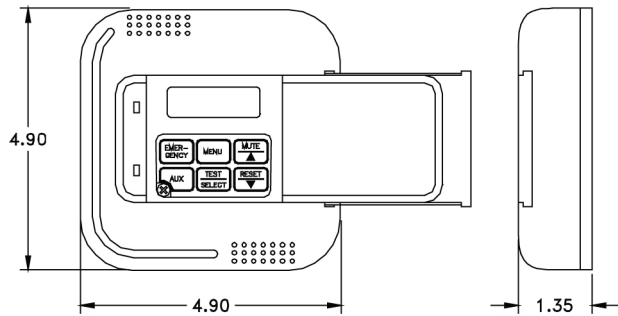
BACnet is a trademark of ASHRAE.

®LonWorks® is a registered trademark of Echelon® Corporation.

®Modbus® is a registered trademark of Modicon, Inc.

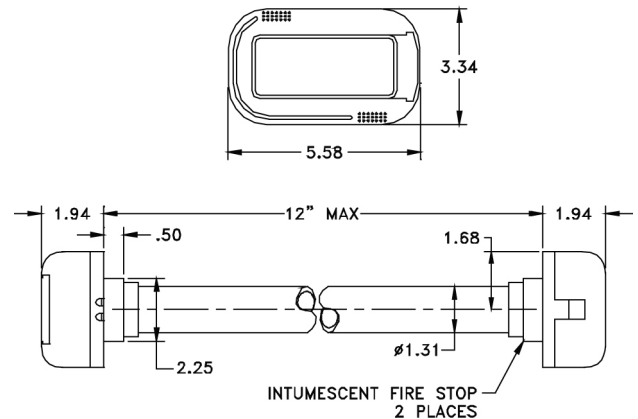
Digital Interface Module Specifications

Low Supply Alarm	0 to 30,000 cfm
High Exhaust Alarm	0 to 30,000 cfm
Alarm Contacts	SPST (NO) Max Current 5A Max voltage 150 VDC, 250 VAC Min switch load 10 mA, 5DC
Flow Inputs	(1) 0 to 10 VDC Supply Flow (1) 0 to 10 VDC Exhaust Flow (2) 0 to 10 VDC Fume Hood Flow Flow (1 Flow on 8681-LN, 8681-BAC)
Temperature Input	1000 Ω platinum RTD
Control Outputs	0 to 10 VDC Supply, General Exhaust, Reheat
Operating Temperature	32 to 120°F
Input Power	24 VAC, 5W max
Size (HxWxD)	4.90 in. x 4.90 in. x 1.35 in.
Weight	0.7 lb



Sensor Specifications

Range	-0.20000 to +0.2000 in. H ₂ O
Accuracy	10% of reading \pm 0.00001 in H ₂ O
Resolution	5% of reading
Temp. Comp. Range	55 to 95°F
Power Dissipation	0.16 W at 0 in. H ₂ O 0.20 W at 0.00100 in. H ₂ O
Size (HxWxD)	3.34 in. x 5.58 in. x 1.94 in.
Weight	0.2 lb



Specifications subject to change without notice.



TSI Incorporated

500 Cardigan Road
Shoreview, MN 55126 U.S.A.
Tel: 651 490 2811
800 874 2811
Fax: 651 490 3824
E-mail: answers@tsi.com