

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™ MS-TP Communications			•

Items Included

Digital interface module
Through-the-wall pressure sensor
Controller output cable, 25 ft (762 cm)
Transformer, 120:24 VAC, 50 VA
Transformer cable, 25 ft (762 cm)

Hardware Options

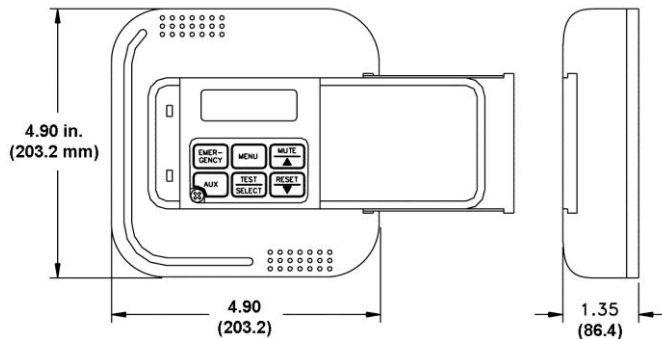
Electric actuator
Electric actuator/damper assembly
Electric actuator/venturi valve assembly
Supply and Exhaust Flowstations
1000 Ω platinum RTD temperature sensor
Remote alarms

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Modbus is a registered trademark of Modicon, Inc.



Digital Interface Module Specifications

Low Supply Alarm	0 to 30,000 cfm (0 to 14.158 lps)
High Exhaust Alarm	0 to 30,000 cfm (0 to 14.158 lps)
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 (1 Flow on 8681-BAC)
Temperature Input	1000 Ω platinum RTD
Control Outputs	0 to 10 VDC Supply, General Exhaust, Reheat
Operating Temperature	32 to 120°F (0 to 48.8°C)
Input Power	24 VAC, 5W max
Size (H x W x D)	4.90 in. x 4.90 in. x 1.35 in. (124.5 x 124.5 x 34.3 mm)
Weight	0.7 lb (0.3 kg)

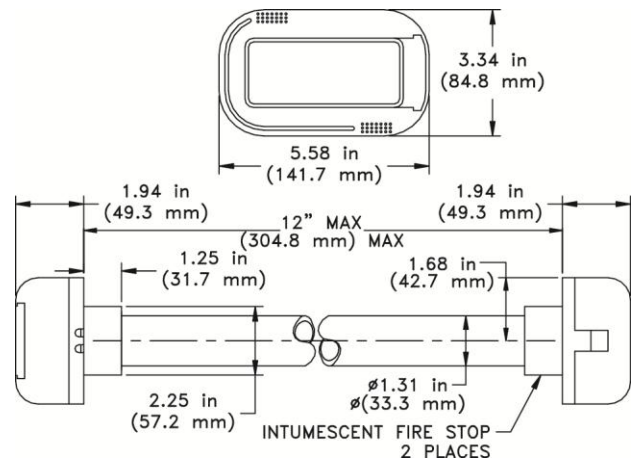


*Relays close to indicate alarm or loss of power.

Specifications subject to change without notice.

Sensor Specifications

Range	-0.20000 to +0.20000 in. H ₂ O (-50 to + 50 Pa)
Accuracy	±10% of reading ±0.00001 in. H ₂ O (±0.0025 Pa)
Resolution	5% of reading
Temp. Comp. Range	55 to 95°F (12.7 to 35°C)
Power Dissipation	0.16 W at 0 in. H ₂ O 0.20 W at 0.00100 in. H ₂ O (0.25 Pa)
Size (H x W x D)	3.34 in. x 5.58 in. x 1.94 in. (84.8 x 141.7 x 49.3 mm)
Weight	0.2 lb (0.1 kg)



UNDERSTANDING, ACCELERATED

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