Hoffman Controls
Product Data

202-17-1 Series Tracking Interface
200-3 Series Flow Controller

Description

The 202-17-1 Interface card provides supply and return airflow tracking in order to create positive or negative room pressurization. This interface operates in conjunction with two 200-3 Series Flow Controllers. Application for this type of control is typically a laboratory or hospital environment where air migration is a concern. Positive room control insures there is no air filtration into the controlled room from the outside. Negative applications insure that no air within the controlled room is allowed to escape that room. By assigning one 200-3 Series Flow Controller as the Master, the second controller becomes the Slave by default. The configuration of the 202-17-1 is user definable. A remote switch allows the user to define which of the two 200-3 Series controllers is assigned Master and Slave status. Reversal of the Master to Slave status is possible by changing a positive application to a negative application.

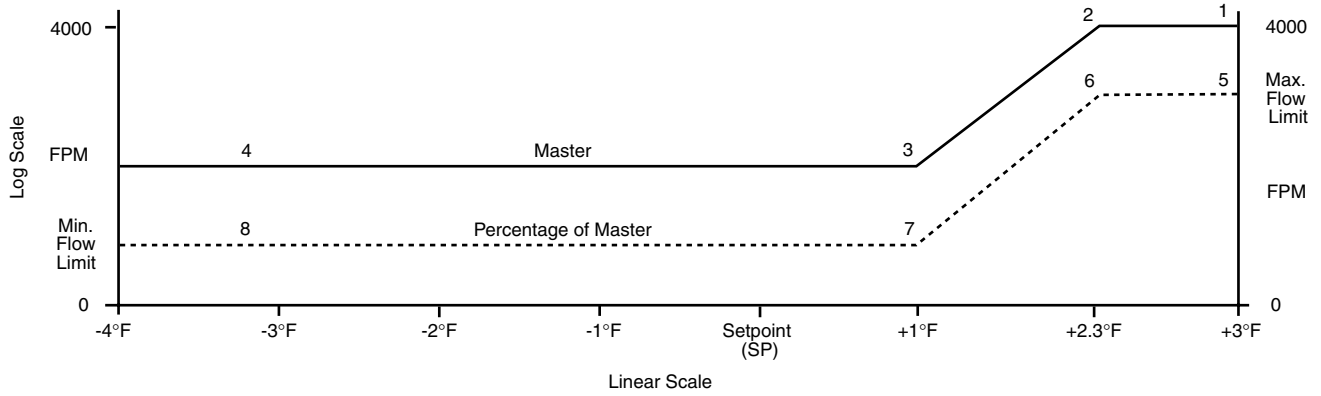
Application

The 202-17-1 incorporates controller "A" and controller "B" terminal connections with thermostat input connections. Controller "A" or "B" can be either the Master or Slave through an on board relay. Controller "A" becomes the Master when the "SW" terminals are open. Controller "B" becomes the Master when the "SW" terminals are shorted. This allows the user the selection of Master/Slave configuration after installation (wiring). The theory of operation dictates that the terminal controller with the greatest airflow (velocity) be designated as the Master. The tracking terminal Controller is therefore the Slave and has less airflow. Typically, a positive application would have the supply terminal Controller assigned Master status and the exhaust would be the Slave. This would be reversed in a negative pressure application. The Master Controller receives its input signal from the thermostat through the 202-17-1. The 202-17-1 additionally provides a signal to the proportionally reduced Slave controller. A "Percentage of CFM" potentiometer allows the user to select the amount of offset required. This offset is a percentage adjustment from 50% to 99% of the Master's flow. A 202-17-1 Series application requires that both the Master and Slave terminals be of the same size for accurate control.

The 202-17-1 Interface incorporates Min./Max. Flow Limits for controller "A" and "B". When the 202-17-1 is used, Min./Max. Flow Limits on the 200-3 Flow Controller must be disabled by removing the two shorting clips (J1 and J2 at H2 on each of the 200-3 Controllers). When using the 202-17-1 either the "A" or "B" Min./Max. Flow Limit becomes the controlling adjustment for its respective Master. Flow Limit adjustment is not required on the Slave.

Specifications

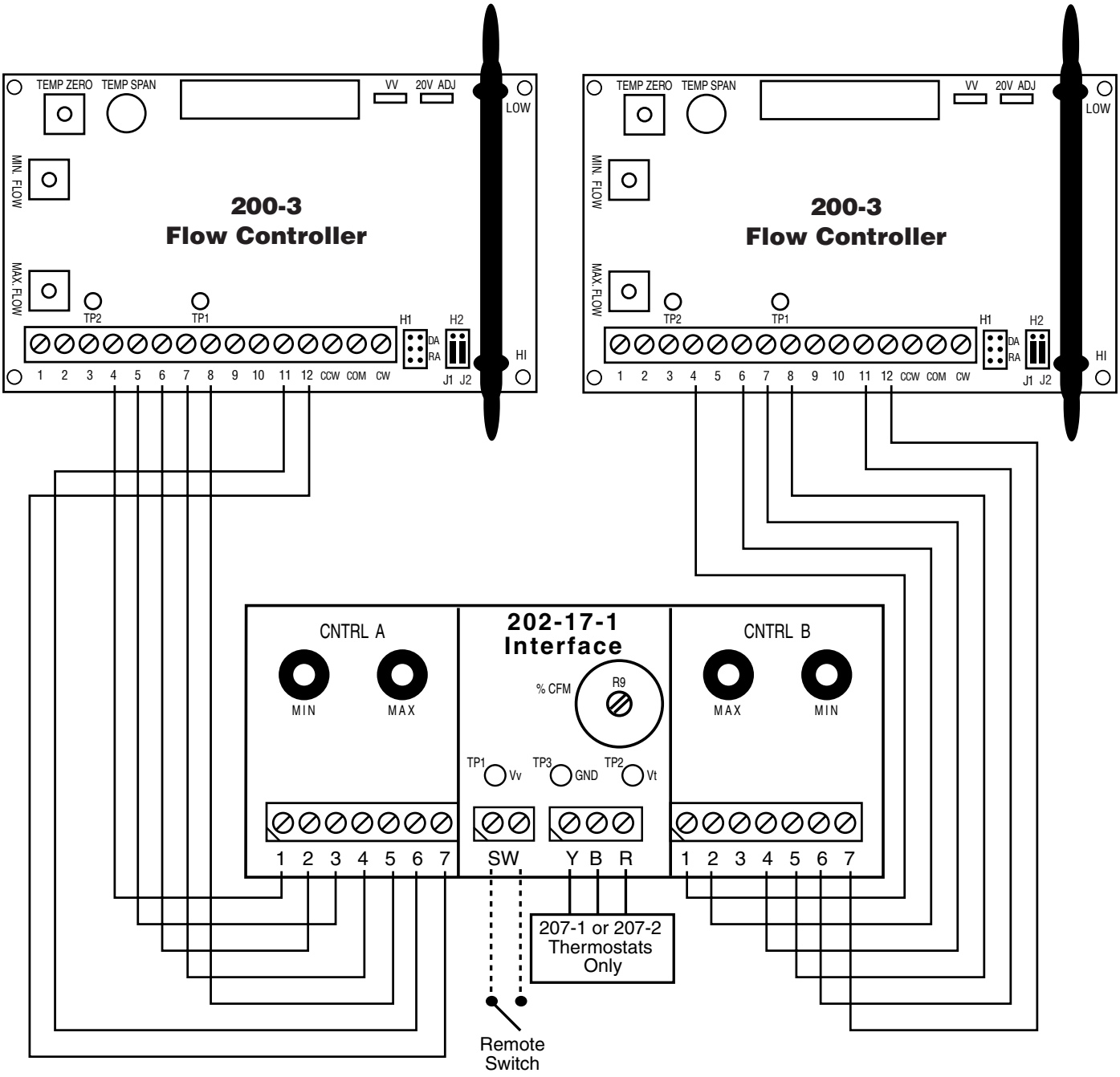
Power	Supplied by 200 Series Control
Velocity	
Master (Min.)	800 FPM
Slave (Max.)	400 FPM
Wiring Requirements	
Size (Minimum)	20 AWG
Length	200 Ft. Max.



FLOW FUNCTION

a. 1 - 2 indicates Maximum Flow as required at Max. Flow Limit setting until space is under control at 2.
b. At 2, flow is regulated over the throttling range by the damper until Min. Flow Limit for the primary air is reached at 3.
c. Min. Flow Limit is established at 3 - 4 for Master and 6 - 8 for Slave.
d. 1 - 4 and 5 - 8 represents a fixed set-in percentage flow difference between the Master and Slave units. The Y-axis is a log scale. The Slave controller should be set to track below 400 FPM. The Slave always tracks the Master. The Master always measures the greater airflow.

202-17-1 Flow Function



200-3 Series Flow Controllers and 202-17-1 Interface Wiring Diagram