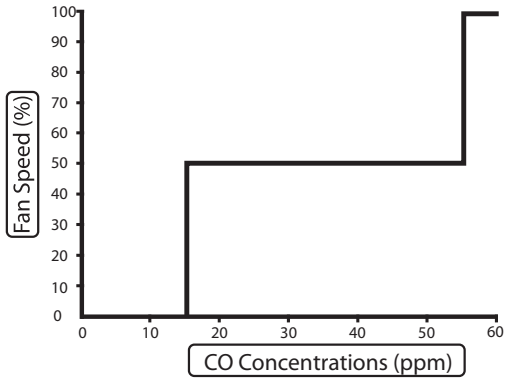
Methods of controlling an analogue system

An analogue system comprises of impulse fans that incorporate AC motors. There are two ways of controlling these fans.

1

Stepped approach (ie. High/low speed)

Two-speed control involves setting the fans to off, low or high speed with a two-speed motor and relays. The relays are switched by the controller and in turn power contactors to the motor windings. The relays are switched at various set points corresponding to sensor readings in the car park. This is a simple and low cost way of achieving basic speed control of JetVent fans in a car park.

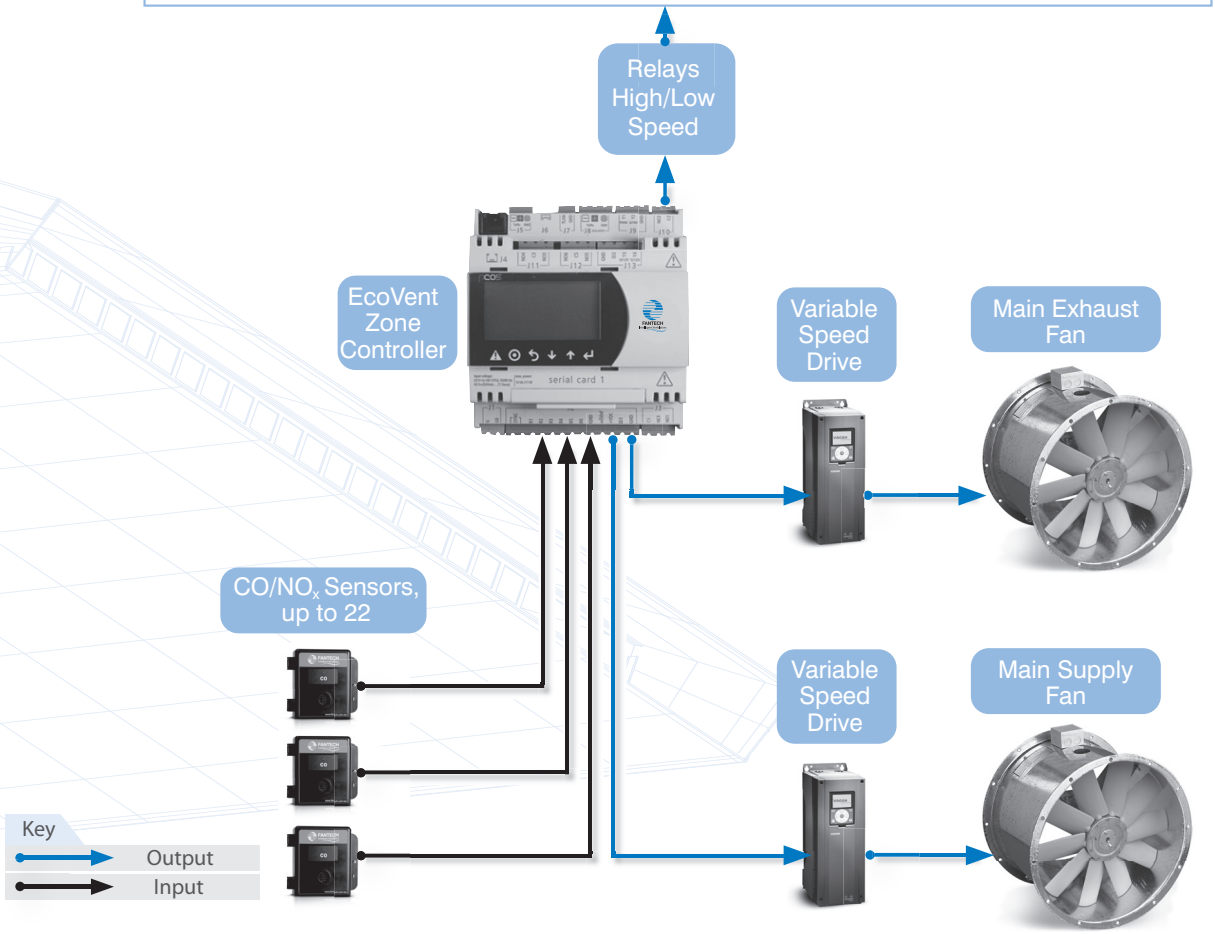


Two speed JetVent Fans

Using relays to drive contactors connected to the fans.

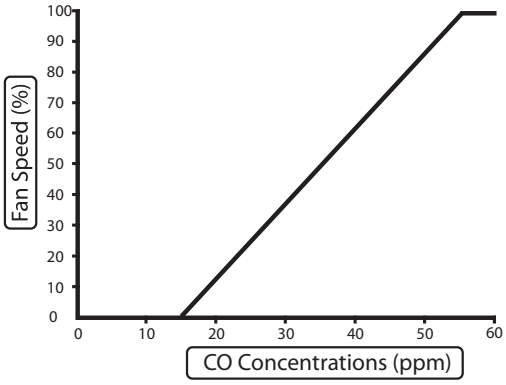
F

Applicable Fans Series: JV-CPA, JIU-CPMF, JIU-CPC2, JISU-CPC



2 Ramped control of speed (i.e with variable speed control)

Variable speed control involves controlling the speed of the fans proportionally to pollutant levels in a car park. The EcoVent control system will control a VSD using a 0-10 Vdc analogue signal. This system of speed control is more energy efficient than 2-speed control as it provides more precise control of the fan speed against pollution levels.



Variable Speed JetVent Fans

Using 0-10 Vdc outputs to proportionally drive VSDs

Applicable Fans Series: JV-CPA, JIU-CPMF, JIU-CPC2, JISU-CPC