A fume cupboard with an **EcoAir® III Controller** is a variable air volume (VAV) system. The Controller monitors the sash position and continually adjusts the fan speed to maintain a constant face velocity as the sash height changes.2 The EcoAir® III Controller thereby saves energy and improves HVAC efficiency by exhausting less conditioned air from the laboratory.

Besides automatically adjusting fan speed to sash height, EcoAir® III also responds to a drop in airflow by ramping up its fan speed. Typical sources of a transient drop in air supply are doors or windows being opened in the laboratory space, or multiple fume cupboards being turned on across the room. Note that the EcoAir® III Controller is designed to ensure safe laboratory conditions and is fully in compliance with AS/NZS 2243.8 (2014).

The Benefits:

▶ State-of-the-art fume cupboard management,

▶ Reduction in operating costs and improved energy efficiency, and

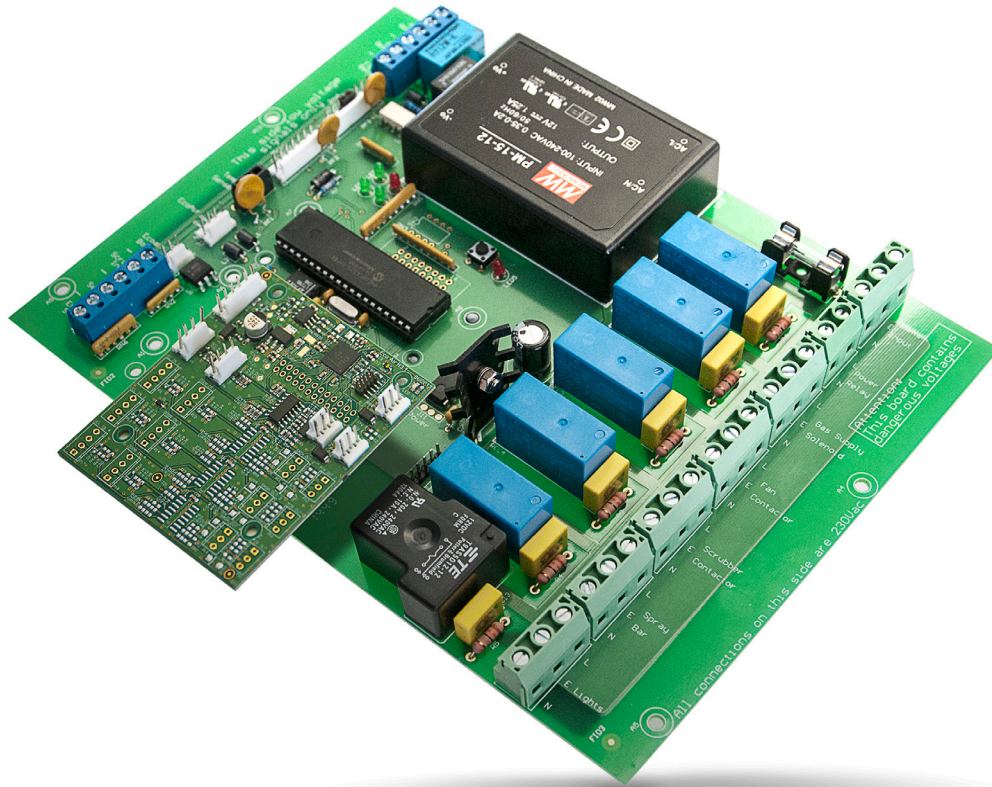▶ Automatic compensation for fluctuations in the laboratory air supply.

Additionally, a remarkable capability of the EcoAir® III Controller is that it can manage as many as four separate fume cupboards if the four use a single exhaust manifold.[1]

EcoAir® Controllers are manufactured by TPE, which was founded in 1970. Working together for many years, its people bring a wealth of experience to their craft, technical expertise that ensures the best fume management solutions for their customers.
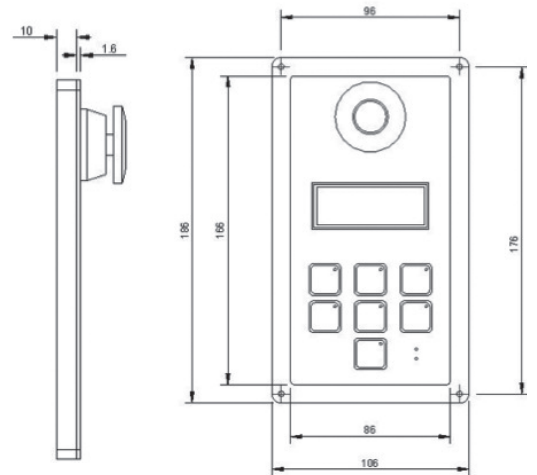
The EcoAir® III Controller comes with a vertically oriented, touch-type control panel that can be mounted on either the left or right column of a fume cupboard. This example shows the control panel mounted on an EcoAir® fume cupboard.

1. The EcoAir® model Controller can also be purchased with the optional EcoSash® for enhanced energy savings. Please see your Advanced Air® representative.

advanced air

Key Features

▶ A transient drop in air supply is immediately responded to by a compensated increase in fan speed.

▶ With its sophisticated electronics mounted internally behind an access panel, the EcoAir® III's Control Panel is vertically mounted in either the left or right sash column, easily accessible for the operator.

▶ The EcoAir® Controller uses four intuitive stages – Pre-Purge, Ready to Use, Post-Purge, and Standby – during normal operation, and it instantly responds to any abnormal conditions that arise.

▶ Low-airflow, high-temperature, and electrical faults each produce visible and audible alarms (which can be muted) and automatically disable power and flammable gas outlets.

▶ The Control Panel's back-lit LCD screen displays the current operational state, timing count-down progress for purging cycles, and a text description of faults that occur.

▶ A dedicated back-up power supply continues to power the alarm functions even after a loss of Mains power.

▶ A prominent *Emergency Stop* button instantly disables power points and flammable gas outlets and places the fume cupboard into a run-on mode.

▶ Set-up and calibration is done via touch buttons and LCD screen instructions.

▶ Numerous configuration and timing options are available, and the Controller is compatible with optional fume cupboard features, such as water sprays and scrubbers.

▶ Where codes permit sharing exhaust components, an EcoAir® III Controller can manage up to four separate fume cupboards.

Control Panel is mounted on 10mm thick white acrylic frame, with 1.6mm MS bracket powdercoated white.

Cutout in column should measure 166mm H x 86mm W.