



CAR PARK VENTILATION CONTROLLER

The Car Park Ventilation controller enables control of car park fans (exhaust/supply/jet fans) via Modbus control signals. Multiple zones can be set up using expansion modules, for managing and monitoring car park fans and sensors.

The controller operates the car park ventilation system in accordance with AS 1668.2:2012 by checking carbon monoxide levels and regulating the ventilation system. Expansion modules can be added to the system for individual zone control and Mechanical Service Switch Board control (Auto/Off/On). The controller can also be integrated into the building Fire system and will operate in accordance with AS 1668.1:2015.

WHAT THE SYSTEM OFFERS



The Carel c.pCO Mini controller can monitor up to 256 devices via Modbus Communication. Therefore, the controller can be configured to any requirement. For a car park ventilation system, we recommend the following:

- Jet Fans – Up to 100 EC Jet fans
- CO Analog sensors – 2 per connected fan
- CO Modbus sensors – Up to 50
- Smoke sensors – 1 Smoke + 1 analog CO sensor per connected fan
- Variable Speed drives – Up to 50
- Expansion Boards – Up to 20
- Fire panel integration with manual override control for Jet fans
- Boss Supervisory System – Connects to any system via Modbus, BACnet TCP/IP, BACnet MS/TP all built in. Allows remote monitoring of system.
- Gateway – Provides wireless connectivity between Modbus devices and the controller.
- Mechanical Service Switch Board with 4 Fault Alarms, System OK indication, 3 mechanical switches for jet fans, supply fans and exhaust fans.
- Display of CO level in car park.
- Purge cycle once in a 24hr period to provide one air change.
- Ventilation rate will be varied between 15 and 45ppm.
- System will be in sleep mode when CO levels are below 15ppm.
- System will run at 100% under all fault conditions.



The controller start up screen can be customized to the customer's design to display any requirement. For example: Time, Date, Customer web address etc

Outline of system operation

Fan Control Methods

The controller has two methods for controlling all connected fans. There is a Manual/Off/Auto switch for the exhaust fan allowing the user to control and set to their needs.

Automatic mode:

- All connected fans will be demand driven by the varying CO levels in the car park.
- All Connected fans will go in to standby mode when CO levels are below 15ppm.
- System will wake up when CO levels are above 15ppm and will vary the fans speed between 30 and 100% of the full speed.
- When any faults in the system occur, all fans will run at 100%.
- The system will initiate one purge cycle per 24hr period to provide one air change.

Manual mode:

- Controller will disregard all sensor inputs and run selected fans at 100% or preselected speed.
- Fan speeds can be adjusted manually through the configuration menu.

Off mode:

- Controller will turn off the selected fan group.
- Controller will disregard all sensor inputs.

Zone Control:

- If individual zone control is required, expansion boards need to be fitted for each zone. The expansion board will provide additional digital inputs and relay outputs.

****Any Fire Signal received will take priority over any of the selected modes****

Fire Panel Integration

The controller can be integrated into the building fire system and will operate in accordance with AS 1668.1:2015.

When the controller receives a General Fire Alarm Signal the exhaust and supply fans will operate at 100% and the Jet/Mixer fans will drop to 0% as per clause 5.5.5.

All supply fans will stop when smoke is detected in the supply air duct work, restarting again when smoke has cleared. This is only applicable if a smoke sensor is fitted in the duct work.

Allowances have been made in the controller for manual override control in the Fire Panel as per clause 5.5.3.



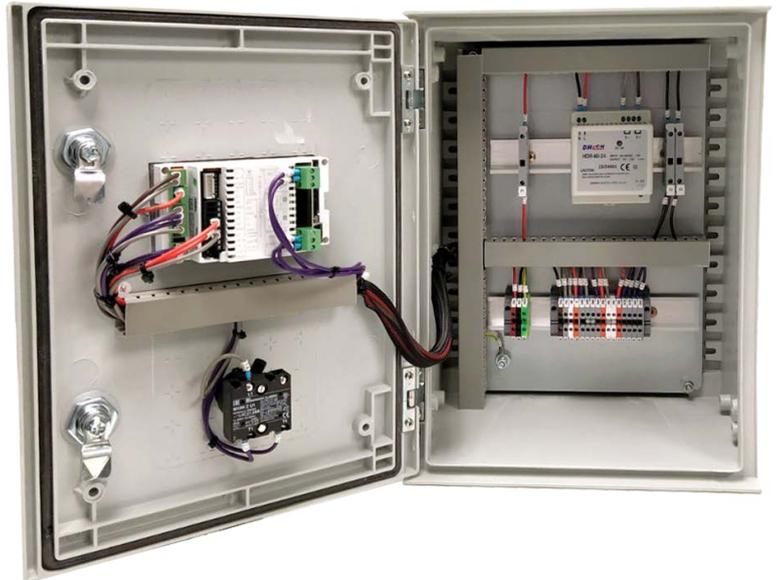
Zones and Expansion Modules

Multi level car parks can be easily split into zones, with each level being a zone. Using an expansion board per zone, allows you complete control of that zone.

You can isolate the zone and operate the fans separate from the rest of the system. Or if required you can link all the zones together and operate the system as a whole.

This offers flexibility within the system allowing you to set it up the way you want.

Controller with Enclosure Box



Contact Us

Please contact your local Eurotec Sales Engineer for a no obligation catch up.

Auckland - Head Office

Unit C, 750 Great South Road
Penrose
Auckland, 1061
Ph: 09 579 1990
Fax: 09 525 3334

Wellington

Unit 9, 2 Tyers Road
Ngauranga
Wellington, 6035
Ph: 04 499 3591
Fax: 04 499 3696

Christchurch

30A Carlyle Street
Sydenham
Christchurch, 8023
Ph: 03 366 0017
Fax: 03 365 6357

www.eurotec.co.nz

sales@eurotec.co.nz



EUROTEC People • Technology • Solutions
HVAC • Refrigeration • Electrical • Measurement

