GTA-VSD20i™

Digital Ventilation Fan Controller

The GTA-VSD20i™ is an AS1668.2 compliant ventilation fan controller system targeted at car park air quality monitoring applications. The system is designed to provide variable speed fan control based on gas concentration input signals from connected gas detectors. The inbuilt control software provides on/off and variable speed fan operation that complies with both AS1668.2 and the recommendations published by fan manufacturers.

Signal Inputs:
The base system has four analog input channels, ideal for small installations but can be expanded up to 20 channels for use in larger applications. Input signals are industry standard 4 - 20mA current loop, scaled as 0 - 100ppm carbon monoxide. Inputs are monitored for sensor disconnection and a fault signal is output if a channel falls outside normal expected operating limits.

Fan Control:
The control unit outputs the industry standard 0 - 10V DC for connection to standard fan drive systems. The AS1668.2 compliant software ensures that fans are cycled both in accordance to the standard and in a manner that places minimum mechanical stress on the fans, providing longer life and lower cost of ownership.
In addition to the analog fan control output, digital outputs are provided to drive the fan in two-speed mode or single on/off mode.

Alarm Signalling:
Digital outputs are also provided for high gas alarm and system fault indication. The high gas alarm output is designed to provide warring of high gas overload conditions and is set at 100ppm carbon monoxide.
The fault output signal is provided to allow indication of internal system faults or connected sensor faults.

Display Panel:
A graphical display panel is available as an option allowing indication of measured gas concentrations and status for each connected channel. Logged measurements and status information can also be viewed via the graphical interface, allowing system performance to be monitored. The display features a touch screen giving easy access to measurement and status screens.

Mechanical design:
The control unit is designed to mount into a wall mounted enclosure using standard DIN rail fittings. The display interface provides for easy panel mounting including a sealing gasket to maintain environmental integrity.

- **AS1668.2 compliant operation**
- **Scalable from 4 to 20 inputs**
- **Industry Standard 4 - 20mA inputs**
- **Industry Standard 0 - 10V output**
- **Variable Speed and on/off fan control**
- **Low stress fan drive control**
- **High gas overload signal output**
- **System fault signal output**
- **Gas alarm output signals**
- **Touch screen user interface option**
- **Seamless use with C-Guard™ Sensors**
- **Reliable operation**
- **Low cost of ownership**
- **Two year warranty**

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Controller and Display Panel Specifications

Number of Input Channels:	Up to 20 via extender modules. Base system 4 channels.	
Inputs signal type:	Current Loop 4-20mA - Sinking.	
Input Scaling:	4 - 20mA = 0 - 100ppm carbon monoxide.	
Analog Output Signal:	0 - 10V DC.	
Output Scaling:	0V at 8ppm / 10V at 30ppm.	
Digital Fan Control Output- Low Range:	Volt-Free Contact.	Active at 8ppm.
Digital Fan Control Output- High Range:	Volt-Free Contact.	Active at 30ppm.
VSD Enable Signal:	Volt-Free Contact.	Active at 8ppm.
High Gas (Overload) Alarm Output:	Volt-Free Contact.	
High Gas (Overload) Activate Level:	100ppm.	
High Gas (Overload) De-activate Level:	30ppm.	
Fault Signal Output:	Volt-Free Contact.	Internal Fault, Sensor Disconnect.
Fan Control Timing:	AS1668.2 compliant using 15 minute cycle.	
Extender Module:	4 x 4 - 20mA inputs, specification as main module.	
Graphical Display Panel:	4.3 Inch Colour TFT 480 x 272 pixels.	
Display Functions:	Gas concentration reading, channel status, alarm status, log data display.	
Display User Input:	Channel Isolate function.	
System Component Operating voltage:	24V DC.	
Operating Temperature:	-20^{O}C to +50^{O}C	
Humidity Range:	0-95% non condensing	
Dimensions (approx.):	Main Module:	90mm (H) x 70mm (W) x 60mm (D).
	Extender Module:	90mm (H) x 25mm (W) x 60mm (D)
	Graphical Display:	103mm (H) x 130mm (W) x 40mm (D).
Warranty:	2 Years.	
Part Numbers:	73-8010:	Control Unit.
	73-8010-1:	Extender Module.
	73-8010-20:	Graphical Display Module.

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