



Fixed systems for gas and fire monitoring you can trust

**Vortex**

# Vortex

**Vortex is the powerful package that has flexibility built-in.**

**With up to 12 channels of gas including up to 3 of fire, Vortex can be customised to meet your site requirements, however complex, without the need for extensive cabling.**

**All this and it is simplicity itself to operate and maintain.**

## Simple to use

Vortex offers all the flexibility you will need while still being simple to operate. **All the day to day operations can be completed via push buttons on the front panel.**

The display panel shows the fault and alarm levels for all the channels but the LEDs only light when a hazard or fault is detected. Thus **the whole system can be checked at a glance.**

Even when there is a need to change the alarm or channel settings all of these **adjustments can be made at the enclosure** without the need for additional equipment.

## Robust & reliable

You can rely on Vortex because it has been tested to the highest environmental standards. It is rated IP65 for dust and water ingress.

Not only does it meet all the current legislation, but it also has been designed to meet the new tough gas detection EMC standards.

For your safety all the relays are monitored continuously so faults are identified immediately **ensuring the system is always fully functional.**

Power failures are not a problem as Vortex has its own **internal battery back-up** which is monitored continuously for connection integrity and charge levels.

**In short no matter how tough the conditions Vortex will protect you.**

## Ultimate flexibility

**Vortex can be configured to match all of your site requirements, whatever they may be, with an absolute minimum of wiring.**

Each channel has **1 fault and 3 levels of alarm** which can be combined in any pattern: **voting**, to trigger up to a maximum of **32 output relays**. In this way Vortex can be customised to protect your staff from any hazard that they may meet.

**Customisation is easy too.** It can be factory set to your requirements or altered at any time by a PC using the Vortex PC software. **This allows extensive systems to be configured without the need for complex cabling.**

**Vortex uses industry standard communication links** so it is simple to integrate it with your existing control systems.

## Easy maintenance

**Vortex has been specially designed to make servicing and maintenance simple and convenient.**

The modular construction means that **replacement parts simply plug in.**

Space inside the enclosure has been maximised to **improve access for cable termination so that cabling is easy.**

**Each zone can be inhibited separately** to allow you to work on a specific area without affecting the rest of the system.

All adjustments are performed electronically thus the problems of drift from adjustable potentiometers has been removed **reducing maintenance to a minimum.**

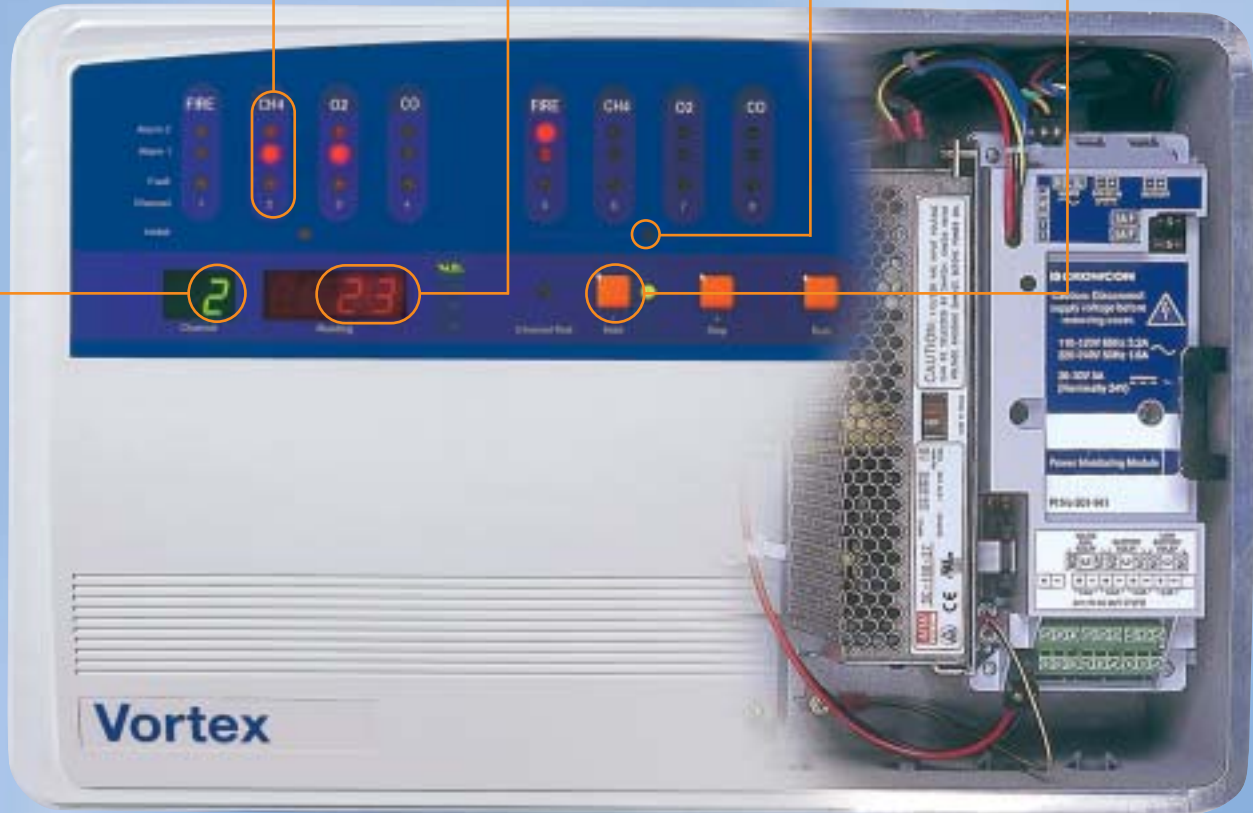
Display shows selected channel number

Visual status indicators for each channel

Display shows gas concentration for selected channel

Zone inhibit indicator

Membrane switch panel for day-to-day operations



Cal Button

Peak Hold Cal Button

Zero Button

Channel Test Button

Zone Inhibit Buttons



# Vortex Flexibility

The standard wall mounted unit has now been joined by modular versions, designed for incorporation into a variety of specialist enclosures or larger cabinet-based safety systems.

The simplest version, which is suitable for use where a display panel is not required, comprises just the essential input, output and controller modules mounted on a DIN rail. This configuration is ideal for confined spaces and can be installed in specialist enclosures, such as flameproof housings or those with high ingress protection.

## Vortex rack



Vortex rack combines the essential modules with a 19" Euro rack fascia featuring simple button controls and visual status indicators. Designed for integration into existing Euro rack enclosures, this configuration can be used to replace obsolete gas monitoring systems or to introduce gas detection to other types of rack-mounted equipment.

## Vortex panel

Vortex Panel is designed for flush mounting in a door or panel in non-Euro enclosures and allows gas detection to be added to almost any OEM monitoring system.

The self adhesive display will seal the panel to an Ingress Protection rating of IP65, which means that this version is ideal for wetter, dustier environments.



# Inputs



Industry standard gas detectors



Remote reset switch



Up to 3 loops of 20 fire/heat detectors



AC/DC Power Options

Internal Battery Backup

# Outputs

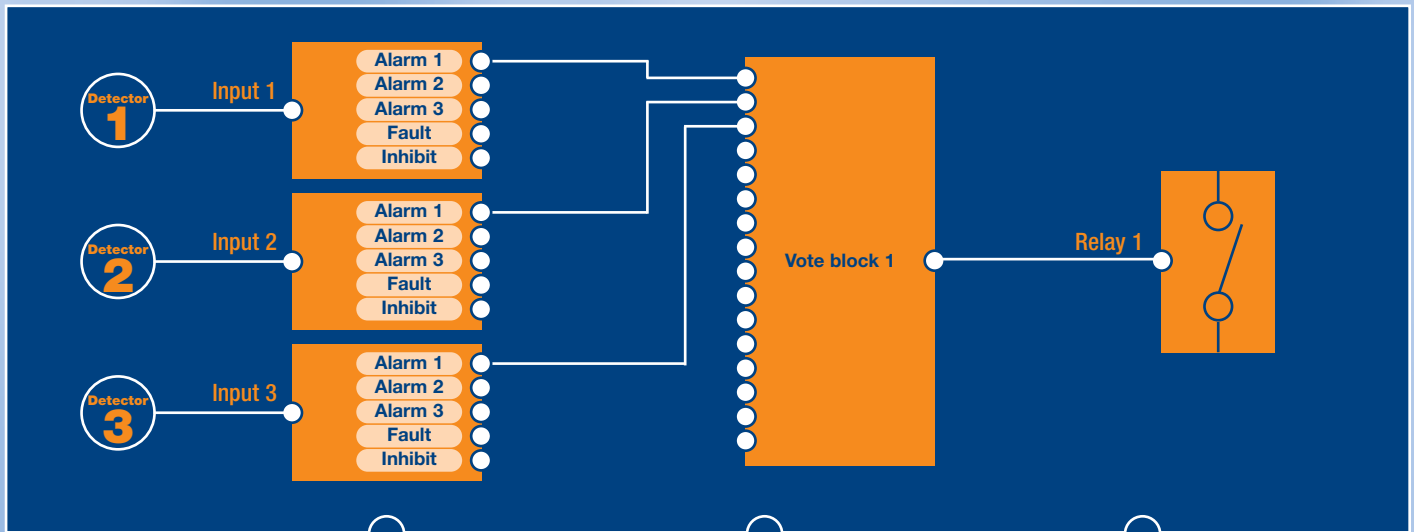
Industry standard RS485 MODBUS Communications for DCS or PLC connection



Dedicated 24v supplies for use with external audio/visual alarms

# Flexible Architecture

Example configuration with a relay trip if any one of three detectors reaches level 1 alarm



Up to 12 Inputs

Up to 24<sup>1</sup> Voting blocks

Up to 24<sup>1</sup> Relays

<sup>1</sup> 32 if 8 inputs only required



<b>Vortex</b>		
<b>Size</b>		470 x 306 x 170 mm (18.5 x 12 x 6.5 ins)
<b>Weight</b>		12 kg (27 lbs)
<b>Enclosure material</b>		Aluminium & Plastic
<b>Mounting</b>		Wall mounted
<b>Ingress protection</b>		IP65
<b>Channels</b>		Up to 12
<b>Inputs</b>	Gas	2 or 3 wire, 4-20 mA (sink or source), 0-5 V
	Fire - Smoke detectors, heat detectors and manual call points, up to 20 per loop	maximum of 3 loops
<b>Outputs</b>	Analogue	None
	External audio/visual alarm drive	4 powered 24 V dc, max load up to 0.5 A each
<b>Relays</b>	Type	Up to 24 SPCO contacts rated 6 A @ 250 V ac, non-inductive load Active coil failure monitoring
	Assignment - common - per channel - voting	Mains fail, battery low, battery fail Up to 24, (32 if only 8 inputs required) configurable using all alarms, fault, and system events energised/de-energised latched/ non-latched Time delayed & pulsed
	Relay modes	
<b>Digital Communications</b>	DCS/PLC/PC	Modbus or Profibus RS-485 multi-drop connection for monitoring, control and configuration Modbus using RS232 internal connector
	Local configuration link	
<b>Logging</b>		Built-in event logger - data available via communication links
<b>Panel indication</b>	Channel number Gas reading Measurement units Power Battery OK Run/hold indication Channel test mode System fault - integrity watchdog	2 digit green 7-segment LED 4 digit red 7-segment LED ppm, %LEL, %vol, fire Green LED on front panel Green LED Green LED activates on hold Flashing amber LED when activated Amber LED
<b>Alarm indication</b>	Audible-internal sounder Visual - alarm  - fault - inhibit	Piezo Individual channel Alarm 1 and 2 (red LED) (amber LED) Zone inhibit (amber LED)
<b>Power</b>	AC mains  DC Battery backup	110/120 V & 220/240 V switchable 50-60 Hz 20-30 V 2Ah Internal
<b>Remote Accept/Reset</b>		Available from terminals within the panel
<b>Lamp test</b>		Via button on front panel
<b>Approvals</b>	Low voltage directive EMC	Meets BS EN 61010-1 EN 50270
<b>Operating Temperature</b>		-10 to +40°C (14 to 104°F)
<b>Humidity</b>		0 - 95% non-condensing

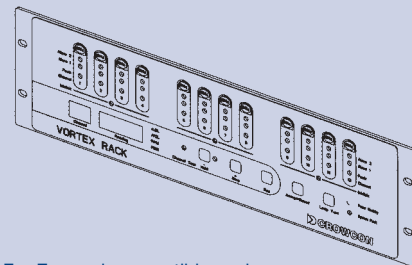
## Flexible Architectures:

### OEM

Full functionality and maximum module capability with no display: a full 12 inputs and 32 outputs are available in OEM, Rack or Panel

### RACK

Standard 19" 3u panel dimensions



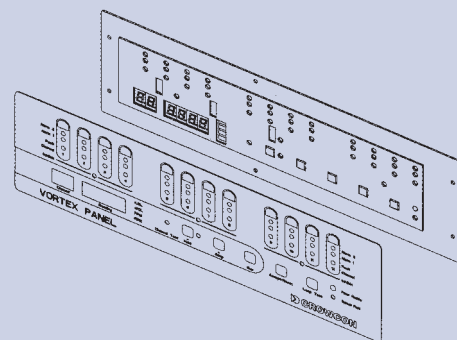
For Eurorack compatible enclosures.

### PANEL

Panel cutout dimensions  
366mm wide x 84.5mm high

Cutout template provided

Overlay label dimensions  
441mm wide x 128mm high



Sealed to IP65