



12 - channel Control Panel for gas and fire Monitoring

# 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 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. Vortex 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

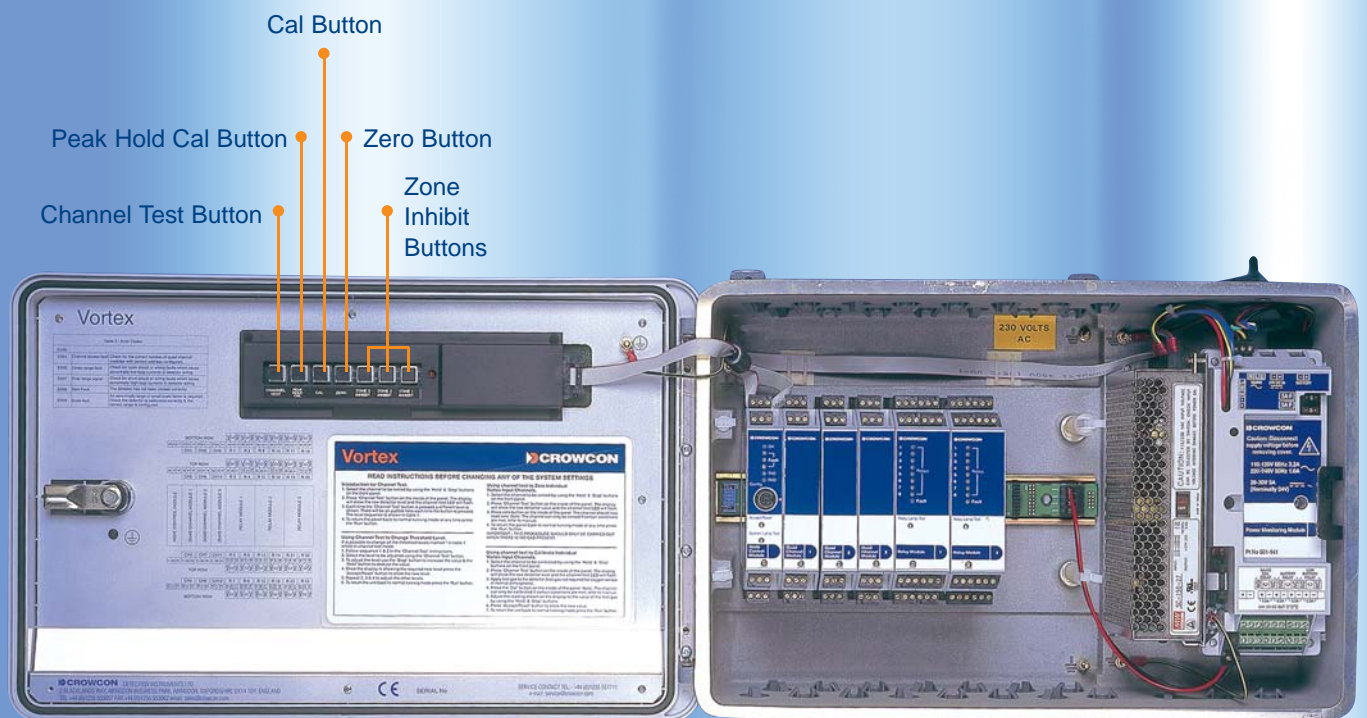
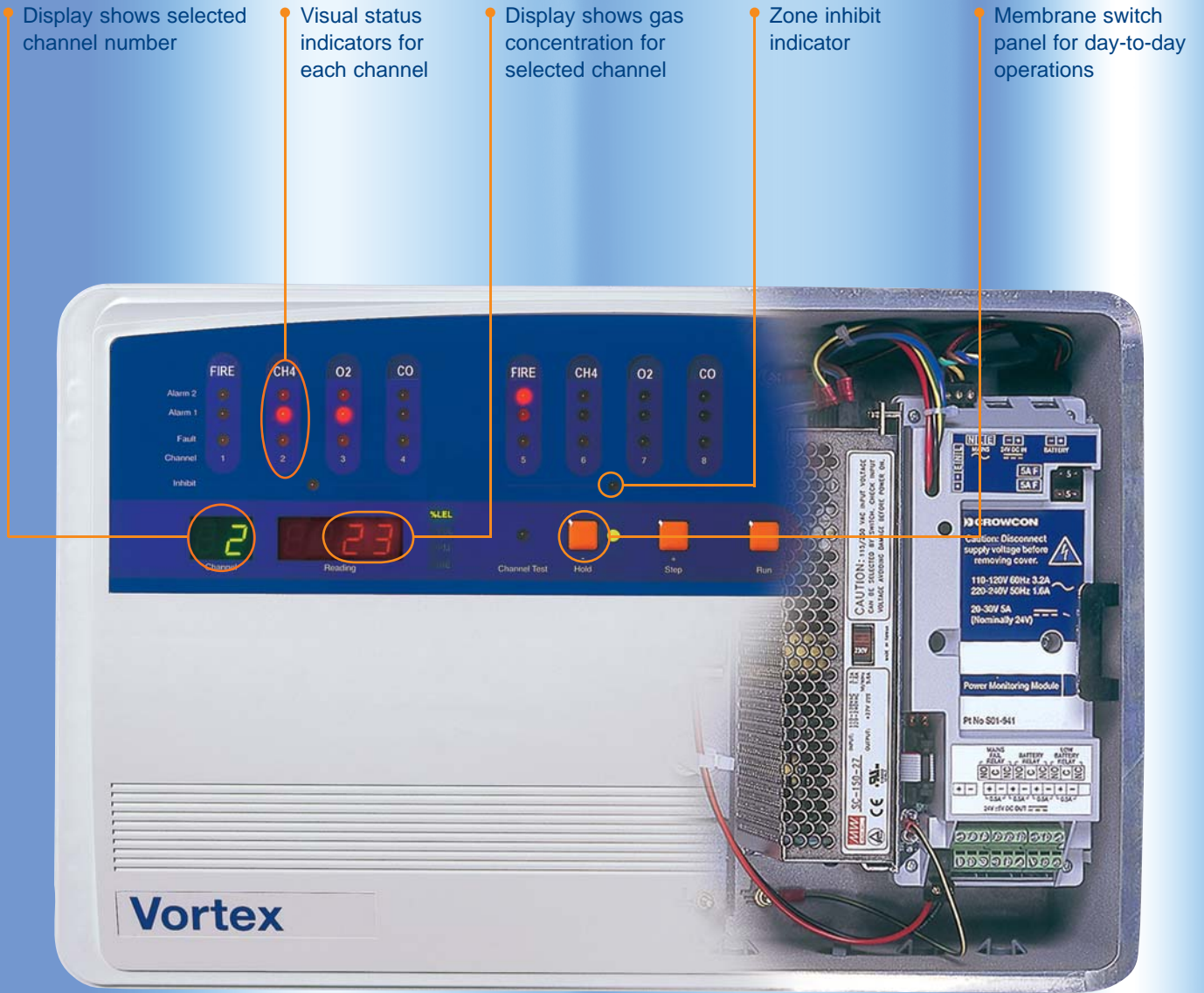
Vortex has been specially designed to make servicing and maintenance simple and convenient.

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.





# Vortex Flexibility

The standard wall mounted unit has 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 smoke/heat detectors



AC/DC Power Options

Internal Battery Backup

# Outputs

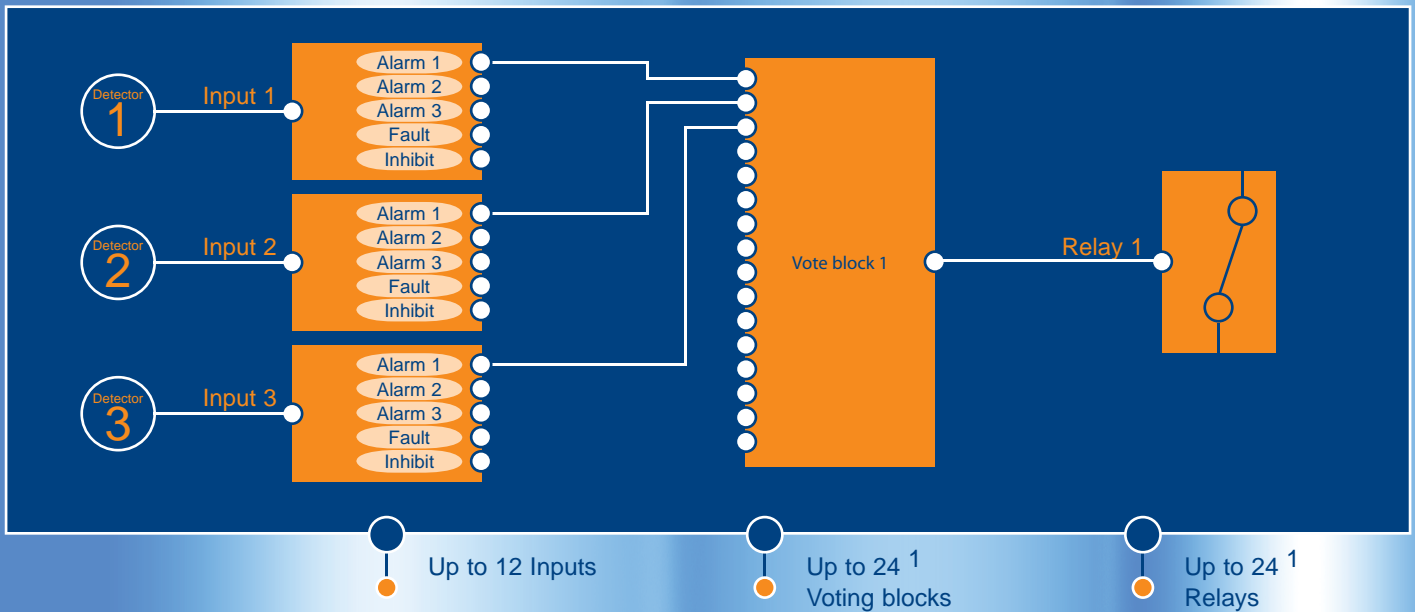
Industry standard RS485 MODBUS Communications for DCS or PLC connection



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 are required



Vortex		
Size	470 x 306 x 170 mm (18.5 x 12 x 6.5 ins)	
Weight	12 kg (27 lbs)	
Enclosure material	Aluminium & Plastic	
Mounting	Wall mounted	
Ingress protection	IP65	
Channels	Up to 12	
Inputs	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
Outputs	Analogue	None
	External audio/visual alarm drive	4 powered 24 V dc, max load up to 0.5 A each
Relays	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	
Digital Communications	DCS/PLC/PC	Modbus or Profibus RS-485 multi-drop connection for monitoring, and control
	Local configuration link	Configuration Modbus using RS232 internal connector
Logging	Built-in event logger - data available via communication links	
Panel indication	Channel number	2 digit green 7-segment LED
	Gas reading	4 digit red 7-segment LED
	Measurement units	ppm, %LEL, %vol, fire
	Power	Green LED on front panel
	Battery OK	Green LED
	Run/hold indication	Green LED activates on hold
	Channel test mode	Flashing amber LED when activated
Alarm indication	Audible-internal sounder	Piezo
	Visual - alarm	Individual channel Alarm 1 and 2 (red LED)
	- fault - inhibit	(amber LED) Zone inhibit (amber LED)
Power	AC mains	110/120 V & 220/240 V switchable
	DC	50-60 Hz
	Battery backup	20-30 V 2Ah Internal
Remote Accept/Reset	Available from terminals within the panel	
Lamp test	Via button on front panel	
Approvals	Low Voltage Directive EMC	Meets BS EN 61010-1 EN 50270
Operating Temperature	-10 to +40°C (14 to 104°F)	
Humidity	0 - 95% non-condensing	

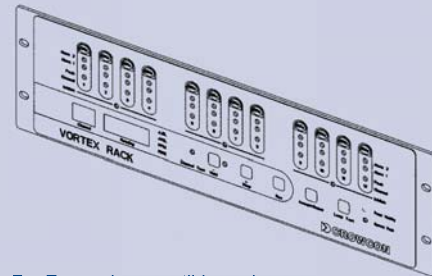
## Flexible Architectures:

### 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



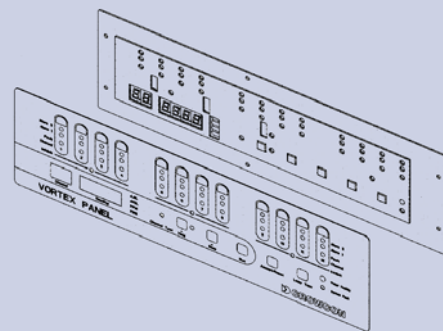
For Eurorack compatible enclosures.

### PANEL

Panel cutout dimensions  
366mm wide x 84.5mm high

Cutout template provided

Overlay label dimensions  
441mm wide x 128mm high



Sealed to IP65



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