



The Zone Rangers
Fixed systems for gas and fire monitoring

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 LED's 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 done from the enclosure** without the need for additional equipment.

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 **24 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 SetVortex 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.

Robust & reliable

You can rely on Vortex because it has been tested to the highest 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 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 are Vortex will protect you.

Easy maintenance

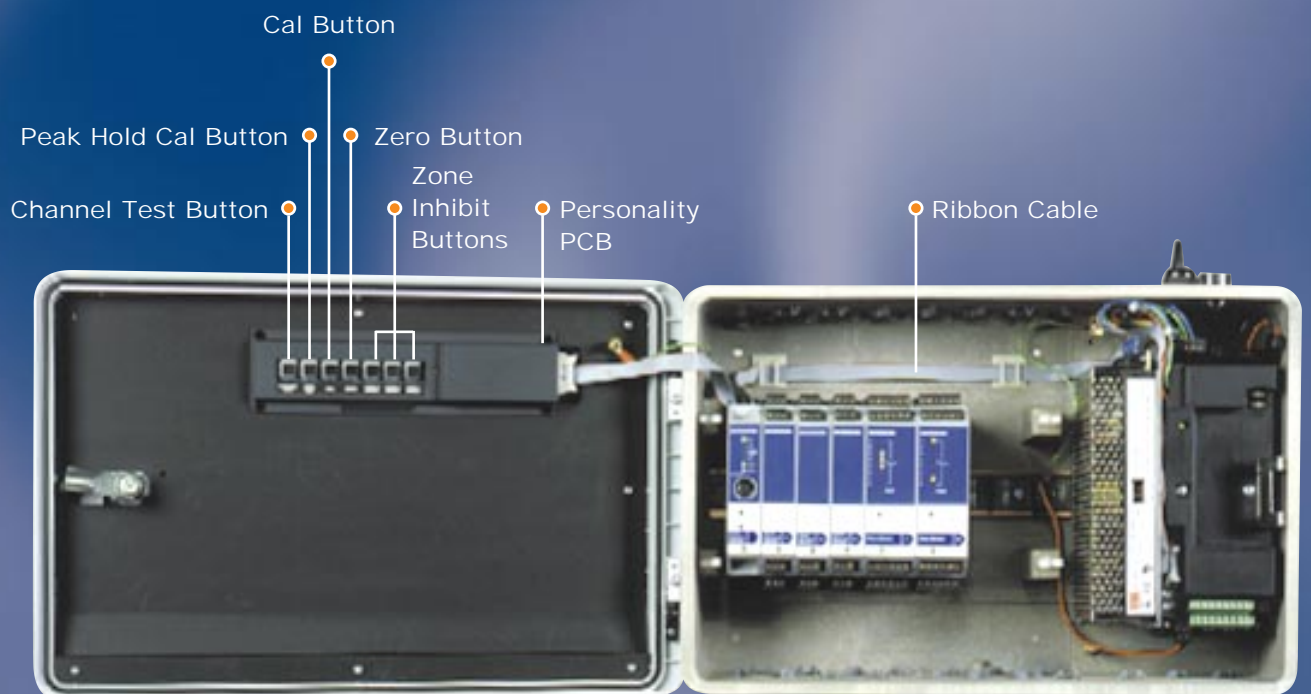
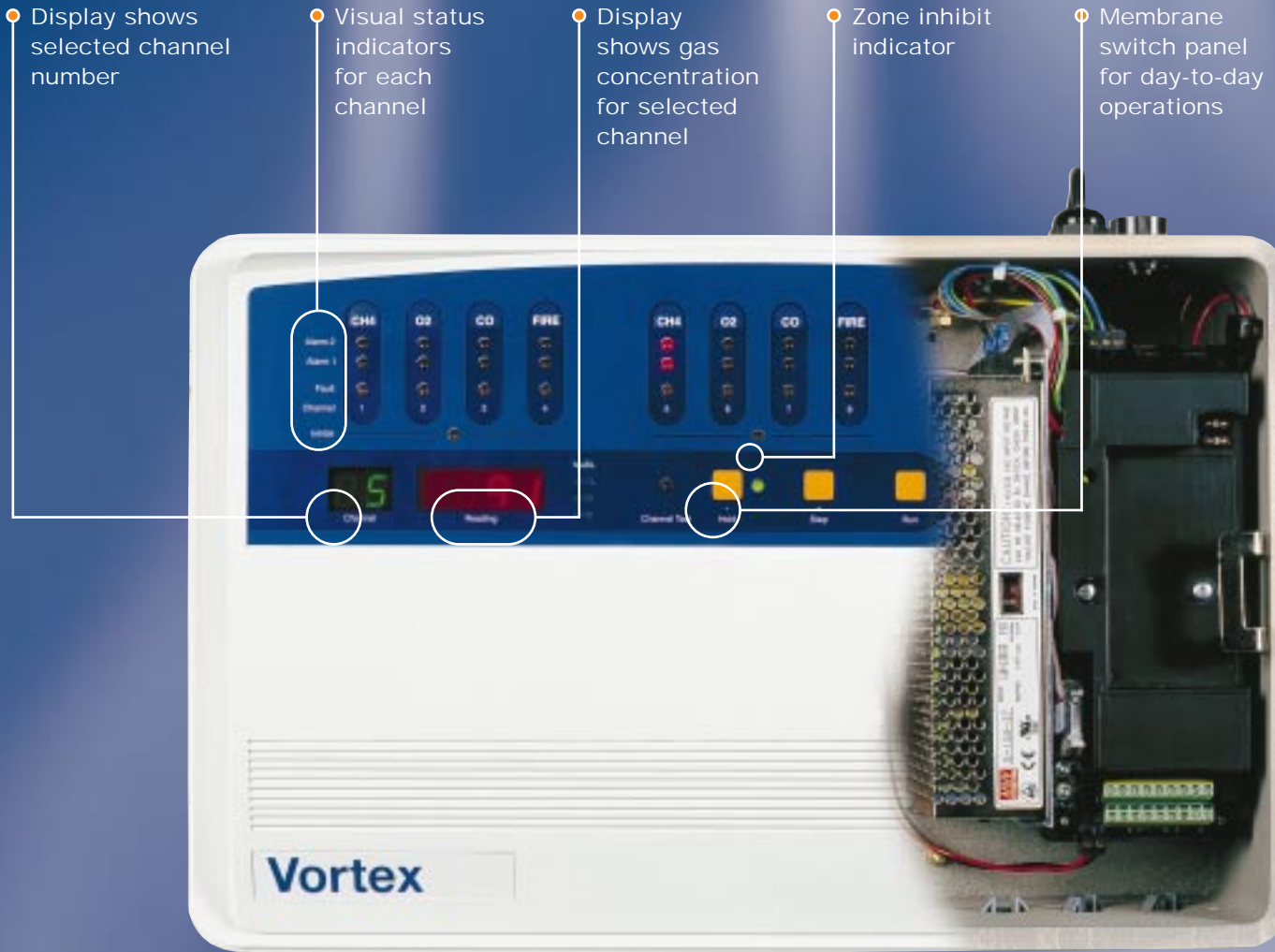
Vortex has been specially designed to make servicing and maintenance simple and convenient.

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

Space inside the enclosure has been kept to a maximum 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.**



The Zone Rangers

Crowcon's thirty years of gas detection expertise has produced a range of control panels for all applications and situations. From the simple, rugged, Master wall mounted unit for 1 – 4 channels to Vortex for ultimate flexibility and communication options and Monitor, the versatile digital modular 16 channel system which can handle the most complex installation, Crowcon has the solution for your gas detection problem.

Master

Up to
FOUR
channels



Master is the simple, flexible solution whenever you need a self-contained, localised panel offering up to 4 channels of gas or fire with flameproof options for very hazardous sites.

Vortex

Up to
TWELVE
channels



Vortex is a powerful, digital package giving up to 12 channels of gas including up to 3 of fire with complete flexibility on customisation and especially suitable for rugged environments.

Monitor

UNLIMITED
channels



Monitor with its modular, rack-mounted design is the ultimate in control panels. It can stack to offer unlimited channels and outputs and will integrate fully with other site, rack-mounted, protection systems.

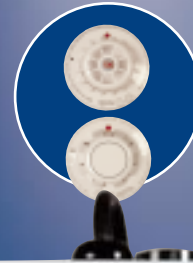
Inputs



Industry standard gas detectors



Remote reset switch



Up to 3 loops of 20 fire/heat detectors



AC/DC Power Options

Internal Battery Backup

Outputs

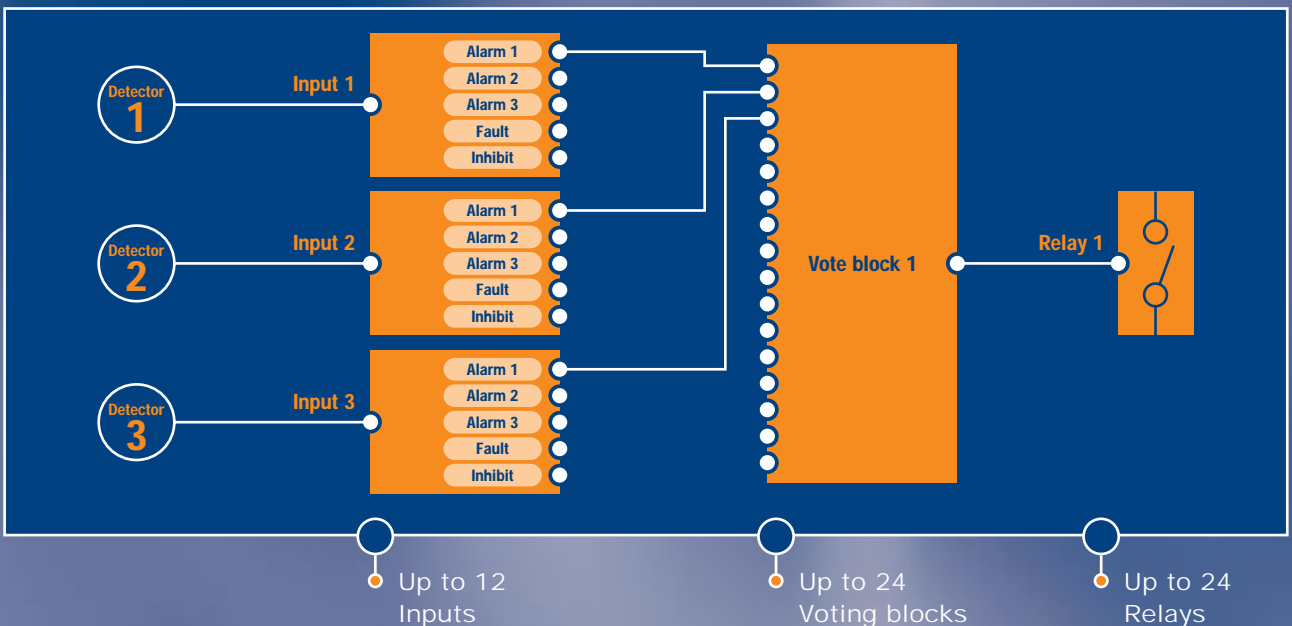
Industry standard RS485 MODBUS Communications for DCS or PLC connection


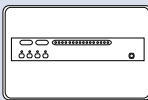
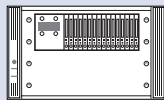



Dedicated 24v supplies for use with external audio/visual alarms

Flexible Architecture

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



			
Model	Vortex	Master ¹	Monitor
Size	470 x 306 x 170 mm (18.5 x 12 x 6.5 ins)	420 x 240 x 90 mm (16.5 x 9.5 x 3.5 ins)	483 x 133 x 294 mm (19.0 x 5.25 x 11.5 ins)
Weight	12 kg (27 lbs)	9 kg (20 lbs)	9.5 kg (21 lbs)
Enclosure material	Aluminium & Plastic	Mild steel	Aluminium alloy
Mounting	Wall mounted	Wall mounted	Rack mounted
Ingress protection	IP65	IP54	-
Channels	Up to 12	Up to 4	16 per rack
Inputs	Gas	2 or 3 wire, 4-20 mA (sink or source), 0-5 V	2 or 3 wire, 4-20 mA (sink or source), or mV bridge
	<i>Fire - Smoke detectors, heat detectors and manual call points, up to 20 per loop</i>	maximum of 3 loops	maximum of 32 loops per rack (i.e. 16 twin zone fire modules)
Outputs	Analogue	None	16 x 4-20 mA, max. load 950 Ohms or 1-5 V, min. load 100 Ohms
	<i>External audio/visual alarm drive</i>	4 powered 24 V dc, max load up to 0.5 A for each alarm level	Powered 24 V dc, max load up to 2 A for each alarm level
Relays	Type	Up to 24 SPCO contacts rated 6 A @ 250 V ac, non-inductive load. Continuous coil failure monitoring.	Up to 11 DPCO contacts rated 5 A @ 250 V ac, non-inductive load
	Assignment - common - per channel - voting Relay modes - energised, de-energised & latched	Mains fail, battery low, battery fail Up to 24, configurable • Time delayed & pulsed	High & low alarm and fault High & low gas alarm or fire None •
Digital Communications	DCS/PLC/PC	Modbus RS485 multi-drop connection for monitoring, control and configuration.	-
	Local configuration link	Modbus using RS232 internal connector	RS232
Logging		Built-in event logger - data available via communication links	Optional separate datalogger
			Built-in datalogger - data available via communication links
Panel indication	Channel number	2 digit green 7-segment LED	1 digit green 7-segment LED
	Gas reading	4 digit red 7-segment LED	3 digit red 7-segment LED
	Measurement units: ppm, %LEL, %vol, fire	•	•
	Power	•	•
	Battery OK	•	•
	Run/hold indication	•	•
	Channel test mode	•	•
	System fault	•	•
Alarm indication	Audible-internal sounder	•	•
	Visual - alarm	Individual channel Alarm 1 and 2 (red LED)	Individual low and high (red LED)
	- fault	Fault (yellow LED)	Individual fault (yellow LED)
	- inhibit	Zone inhibit (yellow LED)	3 individual & 3 common alarms (red LED) Individual & common fault (yellow LED) Individual inhibit (yellow LED)
Power	AC mains	110/120 V & 220/240 V switchable 50-60 Hz	110/120 V & 220/240 V, 50-60 Hz
	DC	20-30 V	12 V, 24 V, 50 W max
	Battery backup	Internal	Internal
Remote Accept/Reset		•	•
Lamp test		•	•
Approvals	 Low voltage directive RF immunity RF emissions Classification EEx D IIB T6 Gas Detection Std	Meets BS EN 61010-1 Meets EN 50082-2 Meets EN 50081-1 prEN 50270	Meets BS EN 61010-1 Meets EN 50082-1 Meets EN 50081-1 •
Operating Temperature		-10 to +40°C (14 to 104°F)	-10 to +40°C (14 to 104°F)
Humidity	0 - 95% non-condensing	•	•

¹ Specifications for Master 4 also available in 1 channel and flameproof versions.