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# Vortex

## Gas detection control panel



### Vortex

- 1 to 12 channel control system

### Vortex Rack

- 19" rack mounted control system

### Vortex Panel

- Panel mounted control system

### Vortex FP

- Exd Flameproof control system

### Vortex FP Compact

- Exd Flameproof control system



# 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 latest gas detection EMC standards.
- For your safety all the relays are monitored continuously: coil faults are identified immediately ensuring system integrity.
- 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.
- Vortex has been validated to the functional safety standard IEC 61508 (SIL 1).

## 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.
- 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 system.

## 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.



Safety Integrity Level



## Systems Options

In addition to the standard wall-mounted panel, Vortex is also available in modular and hazardous area certified versions. **Vortex Rack** is supplied with a standard 19" display panel and input/output modules, PSU and batteries for fitment within any standard 19" enclosure. **Vortex Panel** is designed for flush-mounting into any door or panel. **Vortex FP** is ATEX certified for use in Zone 1 or Zone 2 hazardous areas, such as on oil production vessels and within industrial analyser shelters.

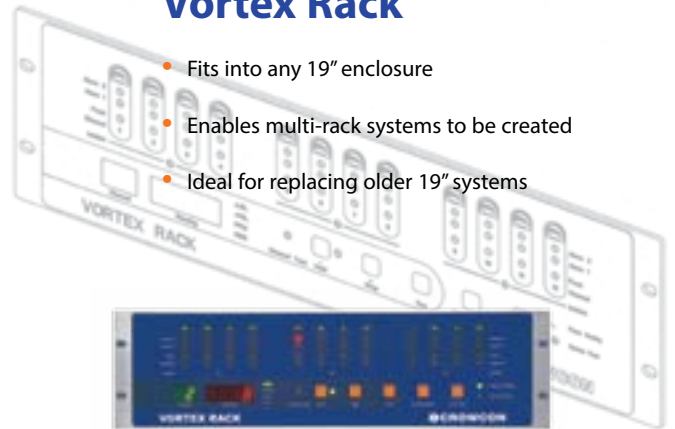


### Vortex

- Proven reliability
- IP65 ingress protection
- RS-485 Modbus Communications



### Vortex Rack



- Fits into any 19" enclosure
- Enables multi-rack systems to be created
- Ideal for replacing older 19" systems

### Vortex Panel

- Fits into any panel or door
- Self-adhesive display label provides IP65 ingress protection
- Wide range of PSU and battery options



### Vortex FP and FP Compact

- ATEX Zone 1 & 2 certified
- Non-intrusive calibration via RS-485 link
- Available in 2 sizes to suit site requirements



## Vortex Specification:

Model	Vortex	Vortex Rack/Panel	Vortex FP and FP Compact
Size	470 x 306 x 170mm (18.5 x 12 x 6.5 ins)	Rack display: standard 19" 3U Panel display: 441 x 128mm (cut-out 366 x 84.5mm) Modules, PSU and batteries are supplied loose for fitting within a cabinet.	440 x 640 x 332mm (17.3 x 25 x 13 ins)  Compact version: 450 x 330 x 289mm (16.9 x 13.7 x 11.4 ins)
Weight	12Kg (27lbs)	Dependant on configuration	70Kgs (154lbs) approx. Compact version: 37.5kgs (83lbs) approx.
Enclosure material	Back-box: Aluminium Front cover: ABS	Not applicable	LM25 Aluminium with polyester powder coating.
Ingress protection	IP65	Cabinet dependant	IP66
Channels	Up to 12	Up to 12	Up to 12
Inputs	Gas  Fire –smoke & heat detectors, manual call-points	2 or 3 wire 4-20mA (sink or source), 0-5V Up to 3 loops Up to 20 devices per loop	As per Vortex
Outputs	External audible/visual alarm drive	As per Vortex	Auxiliary DC power terminals provided .
Relays	Type  Assignment – Common  Voting  Relay modes	Up to 24 SPCO, contacts rated 6A @ 250Vac Mains fail, battery low, battery fail Alarms, faults and system events. Energised/de-energised, latched/non-latched, time-delayed, pulsed	As per Vortex Compact version relay limitations: 1 or 2 input modules: 2 relay modules max. (16 relays) 3 input modules: 1 relay module only (8 relays)
Digital communications	DCS/PLC/PC Local configuration link	RS-485 Modbus or Profibus RS-232 (configuration software and lead supplied)	As per Vortex
Logging		Up to 300 alarm, power, fault, system events are stored in NVM.	As per Vortex
Panel indication	Channel number Gas reading Measurement units Power Battery OK Run/hold indication Channel test mode System fault – integrity watchdog	2-digit 7-segment LED 4-digit 7-segment LED %LEL, ppm, %Vol, Fire Green LED Green LED Green LED Flashing Amber LED Amber LED	As per Vortex  Displayed information can be altered and outputs can be inhibited during calibration using a magnetic key.
Alarm indication	Audible – internal sounder Visual – Alarm – Fault – Inhibit	Piezo  Level 1 & 2, Red LED Per channel, Amber LED Per zone, Amber LED	As per Vortex
Power	AC mains  DC Battery back-up	110/120V & 220/240Vac (switchable) 50-60hz 20-30Vdc 2Ah internal	As per Vortex  Vortex FP: 110/120Vac 150w PSU Vortex FP Compact: 100/240Vac 75w PSU Battery back-up not available
Approvals	Low Voltage Directive EMC Hazardous area	EN61010-1 EN50270, FCC, ICES N/A	EN61010-1 EN50270, FCC, ICES N/A ATEX and IECEx EX II 2G
Operating Temperature		-10 to +40°C (14 to 104°F)	As per Vortex
Humidity		0-95%RH non-condensing	As per Vortex
Functional safety		Validated to IEC61508	Validated to IEC61508

## Compatible Detectors

### Gas Detectors



### Open Path Gas Detectors



### Flame Detectors



### Smoke and Heat Detectors



Crowcon reserves the right to change the design or specification of the product without notice.



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