- **Individual voltage free relay contacts**
- **Advanced digital readout**
- **User programmable**
- **Low power consumption**
- **Alarm inhibit during calibration**
- **Individual 4-20mA analogue outputs**
- **Extensive fault detection firmware**
- **Sealed to IP65 rating**
- **RS485 communications interface**
- **Remote reset and accept terminals**

Digital Signal Processing

Monicon have pioneered a novel approach to significantly reduce false alarms by processing the sensor signal through an advanced analysis program in the microprocessor. Monicon's digital signal processing algorithms are an innovative approach to compensate for the undesirable effects of RFI, Humidity changes, EMI, pressure changes, vibration and electrical noise.

Automatic self-test

The microprocessor implements a comprehensive self-test routine, continually monitoring the system's performance and functionality. The self-test routine examines the integrity of the system's electronic circuitry, system software, sensor cabling, sensor signal, ancillary cabling etc. In the unlikely event of a fault, the digital display will indicate the nature of the condition in a user-friendly diagnostic mode.

The Monicon 8 Channel Gas Monitor is an innovative, cost effective, wall mounted unit. It is designed to operate in conjunction with the T100 toxic gas detector and the highly successful CGS500 combustible gas sensor to monitor a range of toxic gases, combustible gases and oxygen in a wide range of applications. It will also operate with an IR80 infrared gas detector.

The 8 Channel Gas Monitor is also compatible with a wide range of third party 4-20mA transmitters including temperature probes. The gas concentration is indicated on a 4-digit, 7-segment display while another 2-character alphanumeric display indicates instrument status. A third display indicates the active channel.

Simple to use and microprocessor controlled, the 8 Channel Gas Monitor is menu assisted and user programmable for alarm setpoints, relay options, range, sensor type, gas type and many other parameters in a user friendly manner offering unique flexibility and control over the system.

The Monicon 8 Channel Gas Monitor is mains powered (230Vac standard, 110Vac optional) and has changeover circuitry to facilitate an external 12V rechargable battery and charger to be connected to ensure uninterrupted operation in the event of a mains power failure.

Careful product design and rigorous product testing combined with a stringent ISO9002 quality assurance program at Monicon's state-of-the-art manufacturing facility ensure ultimate reliability.

The Monicon 8 Channel Gas Monitor offers a robust, easy to use, cost effective approach to providing an effective gas monitoring system where safety matters.

8 Channel Gas Monitor Specifications

Mechanical Specifications

Height	230mm
Width	300mm
Depth	110mm
Weight	4.0Kg
Mounting holes	4 holes, Ø4.2mm, spaced at 200mm (vert) 288mm (horz)

Environmental Specifications

Operating temperature	-18˚C to +66˚C
Storage temperature	-40˚C to +66˚C
Humidity range	10%RH to 90%RH (Non-condensing)

Electrical Specifications

Supply voltage	230Vac (115Vac optional)
Power consumption	12W
Mains fuse	2A'T'
Transformer secondary fuse	2A'T' PCB mounted 5 x 20mm fuse
Battery fuse	2A'T' PCB mounted, 5 x 20mm fuse
Sensor cables	3 core, screened, $0.5mm^2$ to $1.5mm^2$
Relay contacts	SPDT, 250V, 3A each for prog. alarms, common & FAULT (6 relays)
Analogue outputs	4-20mA into maximum 250 Ω for each channel
RS485 operating mode	Slave mode, half duplex, polled
Max. units on RS485 loop	12 controllers (96 channels)
RS485 communications parameters	1200-N-8-1
RS485 error checking	1 byte checksum
Unit interrogation time	40mS
Battery operation time	7AH battery: typically 6 hours with 8 T100 detectors fitted
Battery voltage	12V
Recommended battery type	Sealed lead-acid
Combustible gas sensor type	Monicon CGS500 or compatible third-party sensor
Toxic gas sensor type	Monicon T100, or compatible 4-20mA transmitter
NDIR (infrared) sensor type	Monicon CGS500-IR or compatible third-party sensor
Stabilisation time	User selectable between 1 and 255 seconds
Annunciator output	2.5kHz, 84dB(A) @ 1m
Transient protection	PCB mounted Metal Oxide Varistor
Terminations	PCB headers & detachable terminal blocks up to for $1.5mm^2$ cable
Option setting	Digital setting (all options fitted as standard and user selectable)
Alarm setting	Digital setting (fully adjustable between 10% and 90% of full scale)
Alarm types	Energised/de-energised. Enrichment/deficiency. User selectable
Resolution	1%
Accuracy	5%
Full scale range	1.00 to 5000 (user selectable)
User variable storage	Non-volatile RAM (EEPROM)
Enclosure material	Two-piece, hinged, ABS or polycarbonate with neoprene gasket
Electromagnetic Conformance (EMC)	Complies with EN50081 and EN50082
Literature supplied	34-page detailed instruction manual with wiring diagram

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