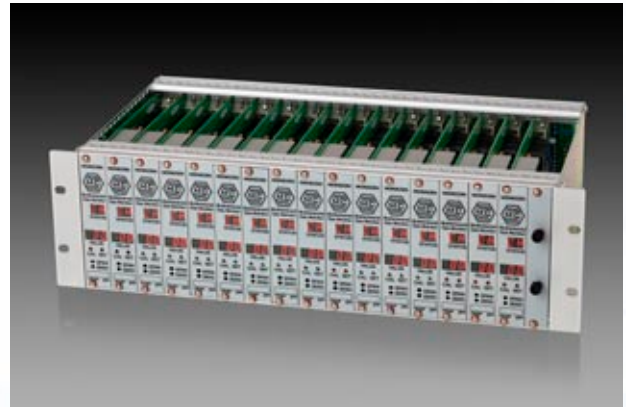- **Fully independent operation per channel**
- **Voltage free relay contacts (SPDT)**
- **Open collector outputs**
- **Advanced digital readout**
- **Fully user-programmable**
- **Low power consumption**
- **Digital Signal Processing algorhythm**
- **4-20mA Analogue Output**
- **RS485 serial data interface**
- **Extensive fault detection circuitry**
- **Up to 16 channels per "Eurorack"**

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 checks 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 Multichannel Gas Monitor is an innovative, cost effective, rack mounted system. Two control cards are available. Part number C25005 is designed for use with the T100 detector head while Part number C55005 control card is designed for use with the CGS500 or similar thermocatalytic sensor.

The Multichannel Gas Monitor is also compatible with a wide range of third party sensors and 4-20mA transmitters including temperature probes. The gas concentration is indicated on a 7-segment digital display while an alphanumeric display indicates instrument status.

Simple to use and microprocessor controlled, the Multichannel Gas Monitor is menu assisted and fully 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 control cards may be mixed in any combination in a single Eurorack. Inadvertent card transposition may be prevented by the use of special coding strips.

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

Multichannel Gas Monitor Specifications

Mechanical Specifications

Height	*112mm (4U version: 178mm)*
Width	*25mm*
Length	*222mm (4U version: 200mm)*
Weight	*300g (4U version: 330g)*
No. of channels per "Eurorack"	*Up to 16*

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	*20-35Vdc*
Supply current (per channel)	*Normal 80mA, Alarm 120mA @ 24Vdc*
Circuit protection	*Electronic current limiter, 1A PTCR device*
Relay contacts	*SPDT, 230Vac, 3A each for A1, A2 and A3 on each control card*
Analogue output	*4-20mA into maximum 500 Ohms (Current source default, current sink option)*
RS485 operating mode	*Slave mode, half duplex, polled*
Max. units on RS485 loop	*100*
RS485 communications parameters	*1200-N-8-1*
RS485 error checking	*1 byte checksum*
Unit interrogation time	*40mS*
Combustible gas sensor type	*Monicon CGS500 or compatible third-party thermocatalytic sensor*
Toxic gas sensor type	*Monicon T100, IR100 or compatible third-party 4-20mA transmitter*
Stabilisation time	*C25005 is variable 1-250 seconds; C55005 is fixed at 30 seconds*
Transient protection	*PCB mounted Metal Oxide Varistor*
Terminations	*32-way F-type connector to DIN41612 standard*
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	*C25005 is user programmable; C55005 is fixed at 100% LEL*
User variable storage	*Non-volatile RAM (EEPROM)*
Electromagnetic Conformance (EMC)	*Complies with EN50081 and EN50082*
Literature supplied	*34-page detailed instruction manual with wiring diagram*

Available Signals

4-20mA Analogue Output
RS485 Serial data interface
Voltage-Free Relay Contacts for A1, A2 & A3/FAULT
Open-Collector Outputs for A1, A2 & A3/FAULT
Open-Collector Outputs for Mimic Panel (A1 and A2)
Open-Collector Output to indicate CALIBRATION mode
Open-Collector Output to indicate Unaccepted Alarm
Inputs for MASTER RESET and ACCEPT Signals