



Single Channel Controller

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



Features

- Voltage free relay contacts
- Advanced digital readout
- User programmable
- Low power consumption
- Built-in battery backup circuit
- Alarm inhibit during calibration
- 4-20mA analogue output
- Extensive fault detection firmware
- Sealed to IP65 rating

The Single Channel 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 4-digit, 7-segment display while another 2-character alphanumeric display indicates instrument status.

Simple to use and microprocessor controlled, the Single Channel 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.

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 radio frequency interference, Humidity changes, electro-magnetic interference, pressure changes, vibration and electrical noise.

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 Single Channel Gas Monitor has a built-in battery trickle charger circuit and an optional 12V, 1.2AH rechargeable battery (sealed lead-acid type) may be fitted inside the enclosure to ensure uninterrupted operation in the event of a mains power failure.

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

Mechanical Specifications

Height	160mm
Width	240mm
Depth	90mm
Weight	3Kg (including optional 1.2AH battery, if fitted)
Mounting holes	4 holes, Ø4.2mm, spaced at 130mm (vert) 228mm (horz)

Environmental Specifications

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

Electrical Specifications

Supply voltage	230Vac (115Vac optional)
Power consumption	5W
Mains fuse	1A T
Transformer secondary fuse	1.6A PCB mounted, auto reset, PTC fuse
Battery fuse	1.6A PCB mounted, auto reset, PTC fuse
Sensor cables	3 core, screened, 0.5mm ² to 1.5mm ²
Relay contacts	SPDT, 250V, 3A each for A1, A2, A3 and FAULT (total of 4 relays)
Analogue output	4-20mA into maximum 500 W (current "source", ground referenced)
Battery operation time	Typically 4 hours with fully charged 1.2AH battery (T100 sensor)
Battery voltage	12V
Battery type	Sealed lead-acid
Combustible gas sensor type	Monicon CGS500 or compatible third-party thermocatalytic sensor
Toxic gas sensor type	Monicon T100, IR80 or compatible third-party 4-20mA transmitter
Stabilisation time	User selectable between 1 and 250 seconds
Annunciator output	2.5kHz, 84dB(A) @ 1m
Transient protection	PCB mounted, 7 Joule, Metal Oxide Varistor
Terminations	PCB mounted terminal blocks to accept 1.5mm ² cable
Option setting	Digital setting (all options fitted as standard and user selectable)
Alarm setting	Digital setting (fully adjustable between zero and 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

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