

S500L-OSV-832 CFC Gas Monitor

Features

- Microprocessor based
- 4-20mA Analogue Output
- Voltage free relay contacts
- RS485 digital interface
- Alphanumeric dot-matrix display
- "One Person" calibration
- Small size
- Certified ATEX II 2 G Exd IIC T6
- Low power consumption
- Standalone operation

The Monicon S500L-OSV-832 is a self contained, intelligent gas sensor that offers a host of sophisticated features to provide fast, reliable warnings against concentrations of chlorofluorocarbon and fluorocarbon gases (CFC's) including R12, R22, R134a, R410 and R1234yf.

The S500L-OSV-832 will operate as a standalone instrument or in conjunction with a controller or a computer. The S500L-OSV-832 is housed in an attractive, compact enclosure and may be configured or calibrated by one person, without de-classifying the hazardous area. The gas concentration is indicated on a 4 character alphanumeric display which also indicates instrument status. The S500L-OSV-832 is user programmable and no physical adjustments are necessary during calibration as the on-board computer assists the calibration procedure. All user variables are stored in non-volatile memory (EEPROM) and retained indefinitely even during total power failure.

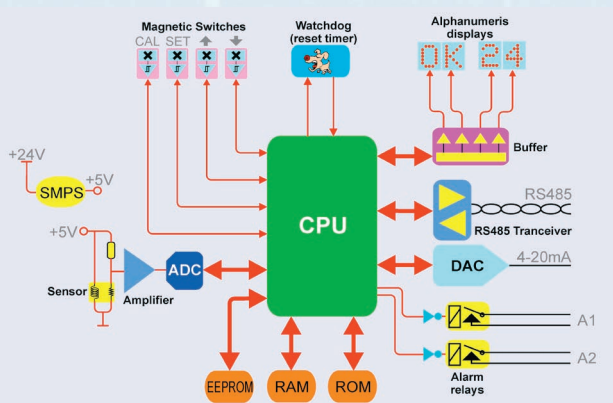


Typical Applications for the S500L-OSV-832

- Chemical processing
- Chemical storage
- Solvent storage
- Laboratories
- Plastics manufacture
- Packaging manufacture
- Insulation manufacture
- Refrigeration
- Aerosol manufacture

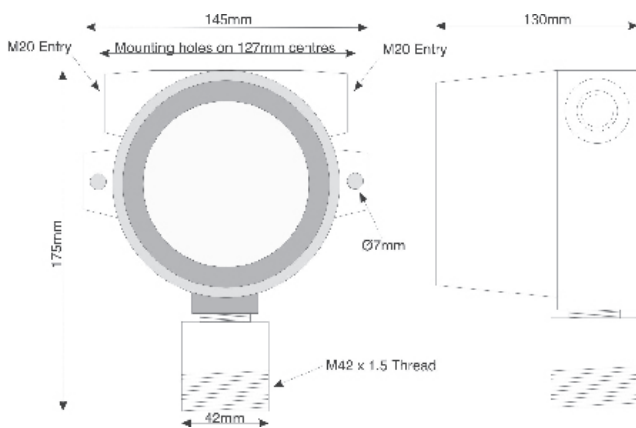
The S500L-OSV-832 uses a semiconductor gas sensor combined with advanced, surface-mount microprocessor and firmware technology. Gases and vapours being adsorbed onto the surface of a heated semiconductor element causes the electrical resistance of the semiconductor to change. This resistance change is measured, processed and linearised by the on-board CPU to give a signal proportional to the gas concentration. A watchdog circuit monitors the system operation and resets the CPU if a failure is detected.

The S500L-OSV-832 is calibrated or user-programmed by activating the magnetic switches with a magnet. The operator is then guided through a variety of options by a user-friendly menu. The CPU constantly verifies system operation. In the unlikely event of a fault, the operator is alerted with a helpful diagnostic display.



S500L-OSV-832 Specifications

Supply voltage	Nominal 24Vdc (operates from 20Vdc to 35Vdc)
Power consumption	2W nominal, 2.3W maximum
Circuit protection	Electronic current limiter, 1.5A auto-reset
Transient Protection	PCB mounted, 3 Joule, Metal Oxide Varistor
Analogue output	4-20mA current source referenced to 0V
Analogue output load	500 Ohms maximum
Operating temperature	-10°C to +40°C
Storage temperature	-40°C to +66°C
Humidity range	20%RH to 80%RH (Non-condensing)
Preconditioning Requirements	Operational: 30 seconds, Specification: 24 hours
Full-Scale range	R22: 0-2000ppm, R134a: 0-3000ppm, R12: 0-5000ppm, R1234yf, R410: 2000ppm
Full-Scale range	R449a: 0-2000ppm,
Full-Scale range	Tetrachloroethylene 0-1000ppm (T90 = 4 minutes)
Response time (T90)	Typically <90 seconds (except tetrachloroethylene)
Linearity	±5%
Repeatability	±2%
Resolution	2%
Sensor life	Typically 3-5 years
Weight	2.0Kg (including sensor)
RS485 operating mode (optional)	Slave mode, half duplex, polled
Max. units on RS485 loop	100
RS485 comm parameters	1200-N-8-1
RS485 error checking	1 byte checksum
Unit interrogation time	40mS
Relay contacts	SPST, NO, 125V @ 0A5 (30V DC @ 1A) each for A1 & A2
Option setting	Digital setting (all options fitted as standard and user selectable)
Alarm setting	Digital setting (adjustable between 10% and 90% of full scale)
Alarm types	Energised/de-energised. Enrichment/deficiency. User selectable
ATEX certification	II 2 G Exd IIC T6 Tamb -20°C to +60°C (Certificate number Baseefa 08ATEX0056)
Recommended calibration flow rate	500mL per minute
Mounting holes	2 holes, diam 7mm, spaced 127mm
User variable storage	Non-volatile RAM (EEPROM)
Electromagnetic Conformance (EMC)	Complies with EN50081 and EN50082
Cable gland entries	2 entries, each M20 x 1.5
Terminations	PCB mounted terminal blocks to accept 1.5mm ² cable



Warning!

The CGS500-OSV sensor utilises a semiconductor absorption element, sensitive to moisture/water vapour and may be damaged if not powered.

Always ensure that semiconductor sensors are capped/sealed from air if unpowered

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