

## 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-VQ101 is a self contained, intelligent gas sensor that offers a host of sophisticated features to provide fast, reliable warnings against concentrations of hydrogen sulphide (H<sub>2</sub>S) .

The S500L-VQ101 will operate as a standalone instrument or in conjunction with a controller or a computer. The S500L-VQ101 is housed in an attractive, compact enclosure and may be configured or calibrated by one person, without declassifying the hazardous area.

The gas concentration is indicated on a 4 character alphanumeric display which also indicates instrument status. The S500L-VQ101 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.

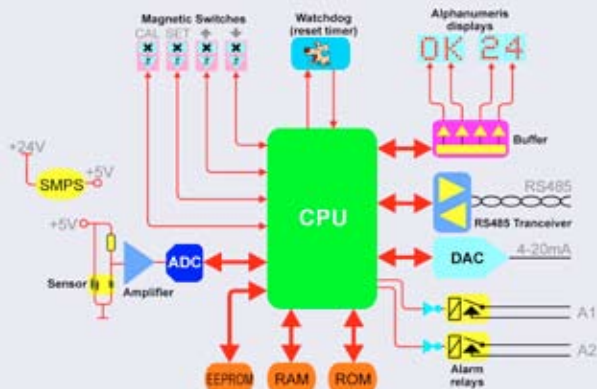
## Typical Applications for the S500L-VQ101

- Chemical plants & refineries
- Drilling rigs & platforms
- Sulphur removal & recovery
- Well head sites
- Mud-logging operations
- Oil & gas production platforms
- Gas collection & distribution facilities
- Waste water treatment facilities
- Paper mills
- Tanneries
- H<sub>2</sub>S based heavy water production

The S500L-VQ101 uses a solid state gas sensor combined with advanced, surface-mount microprocessor and firmware technology.

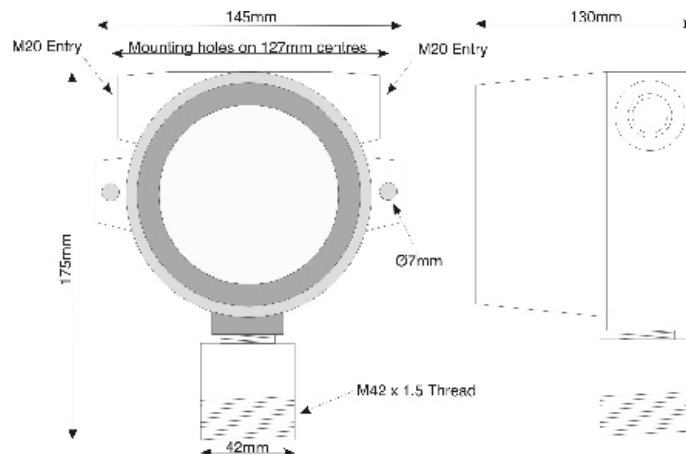
Hydrogen sulphide being adsorbed onto the surface of a heated solid state element causes a change in the electrical output of the sensor element. This electrical change is measured, processed and linearised by the on-board CPU to give a signal proportional to the gas concentration. A watchdog circuit monitors the system operation and resets the CPU if a failure is detected.

The S500L-VQ101 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-VQ101 Specifications

<b>Supply voltage</b>	<i>Nominal 24Vdc (operates from 20Vdc to 35Vdc)</i>
<b>Power consumption</b>	<i>2W nominal, 2.3W maximum</i>
<b>Circuit protection</b>	<i>Electronic current limiter, 1.5A auto-reset</i>
<b>Transient Protection</b>	<i>PCB mounted, 3 Joule, Metal Oxide Varistor</i>
<b>Analogue output</b>	<i>4-20mA current source referenced to 0V</i>
<b>Analogue output load</b>	<i>500 Ohms maximum</i>
<b>Operating temperature</b>	<i>-20°C to +60°C</i>
<b>Storage temperature</b>	<i>-40°C to +66°C</i>
<b>Humidity range</b>	<i>20%RH to 80%RH (Non-condensing)</i>
<b>Preconditioning Requirements</b>	<i>Operational: 30 seconds, Specification: 24 hours</i>
<b>Full-Scale range</b>	<i>H<sub>2</sub>S 100ppm</i>
<b>Response time (T90)</b>	<i>Typically &lt;60 seconds</i>
<b>Linearity</b>	<i>±5% (@50% RH and 20°C)</i>
<b>Repeatability</b>	<i>±2% of FSD (@50% RH and 20°C)</i>
<b>Resolution</b>	<i>2% of FSD (@50% RH and 20°C)</i>
<b>Sensor life</b>	<i>Typically 3-5 years</i>
<b>Weight</b>	<i>2.0Kg (including sensor)</i>
<b>RS485 operating mode (optional)</b>	<i>Slave mode, half duplex, polled</i>
<b>Max. units on RS485 loop</b>	<i>100</i>
<b>RS485 comm parameters</b>	<i>1200-N-8-1</i>
<b>RS485 error checking</b>	<i>1 byte checksum</i>
<b>Unit interrogation time</b>	<i>40mS</i>
<b>Relay contacts</b>	<i>SPST, NO, 125V @ 0A5 (30V DC @ 1A) each for A1 &amp; A2</i>
<b>Option setting</b>	<i>Digital setting (all options fitted as standard and user selectable)</i>
<b>Alarm setting</b>	<i>Digital setting (adjustable between 10% and 90% of full scale)</i>
<b>Alarm types</b>	<i>Energised/de-energised. Enrichment/deficiency. User selectable</i>
<b>ATEX certification</b>	<i>II 2 G Exd IIC T6 Tamb -20°C to +60°C (Certificate number Baseefa 08ATEX0056)</i>
<b>Recommended calibration flow rate</b>	<i>500mL per minute</i>
<b>Mounting holes</b>	<i>2 holes, diam 7mm, spaced 127mm</i>
<b>User variable storage</b>	<i>Non-volatile RAM (EEPROM)</i>
<b>Electromagnetic Conformance (EMC)</b>	<i>Complies with EN50081 and EN50082</i>
<b>Cable gland entries</b>	<i>2 entries, each M20 x 1.5</i>
<b>Terminations</b>	<i>PCB mounted terminal blocks to accept 1.5mm<sup>2</sup> cable</i>
<b>Enclosure material</b>	<i>Aluminium pressure die-casting, chromated with blue epoxy finish</i>



**Monicon Technology Ltd**  
**Ballybrit Industrial Estate**  
**Monivea Road**  
**Galway**  
**Ireland**

Tel: +353 91 752884  
 Fax: +353 91 752886  
 e-mail: sales@monicon.com  
 web-site: www.monicon.com