

## 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-826 is a self contained, intelligent gas sensor that offers a host of sophisticated features to provide fast, reliable warnings against concentrations of ammonia ( $NH_3$ ).

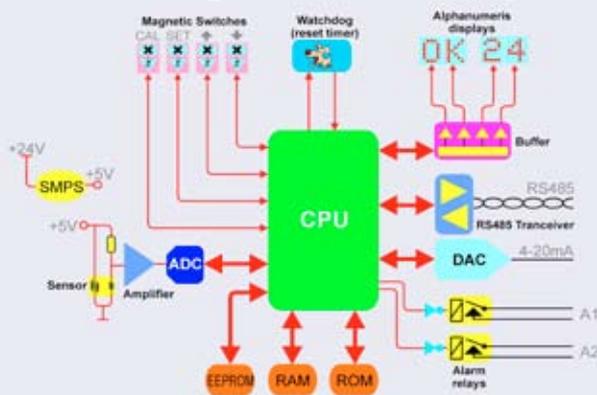
The S500L-OSV-826 will operate as a standalone instrument or in conjunction with a controller or a computer. The S500L-OSV-826 is housed in an attractive, compact enclosure and may be configured or calibrated by one person, without de-classifying the hazardous area. The gas concentration is indicated on a 4 character alphanumeric display which also indicates instrument status. The S500L-OSV-826 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-826

- **Chemical processing**
- **Chemical storage**
- **Laboratories**
- **Refrigeration plants**
- **Ammonia manufacture**

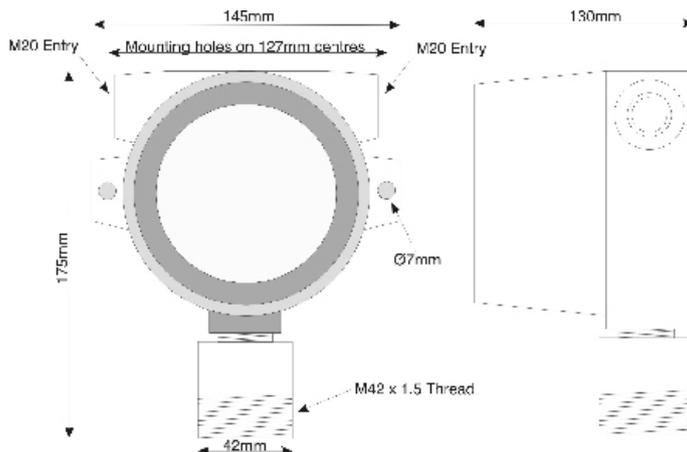
The S500L-OSV-826 uses a semiconductor gas sensor combined with advanced, surface-mount microprocessor and firmware technology. Gases and vapours being adsorbed onto the surface of a heated semiconductor element causes the electrical resistance of the semiconductor to change. This resistance change is 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-826 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-826 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 +50°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>NH<sub>3</sub> 500ppm</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>



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