Pranalytica, Inc.
An ISO 9001 Certified Company

NITROLUX®-S

Pranalytica's Source Level Ammonia Sensor

Nitrolux®-S is Pranalytica ambient level ammonia sensor designed for measurement of ammonia concentrations near the sources of ammonia emanations such agricultural and animal farms. The Nitrolux®-S is compact, lightweight semiconductor laser based ammonia sensor that has a very low electrical power consumption that makes it ideal for internal battery operation where utility electrical power is not available. The Nitrolux®-S can also be operated from an optional solar panel, which can also be used for recharging the batteries. In this configuration the Nitrolux®-S will operate in remote areas without operator attention. Two additional options that make the Nitrolux®-S a very versatile sensor are a GPS receiver to continually monitor the Nitrolux®-S location and wireless connectivity for remote operation. The Nitrolux®-S is housed in a NEMA-4 cabinet, which, once closed, provides protection from rain, dust, etc. characteristic of field measurements while the Nitrolux®-S continues to provide the ammonia concentration measurements.

NITROLUX®-S

- Number of cells — One
- Minimum detectivity — 40 parts-per-billion (ppb) of ammonia
- Measurement time — 120 seconds
- Response time — 2 measurement cycles (0-90% change)
- Selectivity — No interference, at 40 ppb level, from other ammonium containing compounds, hydrocarbons, hydrogen sulfide, sulfur dioxide, water and NO_X
- Linearity — ±10% of full scale (up to a maximum of 500 ppm)

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• Precision	40 parts-per-billion or 10% of the reading (whichever is greater)
• Zero drift	±40 parts-per-billion per week (non-cumulative)
• Span drift	±10% of full scale per month (non-cumulative)
• Control processor	Pentium class microcomputer (self-contained 750 MHz processor board)
• Operating system	LINUX for high reliability
• Data storage	Completely solid state memory for crash-proof reliability; User data storage capacity for ~ 1 year; Extended data storage capable of storing user data for ~4 years is available (Option EDS)
• Alarm settings	User selectable and programmable
• Display	Numerical display showing date, time and measured ammonia concentration, alarm settings and status Graphical display (Option DS) showing ammonia concentration as a function of time and location (GPS option GP1) and provides the capability for programming alarms settings, etc
• Data output	USB key Internet connection via Ethernet Wireless connectivity (Option WS)
• Gas handling	Direct measurement of ammonia, no conversion or preconcentration required
• Vacuum pump	Internal with gas flow of ~100 cc/min
• Special gas needs	None
• Electrical power supply needs	18 V DC, 6A (power converter supplied); Battery pack (Option BP) will operate the sensor for eight hours; Solar panel (Option SP) for operation and recharging the optional battery pack when no line power available
• Electrical power consumption	45 W average in continuous operation
• Size	16.2” W x 6.6” H x 12.7” D
• Weight	30 lbs (including batteries, Option BP); 22 lbs (without batteries)
• Environmental protection	NEMA 4 enclosure (sensor operational with cover closed, waterproof)

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