

DI-COM

Single Point Continuous H₂S Perimeter Monitor



APPLICATIONS

- Perimeter monitoring
- Nuisance odor monitoring
- Remote air monitoring
- Ambient air analysis
- Regulatory compliance

OPTIONAL ACCESSORIES

- Wireless module with antenna
- Solar power
- Central computer and proprietary software to accept data from 1 to 15 systems
- Calibration gas kit to calibrate at 0.5 ppm, and for bump tests

FEATURES

- Detection range of 5 ppb to 2 ppm
- Real-time Hydrogen Sulfide data
- 4-20 milliAmp output
- Datalogging
- Wind speed and wind direction monitoring
- Digital display for field viewing

The Detection Instruments' DI-COM H₂S monitor is designed for continuous monitoring and recording of low level H₂S emissions. The monitor is housed inside a NEMA 4X weatherproof enclosure and uses advanced OdaLog technology to provide continuous real-time data. The OdaLog displays the data for field viewing, provides a 4 to 20 mA signal and also stores the data for later downloading and viewing using the OdaStat software. A weather station measures wind speed, direction, and outside temperature.

Small and compact, the system can easily be moved and installed at different locations.

The monitor is powered by AC current and provides the 4 to 20 mA signal to a central location. A wireless module with antenna is also available for communication to a central computer. In cases where AC power is not available, we supply a solar panel with back up battery to power the system.

The system is simple to operate and can be calibrated in the field with our calibration gas kit. The calibration procedure takes approximately fifteen minutes to complete.

DETECTION
INSTRUMENTS
Corporation

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The monitor provides real-time data via a 4 to 20 milliAmp signal. The data can be transmitted using a wireless module to a central computer, which can monitor up to fifteen systems. Hydrogen sulfide and temperature data can also be stored and viewed using OdaStat software.

The screenshot shows a software window titled "Detection Instruments, Naiaid Monitor" with a menu bar (File, View, Setup, Help). The main area displays a data table with columns for LOCATION, DATE, TIME, H2S (PPM), INT TEMP (C), WIND (MPH), WIND DIR, EXT TEMP (C), and WARNINGS. The data is organized into sections for "East Side Treatment Plant" and "#2 North", each with a "Change" button. The table contains 48 rows of data, with the last two rows (10/04/05 23:30 and 10/04/05 23:00) highlighted in red and labeled "Temperature Action Level" in the warnings column.

East Side Treatment Plant			#2 North			30 Minute Period		
LOCATION	DATE	TIME	H2S (PPM)	INT TEMP (C)	WIND (MPH)	WIND DIR	EXT TEMP (C)	WARNINGS
#2 N	10/05/05	14:30	.005	15	8	50	22	
#2 N	10/05/05	14:00	.000	15	9	45	22	
#2 N	10/05/05	13:30	.005	14	10	35	21	
#2 N	10/05/05	13:00	.005	14	14	45	21	
#2 N	10/05/05	12:30	.010	14	8	50	20	
#2 N	10/05/05	12:00	.005	14	15	45	21	
#2 N	10/05/05	11:30	.010	13	10	35	20	
#2 N	10/05/05	11:00	.005	13	6	45	17	
#2 N	10/05/05	10:30	.005	13	15	35	17	
#2 N	10/05/05	10:00	.005	13	6	45	17	
#2 N	10/05/05	09:30	.005	12	12	40	15	
#2 N	10/05/05	09:00	.000	12	13	50	15	
#2 N	10/05/05	08:30	.005	12	5	10	15	
#2 N	10/05/05	08:00	.005	11	0	-	12	
#2 N	10/05/05	07:30	.010	11	4	50	13	
#2 N	10/05/05	07:00	.005	11	9	45	13	
#2 N	10/05/05	06:30	.005	10	6	20	12	
#2 N	10/05/05	06:00	.000	10	0	-	11	
#2 N	10/05/05	05:30	.005	10	4	40	10	
#2 N	10/05/05	05:00	.005	10	6	45	9	
#2 N	10/05/05	04:30	.005	9	8	50	9	
#2 N	10/05/05	04:00	.000	9	12	45	7	
#2 N	10/05/05	03:30	.005	8	10	35	7	
#2 N	10/05/05	03:00	.010	8	6	45	5	
#2 N	10/05/05	02:30	.010	7	8	50	4	
#2 N	10/05/05	02:00	.005	7	9	45	3	
#2 N	10/05/05	01:30	.010	6	10	35	3	
#2 N	10/05/05	01:00	.005	5	6	45	2	
#2 N	10/05/05	00:30	.015	5	9	35	2	
#2 N	10/04/05	00:00	.020	4	6	45	3	Temperature Action Level
#2 N	10/04/05	23:30	.025	5	8	50	3	Temperature Action Level
#2 N	10/04/05	23:00	.000	6	9	45	3	
#2 N	10/04/05	22:30	.005	7	10	35	5	
#2 N	10/04/05	22:00	.010	5	6	45	5	
#2 N	10/04/05	21:30	.010	8	8	50	5	
#2 N	10/04/05	21:00	.005	8	9	45	7	
#2 N	10/04/05	20:30	.010	9	10	35	7	
#2 N	10/04/05	20:00	.005	9	6	45	6	
#2 N	10/04/05	19:30	.010	10	9	35	8	
#2 N	10/04/05	19:00	.015	11	6	45	10	

Example of Compiled Data using DI-COM Software

SPECIFICATIONS

Monitoring device:	OdaLog CEM 52
Resolution:	0.001 ppm
Measurement range:	0.005 - 2.00 ppm
Precision:	5% Relative Standard Deviation
Accuracy	+/- 5 ppb below 0.1 ppm; +/- 5% from 0.1 - 2 ppm
Flow rate	0.15 lpm
Maintained temperature range	75° - 90° F
Power	115 Vac
Enclosure	NEMA 4X
Dimensions	16" x 8" x 9"
Datalogging	10 to 60 minutes, user selectable
Weight	24 pounds
Warranty	One year, factory parts and labor

DI-COM

Single Point Continuous Hydrogen Sulfide Perimeter Monitor Specifications

System Specifications

Maintained Temperature Range:	40 degree F, minimum
Power:	115 VAC, single phase, 25W, or solar cell 20 amp hour reserve power
Circulating Fan:	0.05 Amps
Vent Fans:	0.10 Amps
Heater:	Varied, dependent on environmental conditions
Control Board:	50 mA
Enclosure:	NEMA 4X, locking
Dimensions:	20 x 16 x 8
Weight:	24 pounds

Instrument Specifications

Monitoring Device:	OdaLog CEM 52
Resolution:	0-.001 PPM
Measurement Range:	0.005 - 2.00 PPM
Precision:	5% Relative Standard Deviation
Accuracy:	+/- 5 PPB below 0.1 PPM; +/- 5% from 0.1 - 2 PPM
Flow Rate:	0.15 LPM
Logging Frequency:	10 to 60 minutes, user selectable
Memory Capacity:	30,000 data points
Output:	4 to 20 milliAmp
Weight:	2 pounds

Optional Central Communication Computer

System Requirements	Windows operating system on dedicated computer Voice Modem for optional telephone notification Free serial port, Base Station Transceiver
Communications Parameters	9600 Baud, 8 data bits, no parity, 1 stop bit, no handshaking Pasive 4 to so millAmp Loop
Logging/Sampling Interval	10 minutes to 1 hour

Specification, XStream X09-009PKC-R RF Modem

Performance

Power Output:	100 mW (20 dBm)
Indoor/Urban Range:	up to 1500' (450m)
Outdoor/RF Line-of-sight Range:	up to 20 miles (32 km)
Receiver Sensitivity:	-110 dBm (@ 9600 bps)
RF Data Rate:	9.6 Kbps
Interface Data Rate:	up to 57.6 Kbps

Networking

Spread Spectrum Type:	FHSS (Frequency Hopping Spread Spectrum) Peer-to-peer, point-to-point
Supported Network Topologies:	point-to-multipoint & multidrop
Error Handling:	Retries & acknowledgements
Filtration Options:	VID (Vendor ID Number), channels and addressing
Channel Capacity:	7 hop sequences share 25 frequencies
Addressing:	65,000 network addresses available for each channel

Power

Supply Voltage:	7 - 18 V
Transmit Current:	170 mA
Receive Current:	70 mA
Power-down Sleep Current:	< 1 mA

General

Frequency Band:	902 - 928 MHz
Data Connection:	Female DB-9

Physical Properties

Size:	2.750" x 5.500" x 1.125" (6.99cm x 13.97cm x 2.86cm)
Weight:	7.1 oz (200g)
Antenna Options:	RPSMA (Reverse Polarity SMA)
Operating Temperature:	0 to 70° C (commercial)

Certifications:

FCC:	OUR9XSTREAM
IC:	4214A-9XSTREAM
Class 1 Division 2:	Approved

