

Bid Specifications: CW Sentry™ Chemical Warfare Agent Detector

PHYSICAL CHARACTERISTICS

Size	Unit shall not exceed 20"W x 25"H x 10"D in total size.
Weight	Unit shall not exceed 40 lbs.
Enclosure Type	The enclosure shall be fiberglass.

OPERATION

Sensor Capacity	The unit shall have the capacity to detect for: <ul style="list-style-type: none">• Chemical Warfare Agents utilizing SAW technology• Toxic Gases utilizing Electrochemical sensor technology
Wired Interface	Shall utilize RS-232 communication.
System Power Requirements	The system shall operate on 90-240 VAC, 50/60 Hz power (60 watts).

CHEMICAL WARFARE AGENT DETECTOR

CWA Detector Specifications	Gas Type	Minimum Detectability
	Nerve Agents (GA Tabum, GB Sarin, GD Soman, GF Cyclosarin)	<0.5 mg/m ³
	Blister Agents (HD Sulfur Mustard and HN-3 Nitrogen Mustard)	<2 mg/m ³
Technology	CWAs shall be detected using the Surface Acoustic Wave Microsensor Array Technology (SAW)	
Selectivity	The CWA detector shall provide high selectivity of CWA agents, identifying Nerve (G) or Blister (H) agents, preventing misleading warnings to preclude unnecessary false positive readings.	
Analysis Time	The CWA detector shall perform analysis sample within 30 seconds.	

TOXIC INDUSTRIAL COMPOUNDS

Technology	Toxic Industrial Chemicals (TIC's) shall be measured using an array of 4 electrochemical sensors.	
TIC Detection	Toxic Industrial Chemicals (TIC's) shall be reported by classification of gas (Hydrid, Halogen, Blood, and Choke).	
TIC Alarm Thresholds	Gas Type	Alarm Threshold
	Hydrogen Cyanide (Blood Agent)	5.0 PPM
	Phosgene (Choke Agent)	0.3 PPM
	Hydrid Gas	0.5 PPM
	Halogen Gas	10.0 PPM
Analysis Time	The Echem Sensors shall perform analysis sample within 5 seconds.	

SENSING TECHNIQUE

Pump	The system shall have the ability to use a sample draw to pull a sample into the enclosure and across each of the sensors.
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MAINTENANCE REQUIREMENTS

Maximum System Maintenance	The system shall require periodic checking of sensor response to a known concentration of gas and periodic checks on the chemical warfare agent pump and smart sensor pump, when applicable.
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USER INTERFACES

Communication	Unit shall communicate to a computer command center or an alternate communication host within a network.
Graphical User Interface	Unit shall provide data for alarm status, fault conditions, and threshold readings.

CALIBRATION REQUIREMENTS

CWA and TICs	No calibration shall be required. Units shall be able to simulate alarm conditions to test.
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ENVIRONMENTAL

Temperature	-20° to +50°C (-4° to +122°F)
Humidity	Operating Humidity range 0-95% RH, non-condensing

WARRANTY

Base Unit and Sensors	Instrument shall have one year parts and labor standard warranty with extended five year warranty available.
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