Site Sentinel
SmartWireless® Gas Detection Technology for Today’s Industrial Environment
**CXT Sensor Assemblies**

Detcon’s Model CXT is a compact, low powered, 2.4GHz wireless sensor that detects for dangerous and harmful combustible and toxic gases. This environmentally bulletproof gas detector has a built-in display and is powered by either rechargeable or disposable batteries.

**CX Sensor Assemblies**

The Model CX is a wired version of the Model CXT that can be used with Detcon’s SmartWireless® Site Sentinel CX/CXT Controllers as well as other Detcon control systems. Standard outputs include 4-20 mA, and RS-485 Modbus.

**Detectable Gases**

- Combustible Hydrocarbons
- Acetylene C2H2
- Ammonia NH3
- Arsine AsH3
- Bromine Br2
- Butadiene C4H6
- Carbon Monoxide CO
- Chlorine CL2
- Chlorine Dioxide CLO2
- Diborane B2H6
- Ethanol C2H5OH
- Ethyl Mercaptans C2H5SH
- Ethylene C2H4
- Ethylene Oxide C2H4O
- Fluorine F2
- Formaldehyde CH20
- Germane GeH4
- Hydrazine N2H4
- Hydrogen H2
- Hydrogen Bromide Hbr
- Hydrogen Chloride HCL
- Hydrogen Cyanide HCN
- Hydrogen Fluoride HF
- Hydrogen Sulfide H2S
- Methanol CH30H
- Methyl Mercaptan CH3SH
- Nitric Oxide NO
- Nitrogen Dioxide NO2
- Oxygen Deficiency O2
- Ozone O3
- Phosphine PH3
- Silane SiH4
- Sulfur Dioxide SO2

**Description**

Detcon’s advanced SmartWireless® Site Sentinel is a lightweight, stand-alone transportable wireless gas detection system that can be fitted with either one, or a combination of electrochemical and infrared sensors to monitor toxic gases and/or combustible hydrocarbons in heavy industrial environments. Designed for reliability in rugged environments, each system includes a tripod, network HMI, gas detection sensor(s), and alarm warning devices. An optional Sentinel SiteWatch provides remote access to system data via Ethernet or cellular communication. Power to the sensor assembly is supplied by a rechargeable Smart Battery Pack, disposable batteries or directly from HMI. Flexible and expandable, a Site Sentinel network can include up to 32 devices and consist of any combination of wireless and/or wired sensors, one or more HMI panels and optional solar panels. Additional sensors and/or remote alarm stations on tripods can be added as needed to assure widespread alert to site personnel.
**Network Operability**

All CXT-Series gas detectors use an innovative “Self-Healing Mesh Network” topology. Standard network configuration is of the master/slave type. An optional and proprietary technology referred to as “Fault Tolerant Safety Network” is also available which guarantees that no single point of failure will interrupt communications between devices on the rest of the network, including loss of HMI.

**Solar Power Options**

Detcon SmartWireless® devices can use line or battery power. Battery power runtimes can be extended indefinitely by using one of several solar power options.

- 1.5 W and 3 W (Class I, Division 1)
- 5W, 10W, 20W, 30W, and 40W (Class I, Division 2)

**Alarm Stations**

Alarm relay options include adjustable set points and latching/non-latching relays. Alarm level 2 can be configured for acknowledge/silence via operator interface at the SmartWireless™ HMI display panel.

- Class I, Div1 & Class I, Div2 options
- Smart rechargeable battery packs
- Optional solar charging panel

**HMI Panel**

- Up to 32 Devices, Wired or Wireless
- NEMA4X Division 1 and Division 2 Packages Available
- Configurable up to eight zones
- Alarm & Fault Condition LEDs
- Display Indicates: Field Device Location, Alarm Status, Channel, Gas Reading, Battery Life & Link Signal Strength

**Wired or Wireless Configuration Options**

Detcon Site Sentinel allows for the extensive use of wireless as well as wired device configurations bringing unparalleled flexibility for quick set up and deployment.

- Wireless
- Wired 4-20 mA
- Wired RS-485 Modbus
- Line Power
- Battery Power
- Solar and Battery/Solar
**SmartWireless® Network Configuration Tool**

The Detcon SmartWireless® configuration tool is used to identify and establish network members and create specific field device functions for the fault tolerant safety network. The auto configuration feature provides field device search and find capability that simplifies network set up and commissioning.

- 10.1” Touch Panel LCD
- USB Wireless Interface

**Sentinel SiteWatch Remote Monitor**

Sentinel SiteWatch is an advanced networking device that provides remote access to any Detcon gas detection systems via Ethernet or cellular communication. The Sentinel SiteWatch Ethernet version provides an IP addressed webpage that can be accessed via any web browser and both the Ethernet and Cellular versions provide automated emails for all alarm and fault conditions instantaneously.

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**Specifications** *(Abbreviated - See Specific Product Data Sheets for Full Specifications)*

### CX & CXT Sensor Assemblies

- **Sensor Type**: Electrochemical for Toxics and Oxygen
- **Non-dispersive Infrared Optical (NDIR)** - Combustible Gas
- **Sub-miniature Plug-in Field Replaceable**

### Input/Output

- 2.4GHz DSSS Radio Transmission (CXT)
- 4-20 mA and RS-485 Modbus (CX)

### Power Input

- Disposable Battery Pack - up to 90 days operation (CXT)
- Rechargeable Smart Battery Pack - up to 180 days operation (CXT)
- 9-30 VDC (CX)

### Electrical Classification

- (Designed to) Class I; Division 1; Groups D, C
- Class I; Division 2; Groups A, B, C, D
- NEMA4 General Purpose

### HMI Panel

- **Capacity**: Up to 32 Input Devices
- **Display**: 1 1/4” x 6” Backlit LCD

### Electrical Classification (Designed to)

- Class I; Division 1; Groups D, C
- Class I; Division 2; Groups A, B, C, D

- **Internal**: Rechargeable Smart Battery (up to 60 days operation)

### Operating Temperature Range

- -20°C to +70°C; -4°F to +158°F

### Alarm Stations

- **Input Voltage**: 24VDC
- **Electrical Classifications Available**
  - Class I; Div 1; Groups C, D
  - Class I; Div 2; Groups A, B, C, D

- **Sound Output**: 104dB @ 1m (1kHz) (Div2 Version)
  - 110dB @ 1m (1kHz) (Div1 Version)

- **Tones**: On-board choice of 15 tones (Div2 Version)
  - 32 Selectable (Div1 Version)

- **Strobe Colors**: Amber, Blue, Clear, Green, Red (Div2 Version)
  - Amber, Blue, Clear, Green, Opal, Red, Yellow (Div1 Version)

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**Network Configuration Tool**

- **Display**: 10.1” Wide (LED Backlit, 1366x768) Dual Bonded
- **Processor/Cache**: Intel Atom Z670 processor (1.5 Ghz)
- **Inputs**: Touch (Capacitive Multi-Touch) and Pen (Active Stylus)
- **Input Voltage**: 100-240VAC~1.5A, 50-60Hz
- **Lithium-Ion Battery with 43WhR capacity (up to 8 hours)**

### Operating Temperature Range

- 41ºF to +109ºF, +5°C to +43°C

### Battery Options

- **Power Rating**: 13.2 AH
- **Watt-hour Rating**: 146 WH

### Operating Temperature Range

- -20°C to +70°C; -4°F to +158°F

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**Solar Power Options**

- **Electrical Classification**: 1.5 and 3 Watt - Class I; Div 1 Groups C, D
- 5, 10, 20 and 40 Watt - Class I, Div2

### Sentinel SiteWatch

- **Signal Input**: RS-485
- **Signal Output**: Ethernet, Cellular
- **Power Input**: 115-230 VAC
- **Electrical Classification**: NEMA 4X corrosion resistant weatherproof

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**High Capacity Rechargeable**

- **Power Rating**: 17.4 AH @ 12VDC
- **Watt-hour Rating**: 193 WH

### Operating Temperature Range

- -20°C to +60°C; -4°F to +140°F

- **“C” Cell Replaceable**
- **Power Rating**: 8.5 AH
- **Watt-hour Rating**: 91 WH

### Operating Temperature Range

- -55°C to +85°C, -67°F to +185°F

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**Battery Options**

- **Power Rating**: 19 AH
- **Watt-hour Rating**: 342 WH

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