

# WALL MOUNTED GAS MONITORS

## GUARDIAN / K-11

### FEATURES

- Direct Digital Readout With Fast Response
- Maintenance Free and Reliable
- NEMA 4X Fiberglass Enclosure
- Provides Three Alarm Levels and Fault Alarm
- Audio and Visual Alarm Indicators
- Local Danger Alarm At Sensor
- Auxiliary Output Relays For Remote Alarming
- System Test Button Checks The Electronics



The Guardian / K-11 series are unique, reliable, wall mounted gas monitors that provide fast response to gas leaks and warn of potential danger. The early warning system alerts personnel to prevent possible larger and more dangerous levels.

The Guardian / K-11 remote gas sensor/transmitter combines fuel cell technology with a diffusion limited barrier which results in a maintenance free sensor that is stable for long periods. The sensor is relatively unaffected by temperature and humidity changes. A danger alarm light and a system test switch are provided locally at the sensor/transmitter to assure proper operations.

The Guardian / K-11 controller provides digital display, reset and silence alarm buttons and three visual and audible alarm levels with auxiliary relay contacts.



**CEA Instruments, Inc.**

*"EXPERTS IN TOXIC GAS DETECTION"*

# GUARDIAN / K-11 SPECIFICATIONS

## TYPICAL GAS SENSORS

Carbon Monoxide (CO)	Nitrogen Dioxide (NO <sub>2</sub> )
Hydrogen Sulfide (H <sub>2</sub> S)	Nitric Oxide (NO)
Oxygen (O <sub>2</sub> )	Hydrogen (H <sub>2</sub> )
Chlorine (Cl <sub>2</sub> )	Chlorine Dioxide (ClO <sub>2</sub> )
Sulfur Dioxide (SO <sub>2</sub> )	Ammonia (NH <sub>3</sub> )
Hydrogen Cyanide (HCN)	Ozone (O <sub>3</sub> )
Hydrogen Chlorine (HCl)	

**PLEASE CONTACT US FOR ANY OTHER GAS SENSORS**

<b>SENSOR RANGES</b>	See the Guardian / K-11 Price List
<b>SENSOR TYPE</b>	Three (3) electrode, electrochemical fuel cell
<b>DIGITAL DISPLAY TYPE</b>	Red LED, 0.5" high
<b>WARRANTY</b>	One (1) year - Sensor, Transmitter, & Controller
<b>EXPECTED SENSOR LIFE</b>	About Three (3) years (One year for Oxygen)
<b>RESPONSE TIME</b>	Less than 8 seconds to full alarm
<b>SENSOR SIGNAL INPUT</b>	4-20 mA, 350 ohms maximum
<b>REPEATABILITY</b>	1% of full scale
<b>DRIFT</b>	Less than 2% per month
<b>OUTPUT</b>	4-20 mA linear signal per channel
<b>ALARMS</b>	Caution, Warning, and Danger gas alarms and Problem (fault) alarm (Set to current OSHA levels unless specified otherwise)
<b>AUDIBLE ALARM</b>	Pulsating piezo buzzer (90dB)
<b>RELAY CONTACTS</b>	Problem - SPST, NO 1A @ 125VAC non-latching Danger - 2 SPDT, 10A @ 125VAC latching Relay 1 - SPDT, 10A @ 125VAC Relay 2 - SPDT, 10A @ 125VAC
<b>POWER</b>	110VAC - 50/60 Hz @ 200mA (unless specified otherwise) 220 VAC and 24 VDC available
<b>DIMENSIONS</b>	NEMA 4X Controller – Typically 7" h x 7" W x 5" D NEMA 4X Remote Sensor – 3.5" H x 6" W x 3" D
<b>WEIGHT</b>	Controller - 4 lbs 10 oz (2.1 kilograms) Remote sensor/transmitter - 1 lb 5 oz (600 g)
<b>TEMPERATURE RANGE</b>	-15°C to 40 °C (5 °F to 104 °F) continuous
<b>OPERATING HUMIDITY</b>	15 to 90% non-condensing

(Specifications subject to change without notice.)



## CEA Instruments, Inc.

160 Tillman Street, Westwood, N.J. 07675 U.S.A.  
Telephone (201) 967-5660 Fax (201) 967-8450  
E-Mail: ceainstr@aol.com Website: www.ceainstr.com



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## GUARDIAN / K-11 SERIES PRICE LIST

Gas Sensor	Standard Range	Maximum*** Range
Carbon Monoxide (CO)	0-500 ppm	0-1000 ppm
Hydrogen Sulfide (H2S)	0-10 ppm	0-200 ppm
Oxygen (O2)	0-25 %	0-25 %
Chlorine (Cl2)	0-10 ppm	0-250 ppm
Sulfur Dioxide (SO2)	0-10 ppm	0-250 ppm
Hydrogen Cyanide (HCN)	0-10 ppm	0-100 ppm
Hydrogen Chloride (HCl)	0-10 ppm	0-100 ppm
Nitrogen Dioxide (NO2)	0-10 ppm	0-20 ppm
Nitric Oxide (NO)	0-50 ppm	0-100 ppm
Hydrogen (H2)	0-200 ppm	0-2000 ppm
Ammonia (NH3)	0-50 ppm	0-200 ppm
Ozone (O3)	0-10 ppm	0-20 ppm
Chlorine Dioxide (ClO2)	0-3 ppm	0-80 ppm

\*\*\*Add \$75 per channel and specify higher range if any above Standard Range is not desired

### Guardian / K-11 (single channel).....\$ 1,995.00

One controller in a NEMA 4X enclosure with digital display, three audio/visual gas alarm levels (set to current OSHA levels unless specified otherwise), fault alarm LED, reset and silence alarms buttons, auxiliary relay contacts for all alarms, 4-20 mA output, manual, and AC power adapter (specify 110 or 220 VAC). **One** remote sensor/transmitter in a NEMA 4X enclosure with one of the above sensors installed (specify gas and range), test button, local danger alarm LED, and twenty five (25) feet of cable.

### Guardian 2 / K-12 (dual channel).....\$ 3,295.00

One controller in a NEMA 4X enclosure with an independent digital display per channel, two audio/visual gas alarm levels per channel (set to current OSHA levels unless specified otherwise), fault alarm LED and silence alarms button per channel, one reset alarms button, auxiliary relay contacts for all gas alarms and 4-20 mA output per channel, manual, and AC power adapter (specify 110 or 220 VAC). **Two** remote sensor/transmitters in NEMA 4X enclosures each with one of the above sensors installed (specify gases and ranges), and each with test button, local danger alarm LED, and twenty five (25) feet of cable.

### Guardian 4 / K-14 (quad channel).....\$ 5,995.00

One controller in a NEMA 4X enclosure with an independent digital display per channel, two audio/visual gas alarm levels per channel (set to current OSHA levels unless specified otherwise), fault alarm LED and silence alarms button per channel, one reset alarms button, auxiliary relay contacts for all gas alarms and 4-20 mA output per channel, manual, and AC power adapter (specify 110 or 220 VAC). **Four** remote sensor/transmitters in NEMA 4X enclosures each with one of the above sensors installed (specify gases and ranges), and each with test button, local danger alarm LED, and twenty five (25) feet of cable.

#### OPTIONS

Additional sensor/transmitter cable (per foot)	\$ 2.00
External Backup Battery with line noise and surge protection	\$ 900.00

#### REPLACEMENT SENSORS

Oxygen Sensor	\$ 225.00
Other Sensors (Specify target gas)	\$ 450.00

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