

COMPLIANCE SOLUTIONS

# BOILERSENSE-NE™ BOILER ROOM GAS DETECTION

## PURPOSE BUILT FOR THE NEBRASKA ADMINISTRATIVE CODE TITLE 229

CET's BoilerSense-NE™ gas detection solution complies with the Nebraska Administrative Code for areas containing fuel-burning appliances to be equipped with CO & CH<sub>4</sub> detectors and proper ventilation and equipment operation protocols.

Stay compliant, reduce risk, and safeguard boiler rooms. Trust the gas detection experts to keep your critical environment safe and secure.



*BoilerSense-NE, the complete solution*

## COMPLIANT, COMPLETE, SAFE

- **FCS-L-SW:** Multi Channel Controller with Modbus® or BACnet® WAN output to BAS
- **CGAS-D-CO:** Digital Carbon Monoxide Transmitter
- **CGAS-D-CCH4-100:** Digital Methane Transmitter
- **RSW-E:** Remote Switch with red push button
- **RSH-24V-R:** Remote Strobe/Horn Combo

Talk to one of our gas detection experts today to learn about compliant gas detection solutions.



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GAS DETECTION  
EXPERTS.**

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# BOILERSENSE-NE: MEETING SPEC

- CO and combustible gas detectors are to be installed per manufacturer instruction
- If gas levels exceed thresholds, alarms activate inside and outside the room and trigger the ventilation system
- Manual switch for shutdown of equipment outside each entrance to the room

## FCS Multi Channel System Controller

- Four 5A relays, audible alarm, touch LCD display with menu, zoning, logic control, and data logging
- Factory installed strobe and manual switch
- Modbus® RS-485 or BACnet® MS/TP output for BAS integration
- 90-240V AC power supply

## cGas Detector Digital Transmitter (CO)

- 0-200 ppm sensor range
- Modbus® RS-485 or BACnet® MS/TP output, 4-wire VAC/VDC
- Options: Relay, Low Temp Operation, Splash Guard

## cGas Detector Digital Transmitter (CH<sub>4</sub>)

- 0-100 %LEL sensor range
- Modbus® RS-485 or BACnet® MS/TP output, 4-wire VAC/VDC
- Options: Relay, Low Temp Operation, Splash Guard

## Remote Switch

- Manual push button control for mechanical/electrical shutdowns and activating horn/strobes

## Remote Strobe / Horn Combo

- Multiple alarm features in one device
- Independent settings for horn, strobe or horn and strobe together
- Three lens colours to choose from

## CRITICAL ENVIRONMENT TECHNOLOGIES



Flexible Control System (FCS)



cGas Detector (CO)



cGas Detector (CH<sub>4</sub>)



Remote Switch (RSW-E)



RSH-24V-R



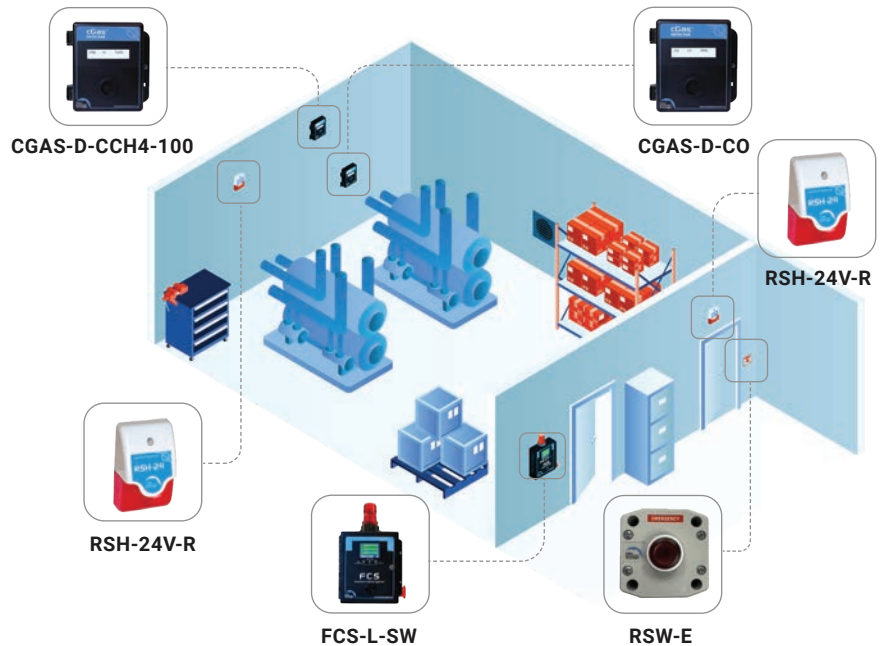
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## COMPLETE SYSTEM INTEGRATION BUILT TO MEET SPEC

- **FCS-L-SW** Controller w/strobe & manual shutoff switch
- **CGAS-D-CO** Detector Digital Transmitter
- **CGAS-CCH4-100** Detector Digital Transmitter
- **RSW-E** Remote Switch
- **RSH-24V-R** Remote Strobe & Horn



## NEBRASKA ADMINISTRATIVE CODE TITLE 229 CHAPTER 24

Nebraska does not have a specific state code for boiler room gas detection. However, the Nebraska Administrative Code Title 229 Chapter 24 does require that boilers be equipped with appropriate safety appliances, and installations must comply with standards from the National Board Inspection Code (NBIC) and the NFPA 54 National Fuel Gas Code and the ASME Boiler and Pressure Vessel Code.

For rooms containing fuel-fired boilers and pressure vessels, especially where carbon monoxide (CO) or combustible gases may accumulate, NBIC Part 1 states that gas detection systems should be installed per manufacturer instruction, include audible alarms inside the room and at entrances and be capable of general area monitoring, not just personal exposure. While NBIC does not specify exact thresholds for CO or combustible gases, it aligns with OSHA and NFPA standards, which recommend:

- CO alarms at 30 ppm or higher
- Combustible gas alarms at 20–25% of the Lower Flammable Limit (LFL)

The National Fuel Gas Code NFPA 54 Section 8.3.1.4 to 8.3.2.2.2 outlines the following requirements for combustible gas sensors in boiler rooms.

- Combustible gas indicators shall be listed and calibrated in accordance with the manufacturer's instructions.
- Gas indicators shall numerically display a volume scale from 0 percent to 100 percent in 1 percent or smaller increments.
- Combustible gas detectors shall be capable of indicating the presence of fuel gas.

As per the ASME CSD-1 Standard, a clearly marked, manually operated emergency shutdown switch or circuit breaker must be installed just outside the boiler room door. For rooms with multiple entrances, a switch is required at each door. Activating the switch must immediately cut off the boiler's fuel or energy supply.

It is the user's responsibility to ensure compliance with applicable regulations. CET is not liable for errors, omissions or misinterpretations. 10-25



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