



# TECHNICAL DATA SHEET

No. SPECS-GAS-029

## COMBUSTIBLE GAS DETECTOR (ambient)

Rev. 2

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**TITLE:** COMBUSTIBLE DETECTOR (ambient)

**DEPARTMENT:** TECHNICAL SUPPORT

**DESCRIPTION:**

A Catalytic technology sensor. The sensor can be located within the logging unit. Commonly used either internally (as shown) or remote installations (with "blind" transmitter). Additional sensors are placed around the rig for the monitoring of ambient gases, at various locations including, but not limited to:

Rig Floor, Mud Pit Room, Ditch or Possum Belly.

The internal sensor may also be connected directly to the "Blender Assembly" for "Cuttings Gas" readings. The sensor has its own visual display, as well as being present in the DLS System.



### A. Specifications.

BRAND:	Detector Electronics (Detronics)
MODEL:	CGSS1A6C2R1X – Sensor U9500 -- Transmitter
SENSOR TYPE:	Catalytic
INSTALLATION LOCATION:	Equipment Rack (backroom) Pit Room, Rig Floor, Possum Belly, Sample Line (optional)
MEASURING RANGE:	0-100% LFL
LINEARITY:	0-50% LFL: ±3% LFL 51-99% LFL: ±5% LFL
REPEATABILITY:	±1% LFL
RESPONSE TIME:	50% full scale in < 10 seconds with 100% LFL applied 90% full scale in < 30 seconds with 100% LFL applied 60% full scale in < 10 seconds with 100% methane by volume in air (CSA flooding test)
LONG TERM STABILITY:	<u>ZERO</u> : < 1% LFL per month <u>SPAN</u> : < 1% LFL per month in clean air
TEMPERATURE STABILITY:	< ±5% LFL: -13°F to +167°F (-25°C to +75°C)



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### COMBUSTIBLE GAS DETECTOR (ambient)

CALIBRATION CYCLE:	< ±10% LFL: -40°F to -13°F (-40°C to -25°C) 90 days typical
APPROVALS/CERTIFICATION:	
SENSOR:	<u>FMRC / CSA</u> : Class I, Div 1, Groups B, C & D. Explosion-verified: -40°F to +257°F (-40°C to +125°C) Performance verified: -40°F to +257°F (-40°C to +75°C) <u>CENELEC</u> : EEx d IIC T4, T <sub>amb</sub> = -55°C to +105°C
Special conditions for safe use:	Intermittent exposure to 125°C (500 hours).
TRANSMITTER:	<u>FMRC</u> : Explosion-proof for Class I, Div 1, Groups B, C & D per FM 3615 (Combustible gas detection). Explosion-proof for Class I, Div 1, Groups C, and D per FM 3615 (Toxic gas detection). <u>CSA</u> : Explosion-proof for Class I, Div 1, Groups B, C, and D per CSA C22.2 No. 30 (Combustible gas detection). Explosion proof for Class I, Division 1, Groups C, and D per CSA C22.2 No. 30 (Toxic gas detection). CSA Enclosure Type 4. <u>CENELEC</u> : EEx d IIC T6, (T <sub>amb</sub> = -60°C to +50°C) T5 (T <sub>amb</sub> = -60°C to +65°C), (T <sub>amb</sub> = -60°C to +75°C) <u>RUSSIAN</u> : 1Ex d IIC T6, (T <sub>amb</sub> = -60°C to +50°C) T5 (T <sub>amb</sub> = -60°C to +65°C), T4 (T <sub>amb</sub> = -60°C to +75°C)
OTHER FEATURES:	Three (3) alarm relays: 5 amperes at 30 vdc. Selectable energized or de-energized as a group; low and auxiliary alarm selectable together for latching or non-latching contacts, high alarm contacts are always latching. One (1) Fault Relay: 5 amperes at 30 vdc. Energized for no fault condition with power applied to device.
OUTPUT:	Chart Recorder, DLS System, all Digital Monitors, Alphanumeric Display on Transmitter
<b>APPROVAL:</b>	
Dept. Supervisor	: <u>VICTOR SAET</u> Date: <u>1<sup>st</sup> AUG. 2002</u>
Technical Committee	: <u>ALAN MORRISON</u> Date: <u>1<sup>st</sup> AUG. 2002</u>