

LACT Systems

Gas Detection for Lease Automatic Custody Transfer Systems

Lease Automatic Custody Transfer (LACT) skids allow dynamic custody transfer of saleable liquid hydrocarbons by determining quantity and quality of the hydrocarbons and re-circulating the liquid hydrocarbons which need further treatment. LACT skids ensure accurate hydrocarbon measurement between producers and their customers.

Custody transfer skids are prefabricated, skid-mounted assemblies used at both attended and unattended leases and loading & unloading points for determination of quantity and quality of liquid hydrocarbons. These skids range in size from small units movable by forklift to large semi-enclosed "buildings" around the pump and measurement components. LACT skids are found on land and offshore transferring into pipelines, barges, and tankers, for both loading and off-loading operations.



LACT units are intended to be automated solutions. They must fail-safe to shut down or diversion mode when a problem is detected. The skid must also be low maintenance and impose no additional hazards to the transfer process.

Gas Detection Solutions for LACT Systems

LACT skids are susceptible to leaking combustibles and H₂S which must be monitored to ensure human and environmental safety. If the LACT unit is in an enclosed shelter, Oxygen monitoring may be required as well.

Sensidyne has partnered with skid manufacturers and panel builders to provide cost-effective, low-maintenance gas detection solutions which, monitor for combustible and toxic gases and Oxygen depletion. Sensidyne systems are easy to use and can provide local annunciation or output a 4-20 mA signal to a skid mounted panel PLC.

The SensAir^{CMB} is approved for use in Class I Division 1 Groups A, B, C, & D hazardous classified areas. It has a non-intrusive user interface for span and zero adjustments. SensAir^{CMB} is housed in a rugged explosion-proof enclosure with variable mounting orientation options. The poison resistant sensor with 316 stainless steel sensor housing will survive extreme conditions. A three-wire, 4-20mA output enables easy installation in retrofit or new applications with interface to common facility communication links. The instrument has an LED display and non-intrusive user interface for easy maintenance and setup. [See reverse to learn more about SensAir^{CMB}](#)



SENSAIR^{CMB}

Heavy Duty Combustible Point Gas Monitor



- FM Certified for Hazardous Classified Area Installation in Division 1 & Division 2 and ATEX Zone 1 & Zone 2
- Explosion Proof 316 Stainless Steel Sensor Housing
- Poison Resistant Catalytic Bead Sensor with Rapid Response
- On-Board Bright LED Display
- Non-Intrusive Zero & Span Adjustments
- Easy Installation and Maintenance in Retrofit or New Applications
- 3-wire Design with 4-20mA Output
- Horizontal or Vertical Installation

Specifications

Sensor

Poison resistant cat-bead. SensAir CMB can be used for detection of Methane, Propane, Pentane, Butane and most common combustible gas detection needs.

Power Requirement

24 VDC, nominal, up to 6 Watts

Voltage Range

12-30 VDC

Current Consumption (Max)

300mA, typical 125mA

Termination Resistance

Less than 500Ω
250Ω recommended

Transmission Link

4-20 mA current source, non-isolated with respect to Common (3 wires)

Operating Temperature

-4° to 167°F (-20° to 75°C)

Storage Temperature

-40° to 122°F (-40° to 50°C)

Operating Humidity

0-95% RH, non-condensing

Oxygen Requirement

10% by volume, minimum

Approvals

FM US and Canadian | NEC/CEC – Class I, Div 1, Groups A, B, C, D T4; Nonincendive for installation in Class 1 Division 2 Groups A, B, C, D (FM6320, C22.2 No. 152)

ATEX – CE 0518 II 2 G Ex d IIC T4 (FM13ATEX0066)

II 3 G Ex nA d IIC T4 (FM13ATEX0084)

For Class I Division 1 and Division 2 approval information, please refer to the approval drawing in the user manual.

SensAir^{CMB} is a heavy duty combustible point gas detector designed to be poison resistant. Sulfides and Silicons are known to poison or inhibit standard catalytic bead sensors at concentrations as low as one part per million (1 PPM). Poisoned catalytic bead sensors are rendered ineffective and unable to detect gas. Advanced sensor technology used in SensAir^{CMB} significantly reduces the effects of poisoning, thereby minimizing the replacement of sensors and costs of ownership, making this product the ideal gas detector for chemical and hydrocarbon processing and manufacturing facilities.

The advanced SensAir^{CMB} catalytic bead sensor employs a pair of pellistors (catalytic beads) that provide uniform electrical resistance in clean air. An active pellistor “catalyzes” combustible gas when present while a reference pellistor compensates for changes in ambient environmental conditions. The difference provides an output that is accurate and linear. This advanced design provides excellent combustible gas sensitivity, rapid response, and extended sensor life.

SensAir^{CMB} is housed in a rugged explosion-proof aluminum enclosure with variable mounting orientation options. The 316 stainless steel sensor housing provides excellent versatility for mounting SensAir^{CMB}. A three-wire, 4-20mA output enables easy installation in retrofit or new applications with interface to common facility communication links. The instrument has an LED display and non-intrusive user interface for easy maintenance and setup.

