

## EX-5100

Remote Gas Monitoring Sensor Transmitter for Combustible Gases 0-100% LEL



### PRODUCT HIGHLIGHTS

- Catalytic sensor
- Three alarm LEDs
- 24 VDC, 4-20 mA
- NEMA 4X, NEMA 7 and IP66 rated enclosure
- Poison resistant
- Non-intrusive calibration
- Approved for Class I, Division 1, Groups B, C & D

EX-5100 is a remote gas monitoring sensor transmitter that incorporates a pellistor or catalytic bead sensor. This sensor consists of a matched pair of elements, one active and the other for compensation. The active bead is coated with a catalyst that, when in contact with a combustible hydrocarbon or solvent, causes the gas or vapor to “burn” or oxidize at concentrations below the Lower Explosive Limit (LEL). This oxidization process raises the temperature of the active bead and increases the resistance of the internal wire coil. The second bead does not have the catalytic coating and provides compensation for environmental conditions including temperature and humidity. When these elements are connected in a Wheatstone bridge type circuit, a useable signal

is produced that is proportional to the gas concentration. The transmitter is 24 Vdc powered and provides a 4-20 mA output signal that can be connected to a controller, PLC or similar instrumentation.

The standard EX-5100 calibration is 0-100% LEL methane. Therefore, methane is considered to have a coefficient or relative response of (1.00) one. Calibration coefficients relative to methane have been generated for over 30 different combustible hydrocarbons and solvents. In addition to these established coefficients, ENMET can generate calibration data for most common combustible gases and vapors for which a sample can be readily obtained.

# EX-5100

## GENERAL SPECIFICATIONS

<b>Sensor Type:</b>	Catalytic
<b>Display:</b>	Backlit LCD
<b>Alarm Indicators:</b>	3 LEDs at programmable set points
<b>Sensor Range:</b>	0-100% LEL
<b>Menu/Calibration:</b>	Magnet-actuated switches
<b>Voltage:</b>	24 VDC powered
<b>Output:</b>	4-20 mA
<b>Installation:</b>	3-wire
<b>Connection:</b>	1/2 inch NPT, conduit
<b>Humidity Range:</b>	0-100%rH, non-condensing
<b>Temperature Range:</b>	-4 to +158°F (-20 to +70°C)
<b>Weight:</b>	4.8 lbs (2.17 Kg)

### Approvals:

Approved for Class I, Div. 1, Groups B,C, & D

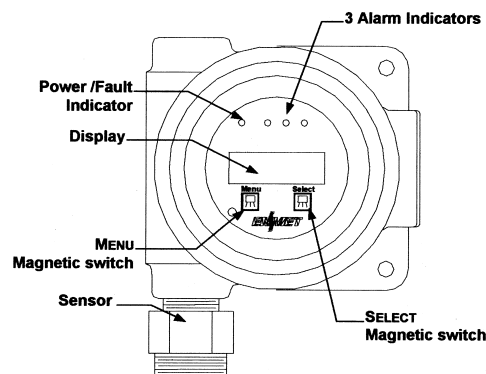
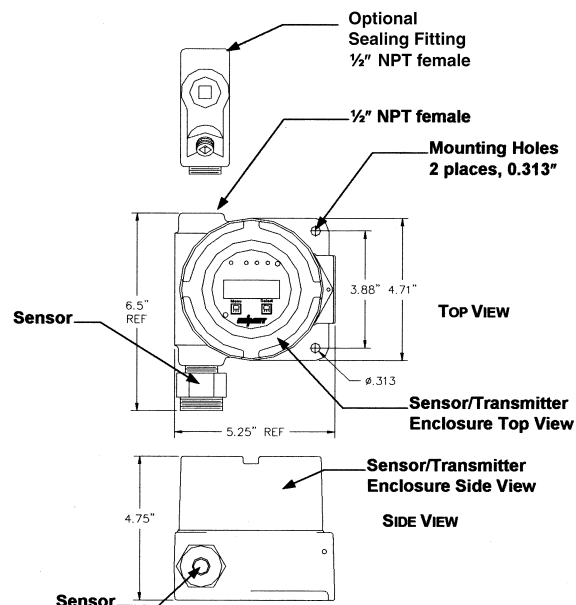
### Classified to:

UL 916 (3rd ed.) and UL 1203 (4th ed.)  
CSA 22.2, No. 0-M91, 30-M1986 and 142-M1987

## ORDERING INFORMATION

Description	Part No.
EX-5100 Sensor Transmitter, factory calibrated, supplied with calibration magnet and manual	10014-001
Calibration Adapter for EX-5100 Sensor/Transmitters	03620-015
Sampling Adapter for EX-5100	03045-002
Gas Regulator Assembly for 34 liter steel gas cylinders	02506-004
Optional Splash Guard for EX-5100	04546-005
Optional Sealing Fitting	73152-000
Replacement Combustible Gas Sensor for EX-5100	03070-003
Replacement Magnet	50030-001

## DIMENSIONS



## GASES MONITORED\*

### Range 0-100% LEL

- Acetone, (CH<sub>3</sub>)<sub>2</sub>CO
- Ammonia, NH<sub>3</sub>
- Benzene, C<sub>6</sub>H<sub>6</sub>
- Butane, C<sub>4</sub>H<sub>10</sub>
- Combustible Gas
- Ethane, C<sub>2</sub>H<sub>6</sub>
- Ethanol, CH<sub>3</sub>CH<sub>2</sub>OH
- Ethyl alcohol, C<sub>2</sub>H<sub>5</sub>OH
- Ethylene, C<sub>2</sub>H<sub>4</sub>
- Gasoline
- Heptane, C<sub>7</sub>H<sub>16</sub>
- Hexane, C<sub>6</sub>H<sub>14</sub>
- Hydrocarbons
- Hydrogen, H<sub>2</sub>
- Isobutane, C<sub>4</sub>H<sub>10</sub>
- Isopropanol, CH<sub>3</sub>CHOH
- Isopropyl alcohol (IPA), C<sub>3</sub>H<sub>8</sub>O
- Methane, CH<sub>4</sub>
- Methanol, CH<sub>3</sub>OH
- Methyl alcohol, CH<sub>3</sub>OH
- Methyl ethyl ketone (MEK), C<sub>4</sub>H<sub>8</sub>O
- Natural Gas
- Octane, C<sub>8</sub>H<sub>18</sub>
- Organic solvents
- Pentane, C<sub>5</sub>H<sub>12</sub>
- Propane, C<sub>3</sub>H<sub>8</sub>
- Propylene, C<sub>3</sub>H<sub>6</sub>
- Solvents
- Styrene, C<sub>8</sub>H<sub>8</sub>
- Toluene, C<sub>7</sub>H<sub>8</sub>
- Trichloroethylene, C<sub>2</sub>HCl<sub>3</sub>
- Xylene, C<sub>8</sub>H<sub>10</sub>

\*In addition to the gases listed above, ENMET can generate calibration data for most common combustible gases and vapors for which a sample can be readily obtained. Contact the factory regarding custom calibration requirements.

**WARNING!** Loss of primary power renders continuous gas monitors inoperative. Contact factory for specifications and pricing for backup battery systems compatible with ENMET monitors.