

## COMBUSTIBLE GAS TRANSMITTER

With its field proven catalytic bead technology, excellent zero stability, and a low maintenance design, the NIC II transmitter offers a rugged, economical solution for combustible gas detection. NIC II features non-intrusive calibration (via magnet), a LCD display, optional local relays, and is available in diffusion, duct mount, and sample draw configurations.

### Easy Operation & Maintenance

Transmitter calibration is non-intrusive via Scott-Bacharach supplied magnet and is made easy via a large LCD readout and intuitive front panel indicators.

The unique "Unity" feature of the NIC II provides the ability to monitor sensor life during routine calibrations. As is typical with all sensors, response degrades over time. The "Unity" feature provides indication of sensor degradation, permitting the sensor to be replaced before failure.

NIC II's auto-inhibit feature helps make for true one man calibration as well as preventing false alarms during power-up. Non-intrusive adjustment means there is no need to declassify an area during calibration and, with true one man calibration, the NIC II helps minimize labor and associated costs.

Designed for easy field maintenance, the NIC II's provides a plug-in sensor and a flame arrestor that can be easily removed for cleaning or replacement. Its battery backed memory prevents loss of calibration data during power interrupts.

### Operational Flexibility and Reliability

NIC II provides a wide array of outputs and installation configurations to make installation and integration into your plant simple. The remote sensor [with calibration port] option and mounting accessories such as duct mount and sample draw kits, enhance NIC II's operational flexibility.

When ordered with the optional integral alarm relays, the NIC II can function as a "stand-alone" unit - providing local activation of alarms without the need for connection to a receiver. The optional 5A SPDT integral relays can be configured for latching-nonlatching /failsafe-nonfailsafe operation. NIC II offers operational flexibility with remote reset and a Fail relay that can be configured to act as an additional Alarm 2 relay. In addition, this relay can then be configured to operate a horn that can be acknowledged/silenced.

Reliability is key to a gas detection system and NIC II provides it through coated, moisture resistant electronics and horizontal conduit entries that minimize damage due to water ingress.



## Features...

### Non-Intrusive Calibration

There is no need to declassify an area during calibration.

### Auto-Inhibit

Prevent false alarms during calibration and power-up.

### Simple User Interface

Intuitive front panel indications of transmitter status.

### Flexible Interface Options

Available with either 4-20 mA or MODBUS RS-485 outputs and optional integral relays.

### Stand-Alone Capable

Remote reset, configurable alarm operation, and a relay that can be configured as a horn relay permits independent transmitter operation.

### Easy-To-Maintain

Plug-in sensor, replaceable flame arrestor, and sensor life indication.

### Easy-To-Install

Dual horizontal conduit entries, duct mount, sample draw, and remote sensor configurations.

## Specifications

Housing ... NEMA 4(IP66) NEMA-7. Explosion Proof, Approved for Class I, Division 1, Groups B, C, and D. Water tight with O-ring seal, 3/4 inch FNPT conduit connection. Aluminum Housing is Hybrid Epoxy/Polyester Painted for Chemical Resistance.

Environmental Detector: -40° to 200° F ( -40° to 93°C), 0 to 99% RH, Non-condensing. Transmitter: -40° to 158° F (-40° to 70°C)

Sensor ..... Poison Resistant Plug-In Catalytic Bead, Gold-Flashed Pins 7 Contacts

Power ..... 18 to 30VDC (or 8 to 18 VDC) 4.2 W maximum draw at 24 VDC.

Memory ..... EEPROM retains calibration data during power interruptions

Output Signal . 4 – 20 mA into 800 Ohms Maximum at 24 VDC. [Optional] isolated 4-20mA with 1500v isolation between signal and transmitter power supply. [Optional] 2/4 wire MODBUS RTU RS-485.

Relays ..... [Optional ] 3 relays [Low/High/Fail] 5A SPDT Form C 250 VAC/30VDC resistive.

Display ..... 3.5 digit LCD, Flashing Colon in Cal Mode (1.5 mA output), Fault LED (0 mA output), and over range

Interconnecting

Wire ..... 3-Conductor Shielded, Plus Conforming Ground, supplied by others

Weight ..... 4lbs (1.8 Kg)

RFI Rejection ... <10% FS at 5 watts and 1 meter at 30,150, and 450 Mhz

Response Time <10 Sec. to 50% Full Scale, <30 Sec, to 90% Full Scale

Linearity ..... ±3% LEL.

Repeatability .... ±2% LEL.

Safety

Approvals ..... CSA (pending)

Warranty ..... One year limited warranty. Request Warranty Statement for More Information.

## Ordering Information

### Model **4888-A-B-C-D-E**

#### A: Sensor Type

1 - 6 v Poison resistant [general hydrocarbon]

#### B: Sensor Connection

1- Sensor integral w/transmitter [standard rain guard]

2- Duct adaptor

3- Flow cell w/aspirator

4- Remote sensor housing with calibration port

5- Flow cell w/o aspirator

6- Remote sensor (max.100'/30 meter) 3 card 14 AWG cable is customer supplied

#### C: Power

1- 24 VDC

2- 12 VDC

#### D: Transmitter Output

1- 4-20 mA non-isolated

2- 4-20 mA (non-isolated) and relays

3- RS-485 MODBUS

4- 4-20 mA isolated

### Spares and Accessories

<u>Part #</u>	<u>Description</u>
8000-8050	6V Combustible sensor
077-0120	Magnetic Screwdriver
023-4098	Calibration Adaptor for diffusion sensor
3470-9500	Calibration Adaptor for duct mounted sensor
0051-7340	Calibration Kit (tubing, fittings, .5LPM regulator, and case) No gas.
0051-1121	2.5% v/v Methane 103 L cylinder
9550-0058	2% v/v Hydrogen 103 L cylinder
0051-1538	.9% v/v Propane 103 L cylinder
9550-0101	1% v/v Ethylene 103 L cylinder



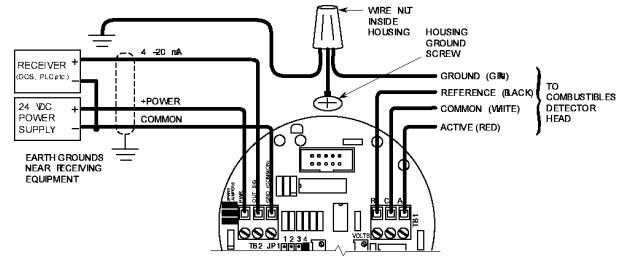
# NIC II Typical Specification

A combustible gas sensor/transmitter shall be provided at the following locations (list) to detect (list gas or vapor) and transmit a linear 4 – 20 mA signal proportional to 0-100% LEL and capable of driving a 800 ohm load at 24 Volts DC supply voltage. An integral 3 ½ digit LCD display shall be provided. Calibration shall be non-intrusive with a magnet. The transmitter shall indicate calibration mode with 2 mA output, and fault conditions with a 0 mA output. Sensor life remaining shall be viewable from the LCD display.

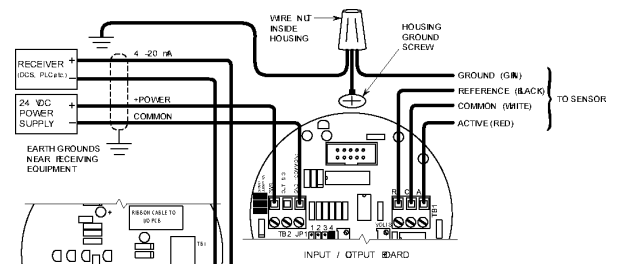
The sensor/transmitter shall be a platinum, poison resistant, catalytic type, which plugs in for ease of replacement. [Optional Remote calibration capability is to be provided (up to 106' feet transmitter sensor separation)].

The sensor/transmitter shall be designed for ambient temperatures of – 40° to 158° F ( – 40° to 70° C). Circuit boards shall be coated for moisture resistance. The transmitter shall operate from 18-30 VDC, and be housed in a NEMA 4 (IP66) explosion proof metal housing with (2) ¾ inch FNPT horizontal conduit entry and warranted for one year from installation date.

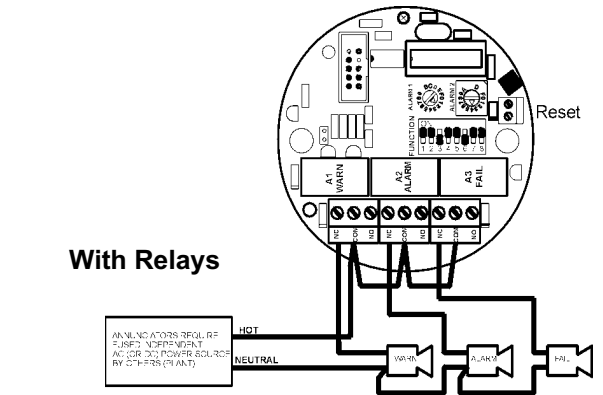
## Electrical Connections



4-20 mA Non-isolated

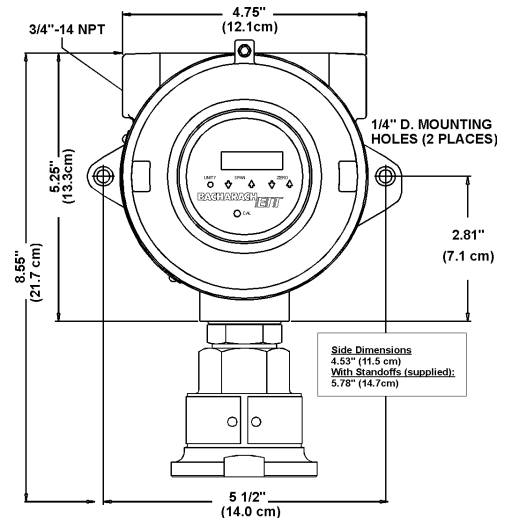


4-20 mA Isolated



With Relays

## Dimensions



## Model 6800 Multichannel Rack Receiver

The Model 6800 provides centralized display and alarming capabilities for Scott-Bacharach gas transmitters and other 4-20mA instruments. Each Multichannel Receiver can handle up to 16 channels, and includes backlit numerical and bar-graph LCD displays as well as 4 alarm LEDs for each channel. The standard instrument includes integral 24VDC power supply and four common alarm relays. Individual alarm relays are available using the optional relay module. Alarm setpoint, time delays, alarm direction, latching mode (latching or non-latching), and alarm failsafe mode (energized or de-energized) are all user-programmable. All settings are stored on the 6800's CPU board, so channel cards can be easily replaced while the instrument is in use without the need for any reprogramming or adjustment.

