

# Hydrogen Smart Gas Sensor

Part Number: 300778  
AT&T Item Number: BLD.10569



*The Hydrogen Smart Sensor*

## Description

The smart sensor features a LCD display of gas concentration, LED indication of each of the SPDT relays and TX/RX for the RS-485 Modbus communications. The units are housed in a NEMA 4X enclosure with an integral buzzer that will meet the most stringent of applications. Pre-calibrated sensors can be purchased and installed by the user thereby reducing calibration costs and minimizing downtime. The user can select multiple screens from the menu that display relay status, time, TWA, STEL, concentration, and other data. Programming and calibration is nonproprietary and is accessed through a user selectable password that protects system integrity.

The unit can be installed as stand-alone or networked with Quest equipment through a RS-485 Modbus communication port that is standard. A 4-20 mA, 2-10 VDC and a 1-5 VDC analog output that is fully assignable over a chosen range is standard. User programmable relays and a buzzer are also standard allowing several options to energize relays through instantaneous activation upon a preselected concentration or activation through a time-waited average concentration.

## Specifications

**Input Power:** 24VDC Nominal, range 18-72 VDC, 0.3A DC Total Max  
24VAC Nominal, range 15-24 VAC, 0.3A AC Total Max  
AC Must Not be grounded

**Fuse:** F2 on Main Board: Polyswitch 750 mA  
Polyswitch resets after fault 15 cleared and powered up

**Sensor:** Catalytic Bead

**Sampling:** Diffusion or Pump-through

**Panel Indicators:** 5 Status LEDs

- RS485 TX Status (Green)
- RS485 RX Status (Green)
- Relay 1 Status (Red)
- Relay 2 Status (Red)
- Relay 3 Status (Red)

**Display:** LCD graphic display c/w backlight

**Keypad:** 3 Capacitive touch sensing keys: F1, F2, F3

**Relays:** 3 Relays SPDT, dry contact

- 1.0 A maximum at 30 VDC (resistive load)
- 0.3 A maximum at 125 VAC (resistive load)

**Enclosure Rating:** IP 66 & NEMA 4, 4X, 12 & 13

**Buzzer:** 80 db at 10 cm, 2700 Hz  
Buzzer with 3 with programmable tones

**Output signal:** RS-485 with Modbus, 4-20 mA, 2-10 VDC, 1-5 VDC Analog Signal Output

**Operating temperature:** -40 to 158°F (-40 to +70 °C), depends on sensor specification

**Ambient Humidity:** 5% to 95% RH(non-condensing)

**Storage Temperature:** 32 to 104 °F (0 to 40 °C) depends on sensor specification

**Size:** 6" x 3.5" x 2.6" (150 x 90 x 65 mm)

**Weight:** Less than 0.5 lb (227 g)

**Warranty:** 90 days

## Features

- Uses Catalytic Bead Sensors
- Pre-calibrated sensors available for easy replacement without calibration
- Three on board user programmable relays
- Non-proprietary set-up and calibration procedures
- Removable terminal blocks for easy wiring
- Digital display of TWA, STEL, concentration and relay status
- Stand-alone operation
- Analog communication to Quest equipment or through RS-485 digital communication protocols
- Integral buzzer with three tones
- NEMA 4X enclosure with knock-outs
- Sensor housing sealed from electronics
- Duct mount available
- Splash guard available
- Flow through/calibration cap available
- Operates on 24 VAC/DC or 48 VDC with included power supply (Quest part #150987 DC/DC power supply 36-72 VDC/24 VDC@0.625 A

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Tel: (941) 729-4799, Fax: (941) 729-5480

208 9th Street Drive West, Palmetto, Florida 34221

