



Description

Model GT-CT8900, Fixed type Catalytic combustible gas sensor, engineered specifically for detecting combustible gas (Methane) and vapor. The sensor is housed together in an explosion-proof enclosure complete with status display, which consists of three high-brightness nixie tubes and four status indicators for gas concentration readings and status conditions. In addition, a sensor life indication function is provided for ease of maintenance and improves instrument reliability. GT-CT8900 provides various output interfaces which includes 4-20mA current output, three sets of Normally Open Contacts for Warning/Alarm/Fault status, two sets of communication interfaces for RS485 and HART interfaces.

Intelligent Sensor For Combustible Gas Detection



Features

- Compatible with Automatic Remote Gas Calibrator (ARGC)
- Event logging
- HART and Modbus communications
- 4-20 mA analog current output
- Warning, Alarm & Fault Relays
- Calibration, Calibration Check, and Setup Modes
- Remaining sensor life indication

Benefits

- Fully automatic calibration
- Fault, gas check, calibration, and alarm event logging
- Provides complete status and control capability in the control room
- Industry standard outputs for remote alarm and fault indication
- Provides local alarm capability
- Simplifies operation and maintenance
- Reduces downtime by providing an estimate of sensor life

System Specifications

Sensor Type : Continuous diffusion, low temperature catalytic bead

Sensor Life : 3 to 5 years typical

Measuring Ranges : 0-100% LEL

Accuracy : ±3% LEL 0- 50% LEL; ±5% LEL; 50-100% LEL

Response Time : T50 <10 s T90 <30 s with 100% LEL methane applied; (T90 ≤18s Typical Value)

Zero Drift : Less than 5% of full scale per year

Modes : Calibration, gas check, setup

Electrical Classification :
ATEX II 2G Ex db IIC T6 Gb IP66
(Tamb = -40°C to +70°C)
SIL2 Certified

Warranty : Two years

MODEL GT-CT8900

Electrical Specifications

Input Power : 24 VDC nominal, 20 to 36 VDC 5W max

Analog Output : 0-20 mA (650 Ohms max. load)

0 mA ①	Malfunction
1.5 mA ②	Gas Check/Calibrate
1.5 mA ②	Setup mode
4 mA ± .05 mA	Zero reading
4-20 mA	0-100% LEL
20-22 mA	Over-range

RS-485 Output : Dual redundant Modbus RTU, suitable for linking up to 128 units or up to 247 units with repeaters

Baud Rate : 2400, 4800, 9600, or 19200 bps

HART: HART 7, HART Device Description Language available. AMSAware

Relay Ratings : 8A @ 250 VAC / 8A @ 30 VDC res. max. (Optional) (3x) SPDT - Warning, Alarm & Fault

Status Indicators: Three-digit LED display with gas concentration, FLT, RUN, Warn and Alarm LED's, calibration prompts, faultcodes, and setup options

Faults Monitored : Calibration error, sensor error, low DC supply, EEPROM, setup error, gas check time exceeded, switch error, internal error

I/O Protection: over-voltage, Miswiring, EMI / RFI Immunity

Cable Requirements: Three-wire shielded cable.

Max. distance between GT-CT8900 and power source @ 24 VDC nominal (20-Ohm loop):

14 AWG - 2303 ft (702 m)

Max. distance for analog output (650 Ohms max):

14 AWG - 9000 ft (2740 m)

Mechanical Specifications

Mounting Holes : 3.86 inches (98 mm) (center to center)

Housing : Marine aluminum
316 Stainless steel (optional)

Weight : 1.8 kg (Aluminum)
4.3 kg (Stainless steel)

Cable Entries: Two entries 3/4 ins NPT, others optional

Environmental Specifications

Operating Temperature

Range : -40°F to 167°F (-40°C to 75°C)

Storage Temperature

Range : -58°F to 185°F (-50°C to 85°C)

Operating Humidity

Range : 5% to 100% RH, non-condensing

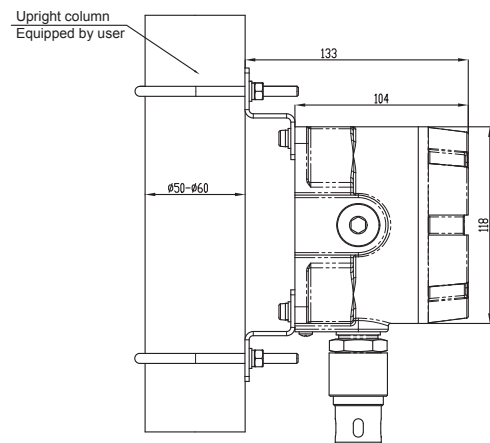
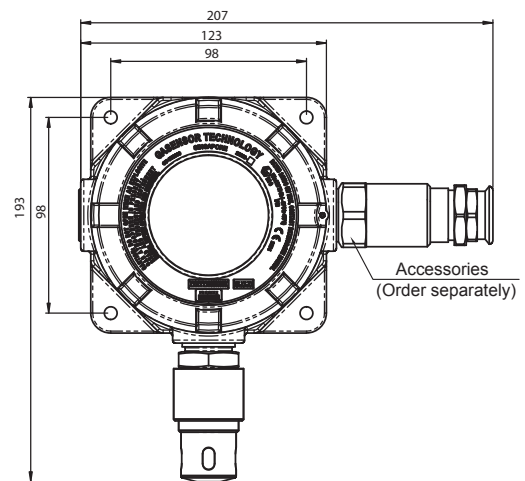


Figure 1: Outline and Mounting Dimensions

① Under HART, current values can be either 3.5 mA or 1.25 mA, depending on user selection.

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Specifications subject to change without notice.

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