CANOGA™ | Traffic Sensing System

Canoga™ 9004 Vehicle Detector

A Matched Component of the Canoga™ Traffic Sensing System

DESCRIPTION

The Canoga™ 9004 Vehicle Detector measures vehicle presence, count and roadway occupancy with industry-leading accuracy and reliability through superior inductive vehicle detection. The Canoga™ 9004 is a four-channel vehicle detector designed to meet U.S. control cabinet rack standards. The Canoga™ 9004 may be configured and monitored using GTT's Central Management Software (CMS).

With CMS, users are able to easily change a detector's configuration, view binning data, monitor traffic in real-time (including speed class and length), and view detector status. The Canoga™ 9004 Vehicle Detector allows remote access through an Ethernet port from the front of the detector and a serial port on the back panel connector. Communications between CMS and the intersection is proprietary to prevent unauthorized access.

OPERATING CHARACTERISTICS

The Canoga™ 9004 Vehicle Detector has built-in protection against lightning-induced and other transients. User-programmed settings and vehicle detector gathered data are stored in non-volatile memory.

FEATURES

Two independent ports are available for local and remote communications:

- Front panel T10/100 base Ethernet port
- Back panel transmit/receive pin connectors for multi-drop TIA485 (RS485) or RS232 single point communication

Canoga™ 9004 Vehicle Detector uses the ports for local or remote configuration of the detector, disturbance identification, to monitor and retrieve real-time activity, and to access data logging and binning information.

Single loop speed and count capability* at low speeds Count with a 99.5% accuracy. Passenger car vs other vehicle classification accuracy of greater than 90%.** Speed accuracy of individual passenger vehicles 90%, 95% for aggregate speeds.** Speed accuracy for all classes of vehicles at 90% aggregate.

*Patent pending

**Mix Dependent

Dual Loop Speed and count capability at low speeds with a 99.5% accuracy. Capture speed and classify with a 95% aggregate accuracy for 5+1 classes.

Tuning Range 20 to 2,500 microhenries.

Sensitivity Setting Twenty sensitivity settings are available per channel

Frequency Setting Self tuning frequency adjustment. Up to eight frequency settings per channel.

Remote Reset Input allows an external reset of the detector. When input voltage on pin C is pulled below 6 VDC for > 17 milliseconds, the detector resets all active channels and establishes a new reference for each "On" loop within four seconds.

Internal Loop Diagnostics Records and stores type of loop fault and time of occurrence.

The Canoga™ 9000 Series adds speed, class and count data capture in a single loop to replace legacy detection traffic management cards.

About GTT

Global Traffic Technologies, LLC (GTT), formed in 2007 from 3M's pioneering Intelligent Transportation Systems business, is the manufacturer of Opticom™ priority control systems and Canoga™ traffic sensing systems.

SOLUTIONS FOR:

Traffic

Canoga™ 9004 Vehicle Detector

Channel by Channel Programmability all vehicle detection parameters are programmable separately for each channel. This includes the sensitivity, background adapt rate, recovery method, wash delay time and wash adapt rate.

Status Output Status output "on" when channel is okay.

Switch Output Opto-isolated Darlington pair switch outputs.

Loop or Micro-loop operation

Four channels on a single width card.

Flexible channel assignments for loop pairs

Home run length 2500'

Historical Faults Last 50

Storage Sufficient on-board flash non-volatile storage to store (168 Hrs. worth of speed, class and count data for a traffic level of 1,000 vehicles per hour per lane.)

Front Panel LCD Display of:

Loop Frequency

- L/dL
- Loop Inductance
- Channel call status
- Sensitivity graph
- Sensitivity Level
- Mode of Operation
- Diagnostics
- Vehicle Counts
- Last Vehicle Speed
- Last Vehicle Length
- Open Loop Fault
- Shorted Loop Fault
- Excessive Inductance Change
- Historical faults
- Call Delay 0-300 s
- Call extension 0-75 s
- Max presence 18 Hrs.

Communications Port Activity Indication

- Ethernet LED indicates connection status

ENVIRONMENTAL

- Temperature: -29° F (-34° C) to +165° F (+74° C)
- Humidity: 5% to 95% (non-condensing)
- Electrical: 10.8 VDC to 37.8 VDC

  < 50 milliamperes/channel at 24 VDC

  120 milliamperes/unit typical at 24 VDC with LCD heater "OFF"

  400 milliamperes/unit typical at 24 VDC with LCD heater "ON"

PHYSICAL DIMENSIONS

- Net Weight: 6.3 oz. (179 g)
- Width: 1.13 in. (2.87 cm)
- Height PC board: 4.5 in. (11.43 cm)
- Face plate: 4.5 in. (11.43 cm)
- Depth: 7.1 in. plus .55 in. for handle (18 cm plus 1.4 cm for handle)

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