DEFLECTOMETER™ SERIES
TWO CHANNEL NEMA TS-2 TYPE A LOOP MONITOR™

Built-in DEFLECTOMETER™ Technology Provides Users With:

☑ Call Strength Indicator for Optimum Sensitivity Programming
☑ One step / One vehicle dynamic Sensitivity programming
☑ Frequency Meter for immediate analysis of loop frequency, avoiding loop cross-talk problems
☑ Push Button Programming

Why guess when you can know your detector is optimally programmed and performing for all vehicle classes!

ENHANCED FEATURES

DEFLECTOMETER Call Strength Indicator:
The Call Strength Indicator provides the technician with a simple one-step method for accurately setting the optimum level of sensitivity that ensures accurate vehicle detection of all vehicles, including motorcycles and high-bed trucks. NO MORE GUESSING!

When a medium size vehicle is over the roadway loop, a DEFLECTOMETER™ Call Strength value of “5” assures that the optimum sensitivity has been achieved. You can adjust the DEFLECTOMETER™ reading DYNAMICALLY without moving the vehicle by using the front panel UP or DOWN sensitivity buttons.

IT DOES NOT GET ANY EASIER THAN THIS!

Frequency Meter:
The built-in Frequency Meter reports the operating frequency of the loop network. Ensuring that adjacent loops are separated by at least 5 KHz will avoid crosstalk problems and future service calls.

Output CALL Test Mode:
The Output Call Test Mode provides a straight forward way to test that the Controller Unit is receiving an active output from the detector. This eliminates the need for cabinet test switches and associated wiring. A huge time saving feature during system set-up and trouble-shooting.

Rugged Handle Assembly:
The rugged handle assembly is made of GE LEXAN™, which is a super durable polycarbonate resin. The design of this assembly strengthens and protects the whole PCB assembly much better than conventional face plates. The temperature stability of critical components is improved with the more encompassing enclosure. Quick reference instructions are conveniently attached directly on the side of the unit, eliminating the need for cards.

Advanced Loop Diagnostics:
The Fault (FLT) indicator displays the type of fault: Short, Open or 25% change of inductance.

The Fault Monitor will report and store three types of loop faults; Open Loops, Shorted Loops, and 25% sudden changes in inductance. Each type of fault is indicated by a unique sequence of flashes allowing the user to diagnose loop failures at a glance.

Options:
Relay Outputs, Model LMD622R

STANDARD FEATURES

☑ Automatic Tuning
☑ Lightning & Surge Protection
☑ Four (4) Frequency Levels
☑ Fail Safe Output Configuration
☑ Separate Color-Coded LED indicators
☑ Wide Loop Inductance Range: 20 to 2500 microHenries.
LMD622 DEFLICTOMETER™ SERIES TWO CHANNEL INDUCTIVE LOOP VEHICLE DETECTOR

SPECIFICATIONS

General Characteristics

Controls: Front panel push buttons allow the user to set the Sensitivity Level, Operational mode, and nominal frequency independently on each channel.

Setting Sensitivity - Front Panel Push Buttons

The DEFLICTOMETER™ front panel 7-segment LED aids in setting the DETECTOR quickly and easily to the most optimum sensitivity level to ensure the trouble-free detection of all vehicles, including motorcycles and high bed vehicles. For typical vehicles (mid-size vehicle / small pick up) utilizing properly installed roadway loops, a Call Strength of 5 will be optimum.

Operational Modes

Presence: For each channel, a Presence output mode may be selected from the front panel Mode button. If presence mode is selected then a choice of short (S) or long (L) can be selected. Short Presence is defined as 30 minutes and Long Presence is defined as 120 minutes.

Pulse: For each channel, a Pulse output mode may be selected from the front panel Mode push button. In Pulse mode, a 125 ms ± 25ms width pulse will be output for each vehicle entering the loop.

Call: For each channel, a continuous CALL output (C) may be selected from the front panel Mode push button which will simulate the presence of a vehicle. This mode is used for testing the CALL output of a channel.

Channel Off: For each channel, the Channel Off (-) may be selected from the front panel Mode push button. This option turns OFF the channel and disables the oscillator. An additional option allows the Status Output to be turned ON while the channel is OFF.

Specifications:

DC Supply Voltage: Minimum: 9.0 Vdc Maximum: 36.0 Vdc
DC Supply Current: Maximum: 100 mA
Optically Isolated Outputs: True (low, 50 mA) Less than 1.5 Vdc

Environmental: Operating Temperature Range: -30°F to 165°F (-34°C to 74°C)
Mechanical: International Card 4.500”H (114.30mm) x 6.875”D (174.63mm) x 1.14”W (28.96mm), excluding handle, with 44 pin double sided edge connector.

Loop Frequency / Loop Frequency Display:

One of four frequency settings may be selected via the front panel FREQ push button to alleviate interference which may occur when loops connected to different detectors are located adjacent to one another. To help prevent or diagnose crosstalk problems, the loop frequency is displayed on the front panel DEFLICTOMETER™. The current loop frequency is displayed after pressing the FREQ button to display the current Frequency Level. The frequency is shown in KHz with a "-" symbol displayed both before and after the numeric digits shown on the DEFLICTOMETER™.

For example, after pressing the FREQ button once the display sequence might show:

3 - 1 - 4 - 2
This sequence would indicate Frequency Level "3" and a loop reference frequency of 27 KHz. Detectors on adjacent loops should be separated by at least 5 KHz.

Loop Fault Monitoring: The Detector continuously checks the integrity of the loop. The system is able to detect shorts or open circuit loops, or sudden changes in inductance exceeding 25% of the nominal inductance. If a fault is detected, the OUT and FLT indicators continuously emit a sequence of flashes. Additionally, the DEFLICTOMETER™ displays the letter "F" indicating a current loop fault. Each type of fault is identified by a unique flash sequence:

Flash Sequence Fault
1 flash Open Circuit Loop.
2 flashes Shorted Circuit Loop.
3 flashes 25% excessive change in inductance.

If the Open or Shorted fault condition self heals, the DET indicator and DEFLICTOMETER™ will return to normal operation. The FLT indicator will continue to flash with the sequence signifying the type of fault that was last detected. In the case of the excessive inductance change fault, the unit will return to the new inductance after a period of two seconds and continue operation. The fault condition will be indicated by the flash sequence of the FLT indicator.

Pin Assignment:

<table>
<thead>
<tr>
<th>PIN</th>
<th>FUNCTION</th>
<th>PIN</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Logic Ground</td>
<td>1</td>
<td>Reserved</td>
</tr>
<tr>
<td>B</td>
<td>DC Supply</td>
<td>2</td>
<td>Reserved</td>
</tr>
<tr>
<td>C</td>
<td>External Reset</td>
<td>3</td>
<td>Reserved</td>
</tr>
<tr>
<td>D</td>
<td>Ch 1 Loop Input</td>
<td>4</td>
<td>Ch 1 Redundant Loop Input</td>
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<tr>
<td>E</td>
<td>Ch 1 Loop Input</td>
<td>5</td>
<td>Ch 1 Redundant Loop Input</td>
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<tr>
<td>F</td>
<td>Ch 1 Output (+)</td>
<td>6</td>
<td>Reserved</td>
</tr>
<tr>
<td>G</td>
<td>Ch 1 Output (-)</td>
<td>7</td>
<td>Ch 1 Status Output</td>
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<tr>
<td>H</td>
<td>Ch 2 Loop Input</td>
<td>8</td>
<td>Ch 2 Redundant Loop Input</td>
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<tr>
<td>I</td>
<td>Ch 2 Loop Input</td>
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<td>Ch 2 Redundant Loop Input</td>
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<td>J</td>
<td>Ch 2 Output (+)</td>
<td>10</td>
<td>Reserved</td>
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<tr>
<td>K</td>
<td>Ch 2 Output (-)</td>
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<td>Chassis Ground</td>
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<td>19</td>
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<tr>
<td>T</td>
<td>Reserved</td>
<td>20</td>
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<td>21</td>
<td>Reserved</td>
</tr>
<tr>
<td>V</td>
<td>Reserved</td>
<td>22</td>
<td>Reserved</td>
</tr>
</tbody>
</table>

Status Outputs:

Each channel includes a separate output which is used to transmit operational status information to a Bus Interface Unit (BIU). Fault information is transmitted by means of pulse-width modulation. Pulse widths shown are +10ms.

Specifications:

Status | Status Output Condition
---|-------------------------------
Normal operation / No fault | Continuous ON (low)
Watchdog fail / Power Supply fail | Continuous OFF (high)
Open circuit loop | 50ms OFF, 50ms ON
Short circuit loop | 100ms OFF, 50ms ON
25% change in inductance | 100ms OFF, 50ms ON

Environmental:

Operating Temperature Range: -30°F to 165°F (-34°C to 74°C)
Mechanical: International Card 4.500”H (114.30mm) x 6.875”D (174.63mm) x 1.14”W (28.96mm), excluding handle, with 44 pin double sided edge connector.