



2-Channel
Rack Mount Type



4-Channel Rack Mount Type

ORACLE ENHANCED SERIES

INTELLIGENT LCD INDUCTIVE LOOP MONITORS

- ORACLE 2E SERIES – DUAL CHANNEL
- ORACLE 4E SERIES – QUAD CHANNEL
- ORACLE 4H SERIES – QUAD CHANNEL ½ WIDTH

The ORACLE 2E, 2EC, 4E, 4H & 4EC "ENHANCED" Series Loop Monitors from Eberle Design takes vehicle detection well into the 21st century. The ORACLE "ENHANCED" detectors not only indicate vehicle presence with great accuracy and reliability, but also incorporate a complete built-in loop analyzer for optimum detector set-up and loop diagnostic purposes.

Knowing More . . . Telling More . . .

For over 35 years Eberle Design Inc (EDI), has provided technicians and engineers with reliable, high quality mission critical component products that improve the performance and lifecycle of traffic control systems. The ORACLE "ENHANCED" series meet or exceed all applicable requirements in NEMA TS 1-1989 and NEMA TS2-2016.

ORACLE ENHANCED FEATURES

LCD View Screens:

The Loop Frequency, $\Delta L/L\%$, Loop Inductance, DEFLECTOMETER® Pie Graph, DEFLECTOMETER® Numeric Optimizer, DEFLECTOMETER® Streaming Graph, Frequency Stability Graph, Sensitivity Level, Mode of Operation, and Vehicle Counting Accumulator can be viewed on the front panel LCD for each channel simultaneously.

DEFLECTOMETER® Pie Graph & Numeric Value Indicator:

The LCD screen displays a pie graph which assists in determining the optimum sensitivity setting by showing the change in inductance caused by traffic moving over the loop. Changes to the sensitivity setting are reflected on the graph in real time during a Call state. Optimum sensitivity setting is reached when the DEFLECTOMETER® value reaches the value of 10 or 50% of the graph, based on typical size vehicles.

DEFLECTOMETER® Streaming Graph:

While the DEFLECTOMETER® pie graph displays an instantaneous indication of the current Call strength, the Streaming Graph display graphically shows the Call strength over time. The horizontal axis represents a six second interval. The vertical axis represents Call strength. The graph streams when there is a Call present.

Frequency Stability Graph:

The frequency stability graph provides the capability to analyze each frequency level to ensure proper selection of the nominal loop tuning frequency. The XY graph displays detector frequency samples with respect to the reference. A variation from the center of the graph depicts frequency instability on the channel. Basically a thin smooth graph offers a more optimum frequency selection over a thick uneven line.

Paired Channel Functions Directional Logic and 3rd Car Logic:

When both of the paired channels have detection in Directional Logic mode, the last channel to have detection will output a CALL until the detection for the last channel ends, even if the detection ends for the first channel. This feature is intended to be used in freeway ramps for wrong way detection and left turn lanes where other movements in the intersection tend to clip the detection zone of the left turn lane.

3rd Car Logic provides a Call output when both channels are in the Call state. 3rd Car Logic is typically used in left turn queues to provide logic for Protected-Permissive movements.

AccurateCount Mode: Model ORACLE 2EC & 4EC Only

AccurateCount mode produces a secondary output in addition to the primary CALL output for each vehicle entering the loop zone. Loop configurations ranges from a single loop to eight loops connected together in series. The LCD screen will report counts from the secondary "Count" outputs and is capable of accumulating 999,999 vehicle counts per channel before rolling over to zero. Note: The ORACLE 4EC (4-ch. model) does not provide secondary count outputs to the edge card connector. The Count Accumulator screen can be used to view the AccurateCount totals.

Programmable Navigation:

The ORACLE "ENHANCED" Series provides a flexible and simple programming process via the front panel bidirectional toggle switches. Moving through the menu choices has never been easier. The new QuikSet mode navigates to commonly used menu items quickly.

Loop Fault History Log:

For each channel, the LCD screen can display the last 25 loop fault conditions and power events.

Loop Inductance Display Indicator:

In the "Induct" display mode the LCD screen displays the equivalent system loop inductance (loop and lead-in inductance) within the range of 20 to 2500 microHenries.

$\Delta L/L$ Percentage Indicator:

The "Induct" display mode shows the percentage of inductance change during the CALL state.

LCD Display Back Lighting and Heater:

The Liquid Crystal Display (LCD) incorporates a white LED backlight. The backlight improves visibility in poor lighting conditions. A built-in heater improves operation in very cold temperatures.

Variable Character Channel ID:

Up to five characters or numbers can be selected to identify each channel of detection.

Point Probe Micro Sensor Support: Model ORACLE 2EC & 4EC Only

The ORACLE 2EC and ORACLE 4EC models support the use of point probe type micro sensors. Consult the factory for compatibility details.



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