

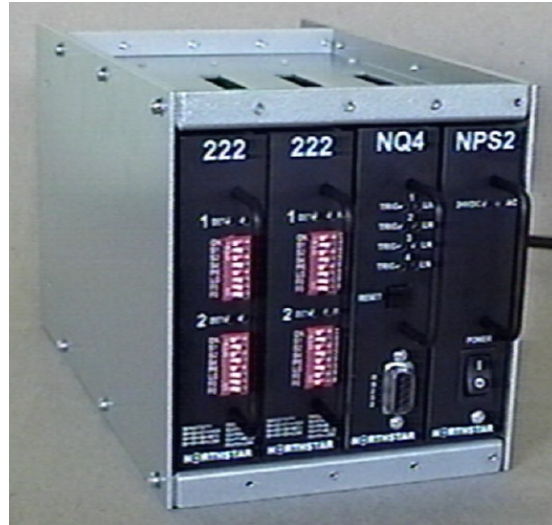


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## Queue Monitor/Speed Advisory System

### Model NQ4 Features:

- Self-contained, stand alone unit
- 2 outputs, two lanes of coverage
- Uses standard 222 detectors
- Simple-to-operate user interface
- Separate: lane, trigger, fault and power indicators
- Front panel DB9 for upload/download of information
- Power supply: 120VAC



The NQ4 has been specifically designed and engineered for use in special application traffic control and warning situations such as: Over speed/Over length detection, truck roll over advisory and blind curve warning. Information the user may view via laptop computer connected to the front panel DB9 of the NQ4's Logic Module include: current set-up, and current data such as speed, length and lane.

The NQ4 uses a pair of Northstar Controls 222 vehicle detectors which provide for a wide inductance range allowing use with many different size and configurations of loops. (For recommended loop sizes please consult the Northstar Loop Information Guide).

The NQ4 Logic Module includes separate indicators for: Lane, Trigger (output), Fault and Power providing quick visual verification of proper operation. Loop diagnostics are easily viewed with the 222 detector fault indicators, differentiating between current and historical faults thus facilitating troubleshooting.

Reliable operation and long field life are key engineering goals in every Northstar product.

# NQ4 Specifications

## Physical Specifications:

- Two (2) 222 dual channel vehicle loop detectors.
- Relay Alarm Outputs (connectable to either NEMA or 170 style controllers).
- Meets or exceeds NEMA temperature range.
- Standard International Style card rack.
- Power supply, internal resettable fuse, LEDs showing AC power 'ON' and 24V 'ON'.
- Logic module has front panel DB9 connector for user set-up and viewing of parameters.
- Standard 'wall socket' style power plug w/ground.
- All PCB's are conformal coated (moisture resistant coating).
- LED's for visual verification of outputs per lane.

## Field Programmable For:

- Loop size (feet).
- Loop spacing (feet and/or inches from leading edge to leading edge).
- Speed threshold (MPH).
- Vehicle length threshold (feet and/or inches).
- Output duration (seconds), output duration restarts for succeeding vehicle exceeding thresholds.

## Logic Module View Mode Via Laptop:

- View current set-up such as loop size, loop spacing, speed and length thresholds.
- View current data per lane.

## User Programmable Thresholds Via Laptop:

- Trigger (output) duration may be set from 0 – 20 seconds in 1 second increments.
- Speed threshold may be set from 0 – 120 MPH in 1 MPH increments.
- Length threshold may be set from 0 to 99 feet in 6" increments.

**Relay Output Rating:** 1A 277VAC/30VDC, with built-in lightning protection.

**Power:** 120 VAC.

**Size:** 6.5" W x 5.5" H x 9" D

## 222 Detector Specifications:

**Inductance Range:** 20uH to 2000uH.

**Temperature Range:** -40° F to +180° F.

**Lead-In Length:** up to 2000 ft. with proper lead-in and loop.

**Mechanical:** International size card: 4.5" H x 7" L, conformal coated, 44 contact (2 x 22), gold plated double sided edge connector.

**Front Panel:** 1.1" W x 4.5" H, handle: 3" L & extends 1" from front panel.

**Weight:** 6 oz.

**Supply Voltage** – 10.8 to 30VDC.

**Indicators** – front panel indicators include:

Detect – Red, solid during detect. Flashes during current fault  
Fault – Yellow, flashes during current or historical fault.

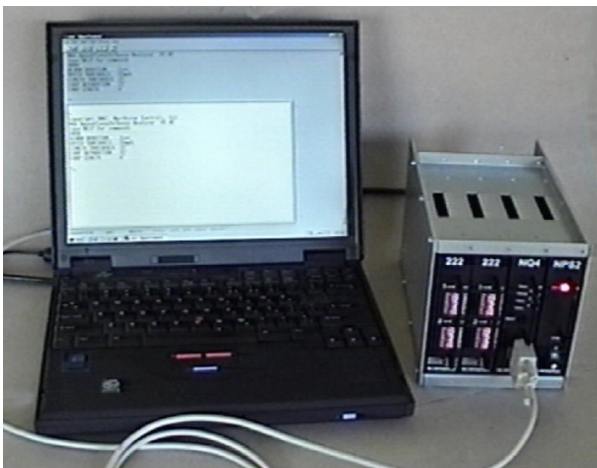
Flash sequence for fault types:

- Open = 1 blink, 1 space
- Short = 2 blinks, 1 space
- 25% inductance change = 3 blinks, 1 space

**Connector** – 2 x 22 Card Edge.

Pins	Functions
A	D.C. (-) Common
B	D.C. (+) Power
C	Reset
D	Loop Ch. 1
E	Loop Ch. 1
F	Output Ch. 1 Collector (Relay N.O.)
H	Output Ch. 1 Emitter (Relay Com.)
J	Loop Ch. 2
K	Loop Ch. 2
L	Chassis Ground
W	Output Ch. 2 Collector (Relay N.O.)
X	Output Ch. 2 Emitter (Relay Com.)

**Note:** The above optional relay connections are shown with correct power supplied and no vehicle present.



Specifications are subject to change without notice.

Northstar Controls L.L.C. warrants this product against defects in Manufacturing and workmanship for two years from date of shipment from the Northstar Controls L.L.C. factory.

L NQ4-Rev B

