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Four Channel – Rack Mount Piezo Detector

Model N554 Features:

- DIN Eurocard Format
- 4 selectable sensitivities.
- 4 selectable gain levels per channel.
- Remote control of detector operations including Sensitivity and Gain.



The N554 has been specifically designed to provide axle detection for use in vehicle classification systems for the tolling industry. The data provided by the N224-iS enables the latest algorithms to develop highly accurate vehicle classification.

N554 Specifications

Specifications

Front Panel Selections

Each channel has 5 DIP switch positions allowing selection of frequency and channel disable.

Sensitivity:

One of four sensitivity settings may be selected using the front panel mounted DIP switches. The setting will only affect the detection of vehicles indicated by the detect leds and discrete outputs not the resolution of the transmitted data. Sensitivity setting may also be set via the data channel.

Gain Selection:

One of four gain selections are available may be selected using the front panel Mounted DIP switch and also via the data channel. Selection of different gain settings may be required for different piezo types.

Scanning Speed:

The N524 may be operated in a fast scan mode wherein channels are scanned Every 2 ms as opposed to 5ms in normal scan mode. Data will be transmitted at 115.2 kbps while in fast scan mode.

Output:

The output will provide a 50 ms pulse to indicate a tire strike on the piezo sensor and front panel led indicator will flash to provide a visual indication of operation.

Supply Voltage:

10.8 to 14.4VDC, 40mA max

Temperature Range:

-34 C to +74 C.

Discrete Outputs:

Optically Isolated Solid State Transistor.
Solid State Outputs are rated Maximum Collector Voltage 47V, ON voltage <1.5V at 50mA.

Lightning and Transient Protection:

Piezo inputs are protected from transient voltages by means of board mounted surge protectors.

Mechanical:

DIN 3U Eurocard: 160mm x 100mm, conformal coated, DIN41612B connector. 1.0" (5HP) Wide front panel.

Weight:

7 oz.

Communications:

Data is transmitted to and from the unit via the rear connector (see pinout). Signal levels are 5V CMOS and transmission rate is 38.4kbps. Optionally the

Remote Operation:

Remote control of the detector allows ability to modify gain and/or sensitivity from a remote location via the serial communications channel.

Indicators:

Front panel indicators include:
Detect – Red, solid during detect.

N524 Detector Connector – DIN41612B

Pin #	Functions
32b	D.C. (-) Common
30b	D.C. (+) Power
29a	Reset
5a	Piezo Ch. 1 (+)
6b	Piezo Ch. 1 (-)
1a	Output Ch. 1, Collector
2b	Output Ch. 1, Emitter
12b	Piezo Ch. 2 (+)
13a	Piezo Ch. 2 (-)
14b	Chassis Ground
26a	Not Used
27b	Not Used
19a	Piezo Ch. 3 (+)
20b	Piezo Ch. 3 (-)
15a	Output Ch. 3, Collector
16b	Output Ch. 3, Emitter
26b	Piezo Ch. 4 (-)
27a	Piezo Ch. 4 (+)
25a	Data Transmit
28b	Data Receive
8b	Output Ch. 2, Collector
9a	Output Ch. 2, Emitter
22b	Output Ch. 4, Collector
23a	Output Ch. 4, Emitter

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.

