



TD180 SINGLE CHANNEL DETECTOR

The 8 series, Nortech's new flagship Vehicle Detector range addresses the market's need for a slimline, advanced vehicle detection solution. The powerful architecture facilitates sophisticated algorithms ensuring robust and reliable detection every time. The relay and opto outputs are fully configurable, allowing for alarms and alerts on desired events. Nortech's Automatic Frequency Selection (AFS) algorithms have been refined and optimised resulting in simplified setup and installation of complex multi-lane traffic sites.

The new wireless diagnostic unit, the DU800 allows for detector configuration and installation feedback on any iOS or Android device. This eliminates the need to adjust any mechanical interfaces once the unit has been installed. The DU800 also allows for vehicle profile streaming. The new slimline, DIN Rail mount housing allows for more physical connections than the traditional relay base and Nortech's innovative modular design allows for the expansion of detection solutions, including: output expansion units, channel expansion units, and communications interfaces.

The 8 series detectors simply work, offering peace of mind in even the most complex installation. They are available in both single and dual channel with either relay or opto outputs.

APPLICATIONS

- Traffic Control Applications
- Tolling Equipment
- Traffic Analysis

SPECIFIC FEATURES

Slimline Form Factor

The TD180 is the slimmest of the Nortech boxed traffic detectors facilitating installation in even the most physically constrained environments.

Expandable

The innovative expansion port on the TD180 allows for the addition of modules to the system. These modules include but are not limited to extra outputs, extra detection channels and communication modules

AFS

Automatic Frequency Selection (AFS) automatically examines the detector environment and sets the optimal operating frequency to ensure minimal interference and maximum reliability, significantly decreasing installation time. Frequency can also be manually set via wireless configuration channel.

PowerFail Memory

In the event of a power failure, the TD180 will retain the presence of the vehicle when power is restored. The TD180 is also able to determine if a vehicle has driven onto the loop while the power is off, and detect it immediately when the power returns. This is most useful in applications where damage to vehicles could occur (E.g. Rising Bollards). The PowerFail memory is infinite.

Diagnostics

Comprehensive, wireless diagnostics allow for accurate diagnosis of loop and installation problems as well as configuration adjustments to eliminate issues. This is made possible via Nortech's DU800 and Integr8 App.

TECHNICAL DATA

Self-tuning Range

20 μ H to 1500 μ H

Sensitivity

Ranging from 0.01% Δ L/L to 5% Δ L/L
Automatic Sensitivity Boost (ASB) is selectable

Frequency

Automatic Frequency Selection (AFS) or select from 6 frequency bands 30 -150kHz (Frequency is determined by loop geometry)

Automatic Frequency Selection

Automatically evaluates all frequency bands on startup and selects the most suitable in the given environment based on signal strength and noise.

Presence Time

Permanent or limited selectable

Drift Compensation

Incorporated method of tracking changes caused by environmental conditions at a rate approximating 1% $\Delta L/L$ per minute

Anti-locking

Incorporated algorithm accommodates the influence of positive inductance changes to avoid detector lock-up

Relay Outputs

2 programmable relays with NO, NC and COM connections exposed. Options for presence or pulse, pulse on detect, undetect or fault and each relay has configurable Filter, Delay and Extend options. Relays also configurable for alerts on classification events

Relay Mode

Relays can be configured to operate as Fail Safe or Fail Secure with the ability to actuate on a Fault condition in Fail Safe mode

Opto Outputs

3 Opto outputs provided as an alternative to relays. Each is individually configurable

Protection

Polarity protection, loop isolation transformer, zener diode clamping, gas discharge tubes, 50- 60Hz Noise Rejection

Power

12 - 24V $\pm 10\%$ (AC/DC)
90V - 230V $\pm 10\%$ AC 50/60Hz

Connections

DIN Rail mount
3 x 3 Way Connectors and 1 x 4 Way connector

Operating Temperature

-40°C to +80°C

Dimensions

Maximum outer dimensions are 94mm x 94mm x 22,5mm.

ORDERING INFORMATION

308FT4101

TD182 Single Channel 90-230V AC

308FT4102

TD184 Single Channel 12 -24V AC/DC

308FT4103

TD182 Single Channel 90 - 230V Opto Outputs

308FT4104

TD184 Single Channel 12 - 24V AC/DC Opto Outputs

