NORTECH
TRAFFIC

308DS4101_00



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.

The 8 Series detectors simply work, offering peace of mind even in 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 even in the most physically constrained environments.

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	20µH to 1000 µH.
Sensitivity	Ranging from 0.01% ΔL/L to 5% ΔL/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, with optional timeout on both.
Drift Compensation	Incorporated method of tracking changes caused by environmental conditions at a rate approximating 1% ΔL/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, pulse on 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 - 24$V_{AC/DC}$ ±10%. 90V - 230V_{AC} ±10% 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 - 24$V_{AC/DC}$
308FT4103	TD182 Single Channel 90 - 230V_{AC} Opto Outputs
308FT4104	TD184 Single Channel 12 - 24$V_{AC/DC}$ Opto Outputs