



Vehicle Detector Diagnostic Unit

DU100

The DU100 hand-held test instrument provides Advanced Diagnostic capabilities for use with all the latest Nortech Inductive Loop Vehicle Detectors. This device provides installation and service personnel with positive verification of the correct operation of a vehicle detector installation.

The DU100 communicates with a vehicle detector by means of a unique optical link associated with the detector power indicator LED.

The DU100 provides valuable information on loop and detector performance. The DU100 can only be used with Nortech brand detectors with diagnostics capability.

PART NUMBER

895FT0001 DU100 (English)

FEATURES

Compact, Self-Contained Test Unit:

The DU100 is a low cost, battery powered, hand-held test device designed for use on site with minimum effort and maximum results.

Exclusive Optical Readout:

The DU100 test unit extracts data from the vehicle detector by optical link. No inconvenient diagnostics plugs necessary on the detector. Advanced Diagnostics features are protected by design Patents.

No Service Disruption:

Diagnostics data is transmitted continuously by the detector during normal operation. Immediate display of actual operating conditions is possible as they occur without service interruption.

Loop Diagnosis:

Easy to read display of important detector operating parameters captured from the unit under evaluation make it easy to check detector performance.

Historical Data Availability:

Unlike other diagnostic units, the DU100 can process information retained in the detector to indicate historical operating conditions. This information is invaluable in proving intermittent faults and disproving product liability claims.

Unique Crosstalk Monitor:

The DU100 will automatically monitor operational data collected from multiple loop installations and report potential crosstalk situations.

APPLICATIONS

The DU100 is indispensable as a diagnostic test unit in the commissioning of new installations, for fault finding problem sites and for routine maintenance checks

- Setting detector sensitivity
- Performance checks on loop and installation
- Fault finding intermittent failures
- Eliminating detector crosstalk

Frequency Resolution:	1Hz
Sensitivity Resolution:	0,001% $\Delta L/L$
Display Element:	2 line x 16 character LCD
Display Contrast:	Adjustable via multi function keyswitch
Keyswitch:	1 x Mode selection 1 x Power-on/execute
Auto Power Off:	2 minutes after last operation
Optical Receiver:	Detachable wand with photo-diode.
Power Supply:	4 x 1.5V AA dry cell
Battery Life:	>10 hours continuous
Operating temperature:	0°C to +50°C
Dimensions:	200mm (height) x 100mm (width) x 40mm (depth)
Weight:	380gms including batteries

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Test Menu Functions:

Loop mode:

Displays the instantaneous loop frequency (F_{loop}) and sensitivity ($\Delta L/L$) of the currently selected channel. This mode is used to monitor actual changes as vehicles traverse the loop.

Frequency mode:

Displays the original loop frequency (F_{init}) and the maximum frequency drift (F_{drift}) since the last detector reset.

Sensitivity mode:

Displays the maximum ($\Delta L/L_{max}$) and minimum ($\Delta L/L_{min}$) inductance change recorded by the detector since the last reset.

Status mode:

Indicates the current detector and loop status (tuning, detect, open circuit loop, short circuit loop etc.).

Time mode:

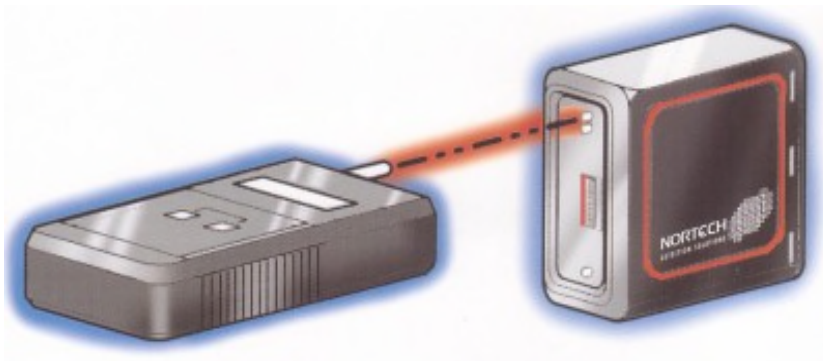
Records the elapsed time since the last fault and indicates the cause of the detector reset.

Crosstalk mode:

Allows evaluation of a potential crosstalk situation between two loops. Ensures adequate frequency separation between closely located loops on a site.

Built-in self test mode:

Confirms proper operation of the diagnostic unit. Includes testing of the Eprom, display, keyswitches and optical receiver.



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