

SLD4 Loop Detector

Product Datasheet

YUNEX TRAFFIC

Overview

In an extensive range of applications, Yunex Traffic induction loop detectors have proven themselves invaluable for the essential detection of vehicles, motorbikes and cyclists on the road network. Designed with unrivalled robustness and accuracy in mind, the SLD4 loop detectors ensure the provision of reliable data under all ambient conditions. This state-of-the-art technology can be used in a wide variety of cases and can complement other detectors from the Yunex Traffic Detection portfolio.

SLD4 loop detectors use advanced loop detection algorithms to provide exceptional detection that is compliant with TOPAS 2512 specifications. The detectors interface with all typical traffic control equipment and the ability for automatic set-up means that optimal performance is always achieved.



Innovative technology

Induction loop detectors function via a magnetic field which is generated by the loop that is placed in the road. Vehicles and cyclists passing over this magnetic field cause an increase in magnetic frequency that is detected by the system allowing for various triggers in different applications.

Automatic set-up

Installations and networks involving multiple detectors often pose a significant challenge when manually establishing the settings, detection parameters and frequency of individual loop detectors. These large installations can suffer from poor detection rates, communications failures and reduced efficiency.

To combat this, the SLD4 provides a unique feature where, when fitted in a rack with other SLD4 detectors, all the units are able to automatically and wirelessly communicate with each other to configure and optimise critical parameters.

The option for manual set-up is available through DIP switches located on the detector unit as well as through a PC configuration tool that is designed for more advanced applications.

This allows access to a wide range of customisable parameters where detectors can be individually tailored for specialist applications.

Enhanced classification

The enhanced version of the SLD4 loop detector family features sophisticated length-based classification with configurable outputs which can be set to activate when specific conditions are detected, such as large vehicles exceeding a predefined speed.

As well as offering standard vehicle detection the latest version of the SLD4 can also be used in specialised bus, tram and Light Rail Transport (LRT) schemes and other similar applications where excellent detection accuracy is required.

The enhanced SLD4 still delivers the self-tuning and fully automatic set-up features of the standard SLD4, ensuring optimum and reliable performance without interference and can also be powered from either AC or DC supplies.

Elexon Code

Description	Part Number	Charge Code	Nominal Watts
SLD4 Vehicle Loop Detector	667/1/45200/001	79 07 001 003 100	1

For complete information on Elexon codes please refer to Yunex document 667/RE/29050/000

Technical Specification

Power Supply	24V AC +20%, -25% (50/60Hz) 10-32V DC
Power Consumption	0.75W with LEDs off 1.0W with LEDs on
Operating Temperature	-25°C to 80°C
Dimensions	160mm x 100mm x 25mm
Output Channels	4 independent loop channels with solid state outputs
Isolated Relay Outputs	One isolated changeover 'detect' output per loop Withstand: 75V DC Capacity: 50mA continuous with 2.5V max drop 300mA/10ms pulse
Power Break Support Times	50ms @24V AC 20ms @24V AC -25%
Loop Operating Frequency	30KHz to 120KHz
Loop Inductance	20µH to 2000µH (including feeder cable)
Loop Feeder Length	Up to 300m
Extended Loop Feeder Length	Up to 1000m (limitations on tuning frequency and sensitivity ranges apply)
Recommended Loop Cable	1.5 mm2 or 2.5mm2
Sensitivity (Standard)	8 switch settings levels from 0.01% to 1% ΔL/L
Sensitivity (Enhanced)	Freely configured from 0.004% to 10% ΔL/L using the configuration tool
Presence Time	DIP switch configurable: • 4 minutes (default) • 35 minutes • 3.5 seconds • 2 hours
Detection Speeds	Vehicles: 0 km/hr (0 mph) to 250 km/hr (155 mph) Cycles: 0km/hr (0 mph) to 40 km/hr (25 mph)
Automatic Set-up Features	• Loop Operating Frequency • Loop Sensitivity Supports up to 16 loop detector cards
Manual PC Set-up Features	• All parameters freely settable by PC configuration tool • Vehicle Capture • Vehicle Simulation • Access via a dedicated USB cable using the front panel connector
Approvals	• TOPAS 2512A • EMC: EN50293 • Radio Approval: EN 300-330 • Safety: EN60950

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