

SLD4 loop detector

Traffic Solutions

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The Siemens SLD4 family uses the latest inductive loop detection algorithms to provide exceptional detection performance in a wide range of applications. Compliant with TR2512, the detectors interface with all popular traffic control equipment and the automated set-up features ensure optimal performance is always achieved.

Operational details

The SLD4 loop detector family offers self-tuning functionality in a 3U Eurocard format with a standardised pinout compliant with TR2512. Providing four separate detection channels, the SLD4 offers fully solid state outputs designed for maximum reliability in both normally open (n/o) and normally closed (n/c) configurations.

The detectors may be powered from either AC or DC supplies and offers both low power and full operation down to 10V DC, which makes support within battery powered equipment a viable option where needed.

A range of LEDs on the front panel provide indication of loop detection and faults. The LEDs are disabled after a preset time to reduce power consumption but can be activated when an Engineer is present by means of a push button on the front panel.

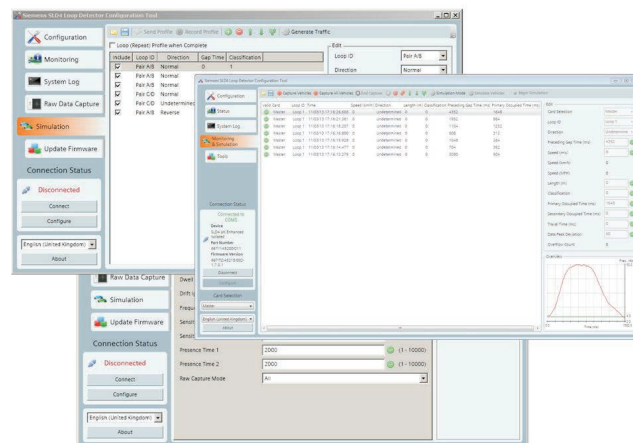
Automated set up

In large installations, manual setting of frequency and sensitivity parameters can often be a challenge, and failure to achieve this correctly can cause detectors to 'chatter' or otherwise fail to operate correctly.

The SLD4 offers a unique feature where, when fitted in a rack with other SLD4 detectors, all units are able to communicate with each other to automatically set critical parameters. Once all the detectors are fully setup, LEDs on the front of each detector flash in synchronism to signal that auto-setup has been achieved.

Manual setup is also possible, with sensitivity level, presence time and frequency selection being offered via DIL switches.

For advanced applications a PC tool is available which enables access to a wide range of parameters, allowing detectors to be individually set up for specialist applications. Connection to the detector is through a jack plug on the front panel using a dedicated USB cable.



- Four detection channels with solid state outputs for maximum reliability
- Fully automated set-up
- Self-tuning operation
- High detection accuracy
- Vehicle classification
- Low power operation
- Standard 3U Eurocard format
- Designed to meet UK specification TR2512

Advanced features

The SLD4 family offers an advanced detector version featuring sophisticated length based classification and other special functions including Bus and Tram detection.

Using the configuration tool, outputs can be set to only activate when certain vehicle types are detected, for example large lorries exceeding a predefined speed.

Additionally the SLD4 Advanced Version can be set up to provide bus detection for use in Bus Gate and similar applications and is also able to be configured to provide detection of trams in LRT schemes.

Technical specification

Approvals

- Approved to TR2512
- Radio approvals to ESTI 300-330
- CE marked

Physical characteristics

- Standard 3U Eurocard outline (160mm x 100mm x 25mm nominal)
- 4 independent loop channels with solid state outputs

Loop parameters

- Loop operating frequency: 30-120 KHz
- Loop inductance: 20-2000 microhenries including feeder cable
- Loop feeder length: 300m min
- Extended loop feeder length: up to 1000m (limitations on tuning frequency and sensitivity ranges apply)
- Recommended loop cable: 1.5 or 2.5sq.mm
- Sensitivity: 8 switch setting levels from 0.01% to 1% dL/L. Advanced detector version is freely settable from 0.004% to 10% dL/L using configuration tool
- Four preset presence time selections between 3.5 seconds and 2 hours. (All basic parameters settable by DIL switches)

Auto set-up features

- Automatic setup of:
 - Loop operating frequency
 - Loop sensitivity(Operates between up to 16 loop detector cards)

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

Detection speeds

- Vehicles (including motor-cycles): 0 – 250km/h
- Cycles: 0 – 40km/h

Power supplies

- 10V to 32V DC
- 18V to 29V AC RMS
- Max power 1W (LEDs not illuminated)
- Power break support times:
 - 50ms @24V AC
 - 20ms @24VDCGuaranteed to restart automatically after power break

Safety

- Meets electrical safety requirement EN 60950

Environmental

- Operating temperature: -25°C to +80°C
- Humidity: 95% (non-condensing)

Electromagnetic compatibility

- Meets emission and susceptibility requirement of EN 50293

Part numbers

667/1/45200/001 - SLD4 standard version

667/1/45200/011 - SLD4 advanced version

Enhanced version offers additional features over the standard version:

- Freely settable parameters outside limits set by DIL switches
- Programmable Digital Output Configurations
- 8+1 Length based classification



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