SWARCO TRAFFIC SYSTEMS GMBH

CLASSIFICATION LOOP DETECTOR MC2224SL
VEHICLE CLASSIFICATION WITH SINGLE LOOPS

SWARCO TRAFFIC SYSTEMS GMBH is a member of the internationally active SWARCO group, the one-stop shop for road markings, signage, signalisation and traffic management – your reliable partner for traffic solutions.
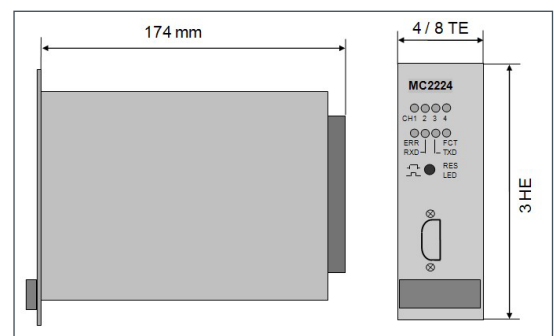
The MC2224SL loop detector was specifically designed for vehicle detection with classification by means of single loops for traffic data acquisition and traffic control.

The single loop detector is not suited for speed and length measurement or detection of driving direction and wrong way drivers. Inherent to its functional principle, the excellent classification accuracy of the double-loop variants is reduced with the SL version.

FEATURES:

- Acquisition of traffic data in accordance with TLS[1]/BASt[2] for 4 lanes with single loops, occupancy rate in connection with a controller
- Serial data transfer via interface
- 4 Open collector switching outputs for detection signals or optional functions
- Maintenance-free
- Low power consumption
- Highly-reliable data acquisition, absolutely independent of climatic conditions and insensitive to interferences
- Automatic alignment, regulation of temperature fluctuations and non-volatile storage of all operating data
- For feed cable lengths up to 300 m with TLS-loops only one pair of wires per loop necessary
- Easy and space-saving integration due to Euro-card format for 19" rack (selectable width: 20 or 40 mm)

---

1 TLS: Technical delivery terms for roadway stations
2 BASt: German federal highway research institute

Dimensions

SWARCO I First in Traffic Solutions.

SWARCO TRAFFIC SYSTEMS GMBH

CLASSIFICATION LOOP DETECTOR MC2224SL

FUNCTIONAL DESCRIPTION:

The MC2224SL is a classification detector, operating with one induction loop per lane, in accordance with TLS specification. Based on the proven and tested MC2024 / CD9054 the usages of powerful 32-Bit controllers allow the improvement of all features such as classification accuracy, power consumption, as well as the function range.

The MC2224SL classifies the vehicles in (8+1) classes acc. to TLS. When TLS loops are used, the classification meets the accuracies required by the German federal highway research institute and is not influenced by e.g. weather conditions. The vehicle type is determined by means of passing-curves which have characteristic features depending on the different classes and the loop types used.

Via RS232 service interface and RS485 data interface, the detector provides the following data:

Single vehicle data:	vehicle class, time of occupancy, time gap
(8+1) classes acc. to TLS:	other vehicles / motorbike / car / van / car with trailer / HGV / HGV with trailer / HGV articulated / bus

Via the RS485 bus single-vehicle data is transferred to a controller, which takes over further data aggregation acc. to TLS-specifications. The detector automatically adjusts itself to the attached loop/feed-cable combination. Variations in temperature have no influence on data acquisition. The measuring systems are permanently checked for short or open loops, only when a definite malfunction is detected, systems are put into a failure condition. Short measuring intervals and a new procedure for speed measurement provide for the high accuracy of the measured data and the high detection speed, according to the requirements of the German federal highway research institute.

TECHNICAL DATA:

Supply voltage	5 V DC +/-5 % (regulated and load-independent)
Power consumption	max. 90 mA / 0.45 W (5 V DC, standard switching output Open Collector)
Interfaces	RS485 data interface (plug connector), RS232 service interface (on front)
Switching outputs	switching output per channel: Open Collector, common error output: Open Collector optional: electronic relay contact
Dimensions	height: 128 mm, length: 190 mm, width: 20 mm (4 TE), optional 40 mm (8 TE),
Operating / storage temperature	-25°C to +80°C / -40°C to +80°C
Protection	III (low voltage < 60 V DC)
Design	plug-in card for 19" rack, to be installed in housing or cabinet with IP54 necessary (pollution degree 2)
Terminal strip	DIN 41612, type F: 48-pole strip, 3-row

For detailled information about the function, operation and pin assignment as well as further technical data see user manual.

SWARCO TRAFFIC SYSTEMS GMBH

SWARCO TRAFFIC SYSTEMS GMBH is one of the leading suppliers of intelligent traffic systems in Germany. Building on many decades of experience, it offers a wide range of innovative solutions for urban and interurban traffic management, including parking and traffic detection. Its nationwide service and maintenance network guarantees highest possible system availability and improved road safety. With economical, sustainable, and environmentally friendly technologies we help ensure smooth and safe traffic flows.