

CLASSIFICATION LOOP DETECTOR MC2224SP

VEHICLE CLASSIFICATION AND SPEED MEASUREMENT



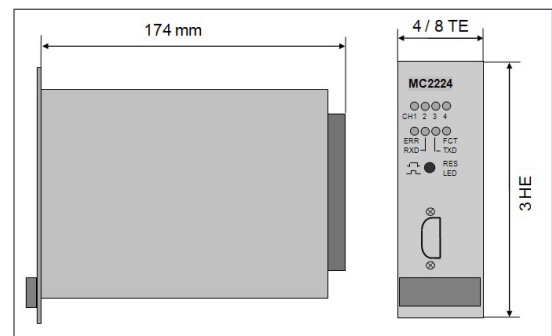
SWARCO TRAFFIC SYSTEMS GMBH is a member of the internationally active SWARCO group, the one-stop shop for road markings, signage, signalisation and traffic management – your reliable partner for traffic solutions.

The MC2224SP loop detector was specifically designed for the direct control of e.g. optical traffic signs considering vehicle class and vehicle speed.

FEATURES:

- Switching signals depending on vehicle class and/or vehicle speed for the direct control of a VMS with parameterizable blinking frequency and number of light impulses
- Acquisition of traffic data in accordance with TLS¹/BAST² for two lanes with speed and length measurement, detection of direction and wrong way drivers with double loop systems, occupancy rate in connection with a controller
- Serial data transfer via interface
- 4 digital switching outputs plus common error output
- 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

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FUNCTIONAL DESCRIPTION:

The MC2224SP is a 4-channel classification detector, operating with two induction loops per lane, in accordance with TLS specification. According to the required classification, the detector is available (8+1), (5+1) or 2 class version. 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 detector can provide the following single-vehicle data via the RS485 interface, depending on the TLS classification version:

Single vehicle data:	vehicle class, speed, length, distance, time of occupancy, time gap, driving direction
2 classes acc. to TLS:	car-similar vehicles (other vehicles, motorbike, car, van) / HGV-similar vehicles (car with trailer, HGV, HGV with trailer, HGV articulated, bus)
(5+1) classes acc. to TLS:	other vehicles / car group (motorbike, car, van) / car with trailer / HGV / HGV combination / bus
(8+1) classes acc. to TLS:	other vehicles / motorbike / car / van / car with trailer / HGV / HGV with trailer / HGV articulated / bus

With the MC2224SP, signals can be switched on the switching outputs channel 1 and 2 resp. channel 3 and 4, considering the vehicle class and speed. Alternatively, vehicle class or vehicle speeds (switching signals when exceeded) as well as a combination of both can be parameterized via service interface (LoopMaster).

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

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SWARCO TRAFFIC SYSTEMS GMBH Business Unit Detection
 Niederkircher Straße 16, D-54294 Trier, Germany, T. +49-651-81002-0, F. +49-651-81002-979,
 E. detection@swarco.de, www.swarco.com/sts