



CLASSIFICATION LOOP DETECTOR MC3224SP



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 MC3224SP loop detector was specifically designed for the direct control of e.g. optical traffic signs considering vehicle class and vehicle speed.

FEATURES:

- 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
- Switching signals depending on vehicle class, vehicle speed and driving direction for the direct control of a variable message sign with parameterizable blinking frequency and number of light impulses
- 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
- Easy and space-saving integration due to DIN rail mounting
- TBUS system: bus system integrated in DIN rail for power supply, RS485 interface and detector synchronization
- Complete integrated overvoltage protection for inductive loops, no additional components necessary

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



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FUNCTIONAL DESCRIPTION:

The MC3224SP now offers the functions and outstanding features of the SWARCO TRAFFIC SYSTEMS classification detectors in 19" plug in technology also in a DIN rail mount version. This integration minimizes the wiring effort and significantly reduces the required space.

The MC3224SP 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 MC3224SP detector, signals can be switched on the switching outputs channel 1 and 2 resp. channel 3 and 4, considering the vehicle class, vehicle speed and driving direction. Alternatively, vehicle class or vehicle speeds (switching signals when exceeded) as well as a combination of both and optionally the driving direction can be parameterized via service interface (LoopMaster). By specifying the driving direction the switching signals for vehicles in the opposite direction are deactivated.

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	nominal 24 V DC, range 10 V DC - 38 V DC
Power consumption	max. 29 mA / 0.70 W with 24 V DC
Interfaces	RS485 data interface, service interface at front (USB adapter type <i>KA-SERVICE_AJ_USB</i> optionally available)
Switching outputs	switching output per channel: Open Collector
Dimensions	DIN rail enclosure; height: 99 mm, length: 114,5 mm, width: 22,5 mm
Operating / storage temperature	-25°C to +80°C / -40°C to +80°C
Protection	III (low voltage < 60 V DC)
Design	DIN rail mounting (TS35 EN50022), to be installed in housing or cabinet with IP54 necessary (pollution degree 2)
Terminal strip	- MSTBT 2.5/4 (top and bottom) - TBUS system 1.5/5 (back side) - functional grounding via integrated contact and DIN rail

For detailed 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.