



CLASSIFICATION DETECTOR MC201xSE

FOR TRAFFIC MONITORING AND SPEED ENFORCEMENT (URBAN / INTERURBAN)

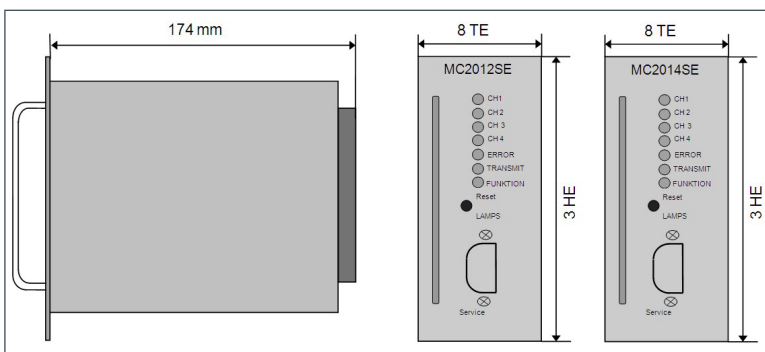


SWARCO TRAFFIC SYSTEMS GMBH is a member of the internationally active SWARCO group, the one-stop shop for road markings, signage, signalisation and traffic management – your reliable partner for traffic solutions.

The MC201xSE loop detector was specifically designed for speed enforcement applications with high accuracy up to 250 km/h for urban and interurban enforcement systems.

FEATURES:

- Speed enforcement and classification with motorcycle detection on one lane with MC2014SE
- Speed enforcement and classification without motorcycle detection on one lane with MC2012SE
- Multiple loop configurations, optimized for specific city or highway applications (with or without motorcycle detection)
- Data interface RS485 for single vehicle data
- Simultaneous traffic data acquisition acc. to TLS using IOC (function group 1) is possible
- Reliable data acquisition independent from environmental influences (weather conditions, day / night time)
- Single vehicle data: vehicle class, speed, length, distance, time of occupancy, time gap, driving direction
- Classification in (5+1) vehicle classes: other vehicles / car group (car, van) / car with trailer / truck / truck combination (truck t, truck a) / bus; additionally: motorcycles (only MC2014SE)



Dimensions



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FUNCTIONAL DESCRIPTION:

The MC201xSE detector was developed for high accuracy speed measuring using two (MC2012SE, without motorcycle detection) or four (MC2014SE, with motorcycle detection) loops per lane. Special algorithms control the loop signals to ensure highly reliable speed measurements. If the loop signal is incorrect, a qualifier bit in the single vehicle telegram will be set to inform the enforcement system about the unacceptable speed value. The telegram is sent via RS485 data interface after the vehicle has left the loop system. In addition to the speed, the telegram contains information about vehicle type and length, the time gap between two vehicles, loop occupation and driving direction. Collecting traffic data according to TLS by using an FG1-IOC is therefore also possible.

The detector has one switching output per loop. These outputs are activated the moment vehicles cause attenuation on the loops, triggering speed enforcement cameras in real time.

For both fields of application (cities and highways) loop configurations optimized for required space and speed accuracy are specified. For motorcycle detection, two 1m loops are added.

The detector automatically adjusts to the attached loop/feeder cable combination. Variations in temperature have no influence on data acquisition. The measuring systems are permanently checked for short circuited or open loops. Only when a definite malfunction is detected, systems are put into a failure condition. If one loop of a TLS double loop system is disturbed, the remaining loop still supplies data on time of occupancy, time gap, as well as a classification of car-similar and truck-similar vehicles.

The detector type MC201xSE controls the loops by means of a continuous sinus signal (no multiplexing!). Adjusting different discrete frequency values avoids measuring channel interference, also for several MC201xSE. The patented analog measuring method allows connection of up to 1000 m of feeder cable for TLS-loops (in case of a speed enforcement limited to 100 m).

TECHNICAL DATA:

Supply voltage	5 V DC -2 % / +5 % (regulated and load-independent)
Power consumption	MC2012SE: 300 mA / 1.5 W MC2014SE: 400 mA / 2.0 W
Interfaces	RS485 data interface (plug connector), RS232 service interface (on front)
Switching outputs	Occupancy signal per channel (CH1 – CH2 / CH1 – CH4); common error output (ERROR) Standard: Open Collector; Optional: Optokoppler, electronic relay
Dimensions	height: 128 mm, length: 200 mm, width: 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 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.

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