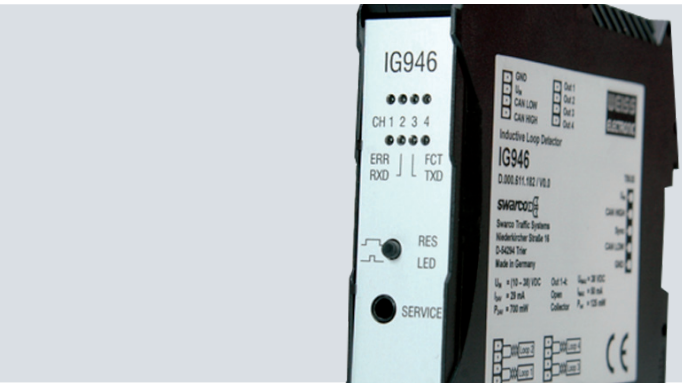

INDUCTIVE LOOP DETECTOR IG946

FOR URBAN TRAFFIC (INCLUDING PUBLIC TRANSPORT)

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 4 channel loop detector IG946 is used for signal output in traffic light installations via CAN bus and switching outputs as well as for traffic counting. The detector is designed for DIN-rail mounting and includes a complete overvoltage protection module for the inductive loops.

FEATURES:

- CAN bus interface functions:
  Detection status, error status, detection edges with occupancy time and time gap e.g. for determining the occupancy rate for congestion detection, complete parameterisation, additional single vehicle data when using double loop systems (speed, length, driving direction)
- Easy and space-saving integration due to DIN rail mounting
- TBUS system: bus system integrated in DIN rail for power supply, CAN bus interface and detector synchronization
- Complete integrated overvoltage protection for inductive loops, no additional components necessary
- Wide power supply range: 10 V DC - 38 V DC, nominal voltage 24 V DC
- Wide inductance range: 20 µH - 2000 µ
- 4 open collector switching outputs for detection signals
- Convenient operation by means of SWARCO TRAFFIC SYSTEMS PC operating program LoopMaster via Service Interface, Saving of unit or application-specific parameter sets by means of LoopMaster
- Variable parameterisation allows use in practically all application fields of induction loop technology
- Detection of vehicle length, speed and driving direction when using a double loop system (e.g. TLS type 1, TLS type 2, ASTRA-SWISS10 or similar)
- Bicycle classification including speed and driving direction when using the SWARCO bicycle loop system
- Bus classification function with output on CAN bus and switching output
- Directional logic with output on switching output
- Loop activation in multiplex mode
- Wide adjustment range for the base frequency
- Low power consumption
- Nonvolatile storage of the operating parameters in EEPROM
- Detector synchronization
- Service interface in front

Quality with a promise.
We have been certified pursuant to
DIN EN ISO 9001

SWARCO I First in Traffic Solutions.

INDUCTIVE LOOP DETECTOR IG946

FUNCTIONAL DESCRIPTION:

The IG946CAN is an inductive loop detector for the connection of up to four inductive loops and was specifically developed for traffic technology applications.

The IG946 offers the functions and outstanding features of the SWARCO TRAFFIC SYSTEMS induction loop detectors in 19“ plug in technology as a DIN rail version and includes a complete overvoltage protection module in one device. This integration minimizes the wiring effort and significantly reduces the required space.

The IG946 has a serial CAN bus interface for data transfer. The bit rate is automatically recognized in a range of 10-500 kbps and the addressing can be effected by a DIP switch.

The CAN protocol is specifically designed for traffic control applications. Standard data contents are e. g. detection status, error status and detection edges with occupancy time respectifly time gap. In a double loop system, additional data such as vehicle speed, length and direction are transmitted. A classification into bicycle / non-bicycle supplemented by speed and driving direction is possible when using a SWARCO bicycle loop system. Via the CAN bus interface the full parameterization of the detector is also possible.

The detector processes the loops one after the other in a predetermined sequence (multiplex mode); i.e. there is always only one loop switched as inductance L to the LC oscillating circuit of the detector. Since there is always only current flow through one loop, the channels of a detector cannot interfere with each other.

If a metallic object is located within the range of action of the connected induction loop, the frequency of the LC oscillator also changes owing to reduction in the loop inductance. This change is determined by the detector evaluation circuit and, if the turn-on threshold is exceeded, a busy signal occurs on the switching outputs of the channel (open collector). Different output functions, e.g. presence signal and pulse signal are possible.

The detector is configured using the serial service interface on the front of the unit. The free PC service software *LoopMaster* provides a convenient operator interface for modifying and displaying all parameters and diagnostic values. The configured parameters are stored in a non-volatile memory (EEPROM).

TECHNICAL DATA:

Supply voltage	nominal voltage 24 V DC, range: 10 V DC - 38 V DC
Power consumption	0.7 W - 1.0 W with 24 V DC
Loop inductivity	allowed range: 20 µH - 2000 µH; recommended range: 80 µH – 250 µH
Sensitivity	0.5 % - 0.007 % (frequency change $\Delta f/f_0$ in %)
Interfaces	CAN bus interface service interface at front (USB adapter type KA_SERVICE AJ-USB 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 class	III (low voltage < 60 V DC)
Installation	DIN rail mounting (TS35 EN 50022) to be installed in housing or cabinet with IP54 required (pollution degree 2)
Terminal strip	MSTB 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.

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

IG946_20_en Printed in Germany