

TRAFFIC DETECTORS TDC3 SERIES

NON-INTRUSIVE TRAFFIC DETECTORS FOR SINGLE LANE TRAFFIC DATA ACQUISITION

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 TDC3 Series are advanced traffic detectors using Doppler Radar, Ultrasound and Passive Infrared technology. Comprehensive traffic data including individual vehicle class, speed, length, occupancy time and time gap are provided via RS 485.

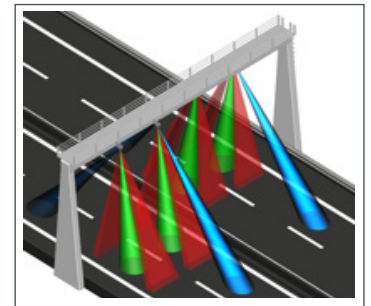
TYPICAL APPLICATIONS:

TDC3 Series detectors are specifically designed for a variety of **Traffic Data Collection** and traffic control applications where inductive loops have been used in the past:

- Vehicle classification
- Individual vehicle speed
- Vehicle counting (volume)
- True presence, queue and wrong-way driver detection
- Occupancy and headway / time gap measurement

WORKING PRINCIPLE:

TDC3 traffic detectors measure the speed of each vehicle using the Doppler shift of the reflected microwave frequency. The ultrasonic sensor system scans the height profile of the passing vehicle and the PIR zones obtain the vehicle position (except TDC3-2) within the observed lane.

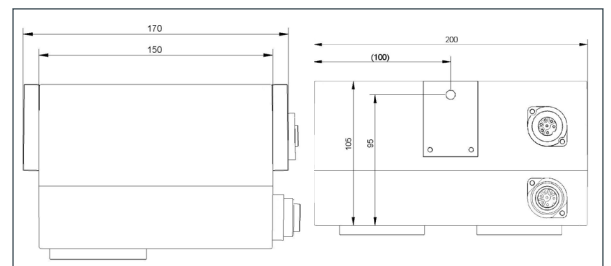


Field of view

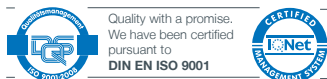
MOUNTING:

Recommended mounting points are gantries or other overhead structures above the lane centre. Clearly superior performance and reliability are a result of:

- Three independent detection technologies
- Full temperature compensation across entire temperature range
- Redundant system functionality



Dimensions



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HIGH QUALITY PRODUCT WITH MULTIPLE FEATURES:

- Multi technology detection: Three independent physical detection principles
- Standardized vehicle classification: German TLS for 2, 5+1 and 8+1 classes
- Auto calibration: Via according installation software within the recommended height above the lane
- Detection of lane-changing vehicles and vehicles travelling between adjacent lanes (except TDC3-2)
- Detection of standing vehicles
- Detection of wrong-way drivers
- Wide operating temperature range (-40 to +70°C): Optimum performance in all weather and climate conditions
- Remote configuration and setup: With according installation program

TECHNICAL SPECIFICATIONS

Supply Voltage	10.5 ... 30 V DC
Power Consumption	max 110 mA typ. 80 mA @ 12 V DC
Output (Data Transfer)	RS 485 (other options on request)
Turn-on Time	typ. 20 s from power on
Dimensions	see drawing
Case Material	Polycarbonate, dark grey
Mounting Points	M8, stainless steel V4A
Weight	app. 1'700 g (3.75 lbs) without bracket
Doppler Radar	K-Band 24.05 ... 24.25 GHz
Ultrasonic Frequency	40 kHz
Ultrasonic Pulse Rate	10 ... 30 pulses per second
PIR Sensors	2 channel PIR (TDC3-2) 7 channel PIR curtain (TDC3-3 /-5 /-8)
PIR Spectral Response	6.5 ... 14 µm
Accuracy Counting	typ. ± 3%
Accuracy Speed	typ. ± 3% (> 100 km/h); typ. ± 3km/h (≤ 100 km/h)
Accuracy Classification	Vehicle classes according to TLS The specifications refer to free traffic flow, detector operated in recommended setup.
Operating Temperature	-40°C to +70°C
Humidity	95 % RH max.
Sealing	IP 64 splash proof

ACCESSORIES:

Interface module USB-IF485 & Software:
For the communication between detectors and a PC during commissioning and maintenance an interface module in combination with the dedicated software is necessary. The interface module and software has to be ordered separately.

Mounting Accessories:

Mounting hardware and cable connectors are not part of the detector delivery unless ordered separately. Information about the available accessories to accommodate various mounting and operation scenarios are made available separately.

MODEL OVERVIEW:

- RD_TDC3-2 (2 Classes)
- RD_TDC3-3 (2+1 Classes)
- RD_TDC3-5 (5+1 Classes)
- RD_TDC3-8 (8+1 Classes)



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.