TDC3 Series

Model TDC3-2-F: Side-mount for Traffic Detection on Closest Lane such as Entry- and Exit-Ramps

The TDC3 Series are advanced traffic detectors using Doppler Radar, Ultrasound and Passive Infrared technology. TDC3-2-F models provide comprehensive traffic data including individual vehicle class (by vehicle length), per vehicle speed, occupancy time and time gap.

Typical Applications

The two TDC3-2-F Models from the TDC3 Series of traffic detectors were specifically designed for a variety of **T**raffic **D**ata **C**ollection and traffic control applications from the side of the road:

- Traffic volume measurement
- Length-based vehicle classification
- Individual vehicle speed measurement
- True-presence detection, queue detection
- Wrong-way driver detection
- Occupancy and headway / time gap measurement

To ensure accurate data and reliable operation, the maximum vehicle speed at the monitored site should **not exceed** 100 km/h (60 mph).

Working principle

TDC3 traffic detectors measure the speed of each vehicle using the Doppler shift of the reflected microwave frequency. The ultrasonic sensor system detects the presence of the passing vehicle and the PIR sensors are used for supporting and plausibility testing. A vehicle record is created and transmitted for each vehicle that passes in front of the detector

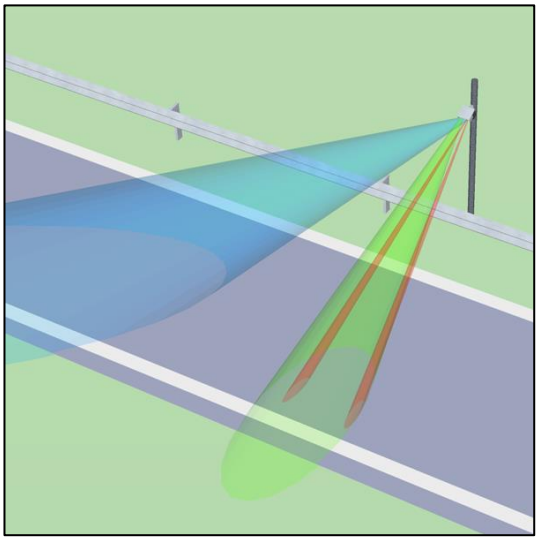
Mounting

Preferred mounting locations are stable structures on the road side, such as poles of gantries or street lights. The distance between the front of the detector and the beginning of the lane where measurement shall occur must be between 0.5 and 8 meters, the mounting height must be between 1.5 and 2.5 meters above the lane surface to ensure optimal performance. Only the traffic of **the nearest lane** is measured!

Features

- **Mounting on the Left or Right Side of the Road**
  Two different models specifically designed for mounting on left or right side of the road
- **Length-based Vehicle Classification**
  In car-like and truck-like vehicles
- **Multi Technology Detection**
  Three independent physical detection principles
- **Auto calibration**
  Auto calibration within the recommended height above the lane with dedicated software
- **Queue Detection**
  Detection of standing vehicles
- **Wrong-way Driver Detection**
- **Wide Operating Temperature Range –40 to +70°C (–40 to +158°F)**
  Optimal performance in all weather and climate conditions
- **Remote Configuration and Setup**
  With dedicated installation program

Field of View (Typ. TDC3-2-F-L)

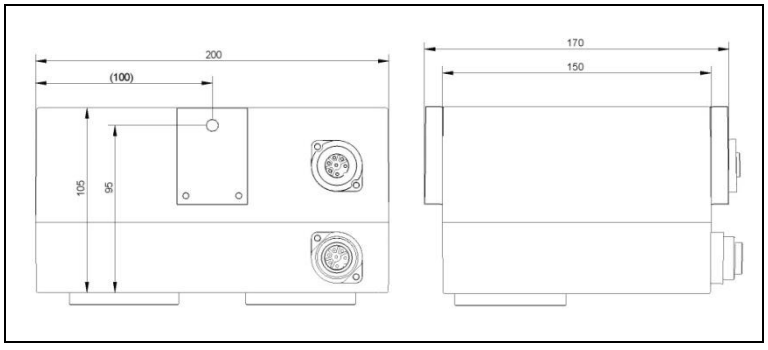


Technical Specifications

Electrical	
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
Mechanical	
Dimensions	see drawing
Case Material	Polycarbonate, dark grey
Mounting Points	M8, stainless steel V4A
Weight	app. 1'700 g (3.75 lbs) without bracket
Detection	
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
PIR Spectral Response	6.5 … 14 µm
Accuracy	
Counting	> 97%
Speed	≤ 100 km/h: < 3.0 km/h > 100 km/h: < 3.0 %
Classification	Vehicle length based, 80 – 99.5% *The specifications refer to free traffic flow, detector operated in recommended setup*
Environmental	
Operating Temperature	–40°C to +70°C (–40 to +158ºF)
Humidity	95 % RH max.
Sealing	IP 64 splash proof*

** applies only to mounted configuration!*

Mechanical Dimensions



Important:

Warranty is void if ADEC detectors are used with third-party equipment such as brackets, connectors etc. that are not approved by ADEC.

Data is based on samples and believed to be representative, except where stated otherwise. Design and specification changes reserved without prior notice. For more specific information on the products, their installation and application please refer to the installation manual or contact the manufacturer.

Accessories (sold separately)

Interface RS 485 & Windows Software

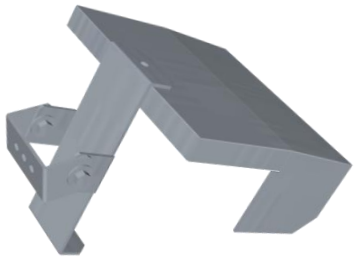
For the communication between detectors and a PC during commissioning and maintenance an interface module in combination with the dedicated software is necessary.
The interface module and software have to be ordered separately.

USB IF 485 (Order Number: 12501)

Mounting & Cabling Accessories

Mounting hardware and cable connectors are not part of the detector delivery and must be ordered separately.

Side-Mount
TDC-MS: **14015**



Pole-Mount Adapter
TDC-PMA: **14101**

Cable connectors straight:
Cable connector: **64015**

Cable receptacle: **64016**

120 Ω Terminating
Resistor: **64014**

Model Overview

Model	Mounting Location**	Part No.
TDC3-2-F-L	Left side of Lane	**11130**
TDC3-2-F-R	Right side of Lane	**11131**

*** viewed in traffic direction*