TDD1 Series

Doppler Radar Traffic Detectors

The TDD1-MW series of traffic detectors uses microwave Doppler radar technology for detecting vehicles moving through its field of view. For the duration of the detection, a contact closure relay output is activated. When the detection ends, the contact is released into its normal state. The factory-set configuration can easily be altered using an IR remote control (extra accessory).

Typical Applications

The ADEC TDD1-MW series has been developed for a range of applications that require robust and reliable detection:

- Green-phase request or extension at traffic lights, with possibility to discriminate by vehicle driving direction
- Speed-dependent detection of vehicles
- Door sensor: As detector for auto-operation of doors

Working Principle

The TDD1-MW series of detectors senses moving objects by detecting the frequency shift of the reflected microwave vs. the transmitted waves.

Using an IR remote control (extra accessory), the following configuration settings can be easily changed (*default*):

- Direction-discrimination (approaching / receding / *bidirectional*)
- Detection range (depends on detector model)
- Minimum speed threshold (*4 kph / 2.5 mph*, 8 kph / 5 mph)
- Auto-timer output activation (*off* / 90 s / 150 s)
- Feedback LED on front of detector (*on* / off)

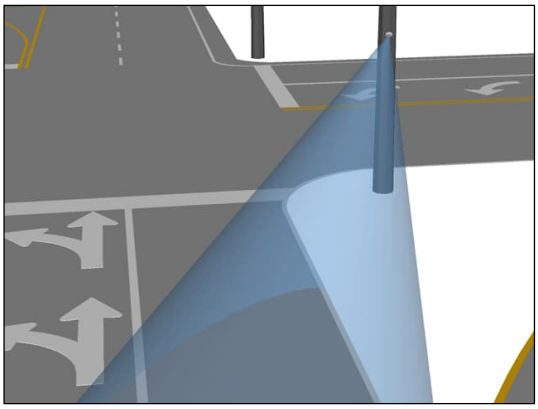
Mounting

The recommended mounting location is on a pole at the side of the road, approximately 1 to 5 m (3 to 16 ft.) above ground.

Features

- **Easy Integration**
  Using SPDT relay output
- **Dedicated Models for AC and DC supply**
  TDD1-MWxxS: 5 – 30 VDC
  TDD1-MWxxS-AC: 24 – 48 VAC
- **Robust, Lasting Design**
  Poly-carbon enclosure with weather protection hood using stainless steel V4A
- **Large Mounting Range**
  Mounting height 1 - 5 meters (3 - 16 ft)
- **Easy Installation**
  Mounting bracket with three holes for easy mounting on poles or gantries
- **Easy & Effortless Configuration**
  Using IR remote control (extra accessory)
- **Large operating temperature range of –40ºC to +70°C (– 40ºF to 160 ºF)**
  Peak performance in all environmental conditions

Detection Zone

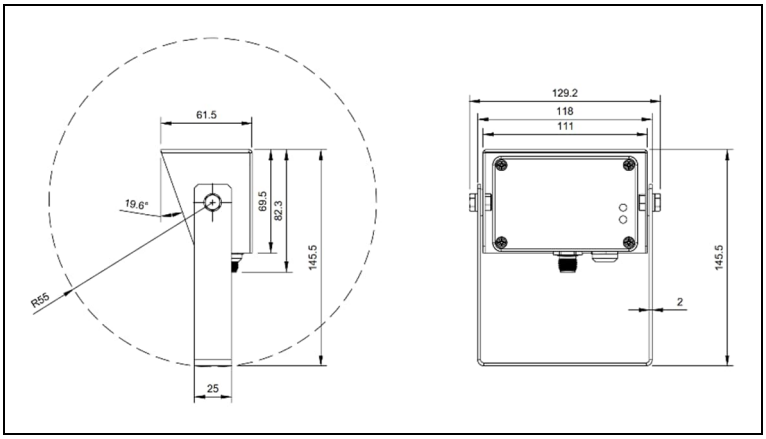


Technical Specifications

Electrical	
Supply Voltage	DC: 5 … 30 V AC: 24 … 48 V
Power Consumption	app. 50 mA @ 12 VDC
Output / Switch*	Relay, SPDT / 250 VAC / 2 A / 60W
Function indication	Tri-color LED on front of detector
Turn-on time	1 second after power on
Mechanical	
Dimensions	see drawing
Case Material	Polycarbonate, dark gray
Weather protection	Stainless steel, V4A
Weight	app. 700 g (25 oz) incl. bracket
Detection	
Doppler Radar	K-Band 24.05 … 24.25 GHz
Detection Range	TDD1-MW30: 30 m (100 ft.) nominal TDD1-MW75: 75 m (250ft.) nominal
Low speed threshold	Selectable, 4 / 8 km/h (2.5 / 5 mph)
Environmental	
Operating Temperature	–40°C to +70°C (– 40º to +158ºF)
Humidity	95 % RH max. (non-condensing)
Sealing	IP 64 splash proof

***) the maximum voltage on the output must not exceed the supply voltage!**

Mechanical Dimensions



Accessories (sold separately)

IR Remote Control

To customize the settings of the detector, an infrared remote control is required.

The following settings can be changed: Traffic direction discrimination, low speed threshold, detection range, front LED feedback, auto-timer output activation.

TDD1-IRF: **12510**

Mounting Accessories

Bracket for mounting the detector on a round pole. Includes stainless steel washer and safety nut.
TDC-PMA: **14101**

Connection Cable

1.5 m PUR connection cable with 5 leads open ended and cable receptacle with M12 thread
K-M12F-15x5**: 66116**

Important:

Data is based on samples and believed to be representative.

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.

Model Overview

TDD1-Model **Order-Nr.**	30 m (100ft.)	75 m (250ft.)
5 – 30 VDC	MW30S **10012**	MW75S **10013**
24 – 48 VAC	MW30S-AC **10015**	MW75S-AC **10016**