



SCAE



TMA-296

Doppler Sensor

The TMA-296 is a compact and versatile multifunction radar designed to control traffic lights, detect speeding vehicles, and intelligently manage public lighting.

Thanks to its two independently configurable relays, it is possible to set different thresholds for speed, distance, and direction for each relay.

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Technical Specifications

Specification	Value
Detection range	Adjustable up to 150 m
Detectable speed	From 3 to 200 km/h
Detection direction	Approaching, receding, bidirectional
Response time	< 250 ms
Relay hold time	Adjustable
Communication	RS-232 interface
Radar frequency	K-band: 24.125–24.235 GHz
Transmitted power	5 mW
User outputs	2 front LEDs + 2 SPDT relays
Maximum relay load	30 V AC / 0,3 A – 60 V DC / 0,3 A



Strengths

- Two independent relays with customizable configuration;
- Adjustable detection distance up to 150 m;
- Wide detectable speed range: 3 – 200 km/h;
- Configuration options for:
 - Minimum and maximum speed;
 - Minimum and maximum distance;
 - Direction: approaching, departing, or bidirectional.
- Quick above-ground installation without roadworks;
- Operation in any weather conditions;
- Integrated self-monitoring for diagnostics;

Use Cases:

Traffic light management:

- Call or extend green phase;
- Intersection coordination (green wave);
- Reward green / penalty red.

Public lighting:

- Activation of lights in parking lots, stations, or underpasses upon vehicle passage.

Dynamic signaling:

- Warning panels for dangerous curves;
- "Vehicle approaching" alerts;
- "Ghost vehicle" or wrong-way vehicle alarms.

Power Supply and Available Versions

Version	Power Supply	Dimensions (mm)	Weight (with support)
TMA-296-LV	10–30 V AC / 12–60 V DC	68×99×119	320 g
TMA-296-MV	15–54 V AC / 21–75 V DC	68×99×205	510 g
TMA-296-HV	100–240 V AC – 50/60 Hz	68×99×212	563 g