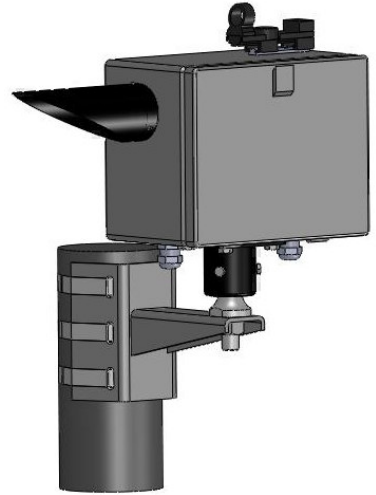


Defender™ Over Height Vehicle Detector



- Infrared break-beam technology
- Operates unattended 24/7
- Easy setup & quick deployment
- Minimal downtime/maintenance
- Best value for your project dollar
- Superior service and support



The Defender™: *Always on Duty!*

Reliable, Accurate and Affordable Over Height Vehicle Detection

EnviroTech Sensors' Defender™ brings you the best in sensor design and technology with the most reliable, accurate and affordable solution for Over Height Vehicle Detection (OHVD) systems. Everyone wants to protect driver safety and infrastructure but you also want the most for your project dollar. The Defender™ is the industry's best value and offers the most standard features at the lowest price. The sensor combines proven infrared optics with smart microprocessor-based detection technology. The Defender™ gives you the peace of mind that it's always on duty 24/7 preventing serious accidents, expensive damage to infrastructure, traffic delays and other costs from over height accidents.

In addition, we provide a 2-year warranty with the Defender™, the best in the industry, as well as superior customer service and transportation system expertise.

The Defender™ offers you an extensive list of features including:

- Rugged, all-weather design with IP66 (NEMA-4X) protection
- Smart 12 MHz microprocessor for accurate & repeatable detection
- Automatic gain control (AGC) circuitry for continued operation in bad weather
- Narrow field of view optics & ambient light rejection circuitry to avoid false alarms
- Laptop hookup so you can customize set-up options on your own
- Includes event, fault, and counter outputs as standard offerings
- Universal AC power or optional 12 VDC for solar power
- Sturdy 3-axis pole mounting for easy installation
- LED array, test points, and optional Red-Dot Sights for quick alignment
- Integrates with traffic equipment including blank-out signs, LED signals, audible alarms & traffic controllers



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Some of the benefits of using the Defender™ OHVD include:

Ease of Installation - The Defender™ has the user in mind. The 3-axis Pole Mount allows freedom to precisely align the Transmitting (TX) & Receiving (RX) Heads. Optional Red-Dot gun sights on a dovetail mount on the TX & RX Heads allow pinpoint accuracy. Optical alignment may be monitored in the RX Head on an internal 10-segment bar graph or using the test points.

Integration - Connection to existing traffic systems is possible but not required. You can warn drivers of their over height vehicles and provide direction by connecting the Defender™ Event Relay to a flashing LED signal or blank-out sign. But more utility can be gained by connecting to an existing traffic system for fault relay notification, camera or loop detector interface, etc.

Low Maintenance - The less time and hassle to maintain the better. Preventative maintenance (PM) is very simple and quick. The wide range AGC circuit automatically corrects for minor misalignments, dirty optics, & bad weather. Primary tasks of PM are a quick cleaning of the optical lenses, verification of signal strength using the LED array, and introducing events & faults by blocking the optics to test system continuity - all in <10 minutes!

High Reliability - Ensuring the system operates 24/7 is critical to OHVD operation. Incorporating our years of experience with optical sensors, the Defender™ uses industrial grade components rated over a wide temperature range & smart microprocessor technology. Our OHVD is designed to operate for 10+ years and comes with a 24-month warranty, the best in the business.

Fault Reporting - Fault reporting notifies you in the unlikely event of an error. Unlike competitors who charge extra, every Defender™ provides a fault relay as a standard feature. The fault relay automatically activates when there is a loss of system power, the TX or RX Head malfunctions, or the signal between heads is blocked. The delay time is adjustable using the smart PC interface.

Cost Effective - EnviroTech believes in providing you the best value. We deliver a wide range of standard features, competitive pricing, and reasonable costs for replacement parts. The Defender™ gives you the most affordable cost of ownership around!

Defender™ Specifications

Method of Operation	Break-beam technology, 880 nm IR light, eye-safe with 3 degree beam divergence angle & background light rejection
Range	Up to 60 m (200 feet) typical, up to 180 m with reduced performance
Reaction Speed	1-120 km/hr (1-75 MPH) for a 5 cm (2") diameter object
Event Output	Retriggerable by subsequent over height event, Form C dry relay contact, rated 230 VAC @ 20A, with 8A circuit breaker for protection. ON Delay instantaneous; OFF Delay 15 seconds default, user selectable up to 600 seconds
Fault Output	Instantaneous, Form C dry relay contact, rated 230 VAC @ 20A. ON Delay 15 seconds default; user selectable up to 600 seconds. Remains activated until fault is corrected
Counter Output	12 VDC pulse for each over height event. Used to activate optional 5-digit event counter.
AC Mains Power	Universal AC; 100-240 VAC, 50/60 Hz. TX Head 15 VA typical / RX Head 25 VA typical
DC Mains Power *	10-36 VDC; TX Head 10 VA typical / RX Head 15 VA typical
Environmental	Operating temperature: -40 to +60 C (-40 to 140 F) / Humidity: 0-100% RH
Winter Protection *	Thermostat controlled external hood heaters for areas subject to snowy conditions
Housings	Power-coated steel standard / 306 stainless steel optional
Weight / Size	TX / RX Head: 4.5 kg (10 lb) each / TX /RX Head: 430 x 150 x 280 mm (17 x 16 x 11 in) each
Mounting	3-axis bracket for standard pole mounting

* Optional Feature

Ordering Information

DOVD1-xx-y Defender™ OHVD includes standard TX & RX Heads where "xx" = AC or DC & "y" = H if external hood heaters ordered
P/N 20207 3-Axis Pole Mounting Bracket
P/N 20206 5-Digit Mechanical Counter in Weather-Tight Enclosure
P/N 20210 Red-Dot Gun Sight (2)



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