CARSENSE 303
SINGLE SAW CUT MAGNETORESISTIVE VEHICLE DETECTOR

The CarSense 303 features advanced 3-axis, magnetoresistive sensing technology. The sensor measures Earth's magnetic field and responds to disturbances caused by ferrous objects. Three sensing elements provide magnetic field measurement in the X, Y and Z axes, improving detection sensitivity. The CS303’s exciting new technology provides a high-sensitivity, compact, and cost-effective solution for reliable vehicle detection.

The small size of the CS303 allows for easy installation in pavement (below grade) with a single saw cut. It provides cost savings on labor and materials when compared to the multiple cuts and corner reliefs required for the installation of inductive loops. The rugged sensor is also suitable for above grade installations, making it ideal for use in confined areas or hidden in non-ferrous architectural components for security purposes.

- Three-dimensional presence detection - select X, Y and/or Z axis independently
- Remote control module for programming and relay contact output
- Stand-alone sensor stores background and settings in a non-volatile memory
- Single cut, low-cost installation
- ULTRAMETER™ sensitivity display for easy set-up
- Fast response for high-speed detection
- Logic Interface available for extended range, directional logic and more
- DETECT-ON-STOP™ feature will allow detection only when a vehicle has come to a complete stop near the sensor. This EMX exclusive technology ignores cross traffic in tight spaces.
Applications

- Boom gate control
- Drive-thru and car wash vehicle detection
- Truck/lorry detection at loading docks
- Vehicle counting in car park and toll booths
- Truck and tow-motor detection for industrial gates and doors

<table>
<thead>
<tr>
<th>Area (ft.)</th>
<th>Height at the center (ft.)</th>
<th>Sensitivity (adjustment setting)</th>
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</thead>
<tbody>
<tr>
<td>1x1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>2x2</td>
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<td>3</td>
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<td>3x3</td>
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<td>6</td>
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<td>5x5</td>
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<td>7</td>
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</tbody>
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Technical Data

Control Unit

- 3-axis magnetoresistive
- 10 levels of sensitivity: 0-9
- 512 counts/ gauss (typical)
- Automatic compensation
- Averages local field signature in any sensor orientation
- Detection Range 5 ft. (1.5m)
- Power/Fault Indicator Green LED
- Detect Indicator Red LED
- Pulse/Presence Allows the relay/NPN output to send either a pulse output or have constant presence
- Detect-On-Stop™ Requires vehicle to stop for a minimum of 1 second (1-2s typical)
- Outputs SPDT relay/NPN (open collector)
- Connection 10 position screw terminal
- Operating Environment
  - Temperature: -40° C...82° C (-40° F...180° F)
  - Humidity: 0...95% relative humidity
- Housing ABS DB: PVC
- Environmental Rating FP: Polyamide
- Power Supply
  - 12-30 VDC and 24 VAC
  - 12-30 VDC
- Current Draw 40 mA max
- Supply Protection Circuitry Reverse polarity and fuse protected
- Dimensions
  - Control Unit: 76mm (3.0") x 22mm (0.9") x 70mm (2.75")
  - Sensor: 102mm (4.0") x 27mm (1.0") x 9mm (0.3")
- Weight
  - Control Unit: 68g (0.15 lbs.)
  - Sensor: 43g (0.09 lbs.)
  - FP: 27g (0.06 lbs.)

Control Unit & Sensor

- Control Unit
- Sensor

Sensing Technology
- ULTRAMETER™ Display
- Axis Sensitivity
- Environmental Tracking
- Local Magnetic Field Nulling
- Detection Range
- Power/Fault Indicator
- Detect Indicator
- Pulse/Presence
- Detect-On-Stop™
- Outputs
- Connection
- Operating Environment
- Housing
- Environmental Rating
- Power Supply
- Current Draw
- Supply Protection Circuitry
- Dimensions
- Weight

Ordering Information

- CS303-C1 Control Unit
- CS303-DB-50 Direct Burial Sensor, Probe, 50’
- CS303-DB-100 Direct Burial Sensor, Probe, 100’
- CS303-FP-50 Direct Burial Sensor, Flat Pack, 50’
- CS303-FP-100 Direct Burial Sensor, Flat Pack, 100’
- CS303-L Logic Interface, includes black 11 pin socket base DIN rail mount

WARRANTY EMX INC. the product described herein for a period of 2 years under normal use and service from the date of sale to our customer. The product will be free from defects in material and workmanship. This warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products, or damage caused by the purchaser from incorrect connections, or lightning damage. There is no warranty of merchantability. There are no warranties expressed, implied or any affirmation of fact or representation which extend beyond the description set forth herein. EMX Inc. sole responsibility and liability, and purchaser’s exclusive remedy shall be limited to the repair or replacement at EMX’s option of a part or parts not so conforming to the warranty. In no event shall EMX Inc. be liable for damages of any nature, including incidental or consequential damages, including but, not limited to any damages resulting from non-conformity defect in material or workmanship. Rev 2.0 02/04/2020

MADE IN USA