

CARSENSE 303

MAGNETORESISTIVE VEHICLE DETECTOR

Applications

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. The CS303 combines this exciting new technology with a field-proven hardware platform to produce a high-sensitivity, compact, and cost-effective solution for reliable vehicle detection. Three sensing elements provide magnetic field measurement in the X, Y and Z axes, improving detection sensitivity.

- Three-dimensional presence detection of vehicles
- Select X, Y and/or Z axis independently
- Stand-alone sensor stores ambient background and settings in a non-volatile memory
- ULTRAMETER™ sensitivity display for easy set-up and installation
- Remote control module for programming and additional relay contact output
- Fast response for high-speed detection
- Easy, low-cost installation
- **NEW....DETECT-ON-STOP™** or (DOS®) feature will allow detection only when a vehicle has come to a complete stop near the sensor. This is a worldwide unique feature to EMX detectors. It is a major advantage if you want to ignore cross traffic in tight spaces.

In contrast to the multiple cuts and corner reliefs required for the installation of inductive loops, the small size of the detector allows for easy installation in pavement (below grade) with straight saw cut resulting in cost savings on labor and materials. 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.

CS303



EMX

INDUSTRIES

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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



CS303-C-1



CS303-DB-XX



CS303-FP-XX

Technical Data

Control Unit

Control Unit & Sensor

Sensor

Sensing technology	3-axis magnetoresistive	
Sensitivity	10 levels: 0-9	
Axis sensitivity	512 counts/gauss (typical)	
Environmental tracking	Automatic compensation	
Local magnetic field nulling	Averages local field signature in any sensor orientation	
Detection range	1.5m (5ft.)	
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)	NPN (open collector)
Output ratings	Relay: 1A @ 24VDC...120VAC NPN: 50 mA (max)	50 mA
Connection	10 position screw terminal	5 conductor direct burial
Operating environment	-40° C...82° C (-40° F...180° F) 0...95% relative humidity	
Housing	ABS	DB: PVC FP: Polyolefin
Environmental rating	IP30	IP69K
Power supply	12-30 VDC and 24 VAC	
Current draw	40 mA max	10 mA max
Supply protection circuitry	Reverse polarity and fuse protected	
Dimensions	76mm (3.0") x 22mm(0.9") x 70mm(2.75")	DB: 102mm (4.0") x 27mm (1.0") FP: 80mm (3.0") x 20mm (0.8") x 9mm (0.35")
Weight	68g (0.15 lbs.)	DB: 43g (0.09 lbs.) FP: 23g (0.05 lbs.)

Ordering Information

- CS303-C-1 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'



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 1.5 11/19/15

