Sensata
Technologies

SAFETY FIRST WITH DAVESMAN

Protect Your People, Investments, and the Public

When you work in and around vehicles and equipment, safety should be everyone's top priority. However, more and more incidents are taking place on our roadways and worksites. Drivers need to be equipped with the right tools to help them operate safely. They need to know what can't be seen.

Once an incident happens, you can't go back. With PreView Side Defender®II and PreView Sentry®, you're protecting people, property, and your bottom line, with the most advanced side and rear object detection solutions on the planet.

Why RADAR Stands Above the Rest

- RADAR sensors are not affected by vibrations of large vehicles and equipment
  - Ultrasonic sensors can be affected by the vibrations of heavy equipment
- RADAR sensors are capable of and designed to work in the rain, snow, sleet, hail, fog, mud, and dust
  - Camera Vision Systems, Ultrasonic sensors, and LiDAR sensors can be affected by the environment
- RADAR sensors are designed to work in low light conditions such as at night or on cloudy days
- RADAR sensors can detect fast-moving objects and are used for such advanced driver-assistance system (ADAS) tasks
- RADAR uses high speed radio waves with a wide angle field of view to accurately detect stationary or moving objects up to about 100 feet away
  - Ultrasonic sensors can only detect objects that are up to about 8-10 feet away

Mitigate Incidents in Urban Environments with Vulnerable Road User Awareness

DAVESMEN INDIA PVT. LTD.
Maximizing Safety | Optimizing Efficiency

Responding to worldwide demands to protect vulnerable road users, PreView Side Defender®II is the benchmark for side collision mitigation technology. Representing an evolution of advanced technology, this system adds Vulnerable Road User (VRU) awareness to the already successful blind spot lane change assist feature.

PreView® Side Defender®II is the most accurate and reliable urban turning assistance solution available worldwide.

PreView® Side Defender®II

Side Blind Zone Detection:

Urban Vulnerable Road User (VRU) Awareness

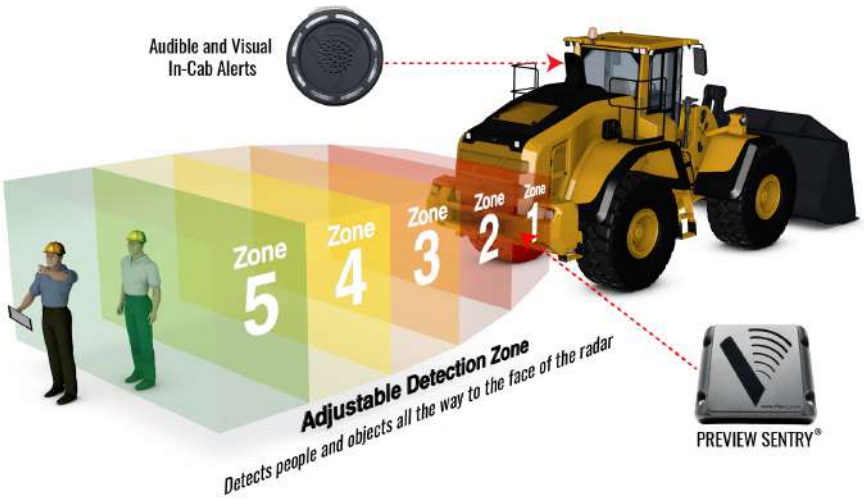
- Developed for inner city areas to protect road users in blind spots
- Visual and audible alerts on moving cars, motorcycles, and bicycles
- Ignores stationary objects such as parked cars, street signs, etc.

Lane Change Assist

- Designed to assist with lane change maneuvers
- Visual and audible alerts on moving cars, motorcycles, and bicycles overtaking the vehicle
- Ignores stationary guardrails, street signs, etc.

Maximize Safety and Reduce Struck-By Incidents

PreView Sentry® is the industry's most flexible, accurate, and powerful active blind spot monitoring solution available. Sentry has a fully configurable detection zone, with the ability to detect objects from the face of the radar up to 30 meters (100 feet). The width of the detection zone is adjustable to fit almost any vehicle type to keep operators and jobsites safer. Sentry is an ideal solution for backing and short range forward requirements.



PreView® Sentry®

Front/Rear Blind Zone Detection:

- Programmable range and width
- Accurately detects and reports the location of up to 16 people or objects simultaneously
- Detects objects to the face of the radar
- Environmentally hardened/robust

PREVIEW SENTRY®

24 GHZ SHORT RANGE RADAR

PERFORMANCE

- 24 GHz FMCW
- Programmable range and width
- Detects, tracks, and reports the location of up to 64 people and objects simultaneously
- Detects objects to the face of the radar
- Environmentally hardened and robust (IP6K9K)

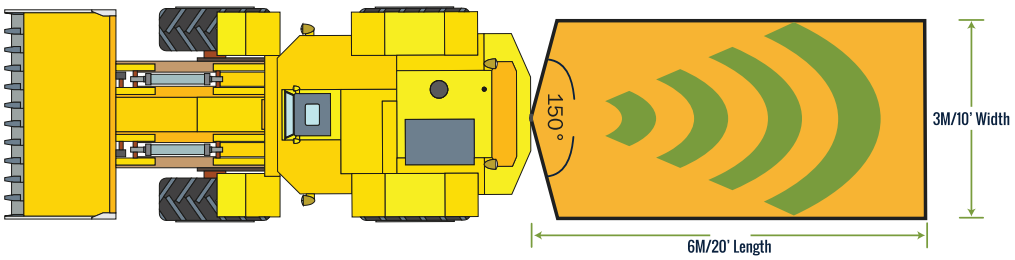
DIMENSIONS

4.90 W x 4.06 H x 1.28 D (12.4 cm W x 10.3 cm H x 3.25 cm D)

SPECIFICATIONS

Frequency Band	24.05 - 24.25 GHz Bandwidth, FMCW Waveform
Communication Interface	J1939 CAN Bus | 250/500 Kbits/sec.
Range	Configurable from 0-30 m (10 dBsm target)
Range Accuracy	±0.3 m
Vertical Field of View	±10° (10 dBsm target)
Horizontal Field of View	±75° (10 dBsm target)
Velocity Range	±9 m/sec (±20 mph)
Target Accuracy	±75° | 1.4 m for static targets | approaching 0.3 m for dynamic targets
Alarm Output	Switch to ground | sink up to 1A | over current protected
Update Rate	80 ms
Target Detection Time	240 ms
Power On to Active	240 ms
Power Supply	9-33 VDC
Current	<0.5 A
Operating/Storage Temperature	-40° to +85° C/-55° to +105° C
Shock	50G
Vibration	25G | random | all three axis
Enclosure	Polycarbonate Radome

EXAMPLE DETECTION PATERN



*Listed specifications are based on design targets and are subject to change.

PREVIEW SENTRY®X

24 GHZ SHORT RANGE RADAR

PERFORMANCE

- 24 GHz FMCW
- Programmable range and width
- Detects, tracks, and reports the location of up to 64 people and objects simultaneously
- Detects objects to the face of the radar
- Environmentally hardened and robust (IP6K9K)

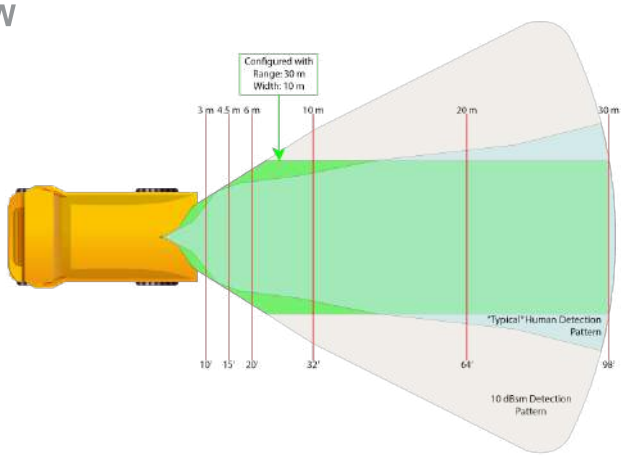
DIMENSIONS

4.90 W x 4.06 H x 1.28 D (12.4 cm W x 10.3 cm H x 3.25 cm D)

SPECIFICATIONS

Frequency Band	24.05 - 24.25 GHz Bandwidth, FMCW Waveform
Communication Interface	J1939 CAN Bus | 250/500 Kbits/sec.
Range	Configurable from 0-30 m (10 dBsm target)
Range Accuracy	±0.3 m
Vertical Field of View	±10 degrees (10 dBsm target)
Horizontal Field of View	±45 degrees (10 dBsm target)
Velocity Range	±9 m/sec (±20 mph)
Target Resolution	1.4 m for static targets | approaching 0.3 m for dynamic targets
Alarm Output	Switch to ground | sink up to 1A | over current protected | Inactive State - High Impedance
Update Rate	80 ms
Target Detection Time	240 ms
Power On to Active	240 ms
Power Supply	9-33 VDC
Current	<0.5 A
Operating/Storage Temperature	-40° to +85° C/-55° to +105° C
Shock	50G
Vibration	25G | random | all three axis
Enclosure	IP6K9K

FIELD OF VIEW



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PREVIEW SIDE DEFENDER®II

Add Vulnerable Road User (VRU) protection with PreView Side Defender®II. The Side Defender II radar is the most advanced side object detection and VRU protection radar available for on-road medium and heavy-duty trucks. Side Defender II is the next generation of side blind zone collision mitigation.

SIDE OBJECT DETECTION - BUILT TOUGH FOR HEAVY-DUTY INDUSTRIES

Intelligent Operating Modes

Urban VRU Warning: <30 km/h

- Designed for slow-speed urban environments and passenger side turns
- Alerts on moving bicycles, motorcycles, etc.
- Ignores stationary objects such as parked cars and street signs

Lane Change Assist: >30 km/h

- Designed for lane change maneuvers
- Alerts on moving cars, bicycles, motorcycles, etc.
- Ignores stationary guardrails and similar

Rugged. Reliable. Flexible.

Rugged design, engineered to operate in all weather conditions

Provides the operator audible and visual in-cab active alerts

Ability to report sensor data to a logging device or telematics application

PREVIEW SIDE DEFENDER®II

SIDE BLIND ZONE DETECTION

DAVESMEN INDIA PVT. LTD.
Maximizing Safety | Optimizing Efficiency

URBAN VULNERABLE ROAD USER AWARENESS

- Developed for inner city areas to protect road users in blind spots
- Visual and audible alerts on moving cars, motorcycles, and bicycles
- Ignores stationary objects such as parked cars, street signs, etc.

LANE CHANGE ASSIST

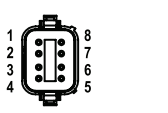
- Designed to assist with lane change maneuvers
- Visual and audible alerts on moving cars, motorcycles, and bicycles overtaking the vehicle
- Ignores stationary guardrails, street signs. etc.

SPECIFICATIONS

Frequency Band	24.00 - 24.25 GHz Bandwidth, FMCW Waveform
Communication Interface	J1939 CAN Bus
Range	3 m x 12 m
Range Accuracy	±0.3 m
Vertical Field of View	±10 degrees
Horizontal Field of View	±75 degrees
Velocity Range	±9 m/sec (±20 mph)
Angle Accuracy	±2° at ±10° FOV, ±5°
Target Detection Time	300 ms
Power On to Active	300 ms
Power Supply	9-33 VDC
Current	<0.5 A
Operating/Storage Temperature	-40° to +85° C/-55° to +105° C
Shock	50G
Vibration	25G | random | all three axis
Enclosure	Polycarbonate Radome

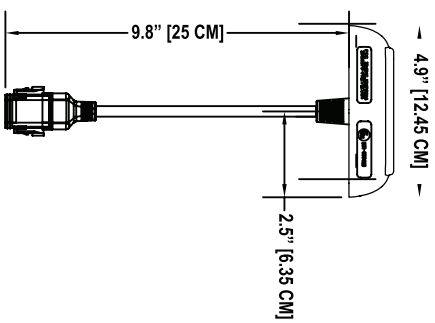
DIMENSIONS AND CABLE PIN-OUTS

4.90 W x 4.06 H x 1.28 D (12.4 cm W x 10.3 cm H x 3.25 cm D)

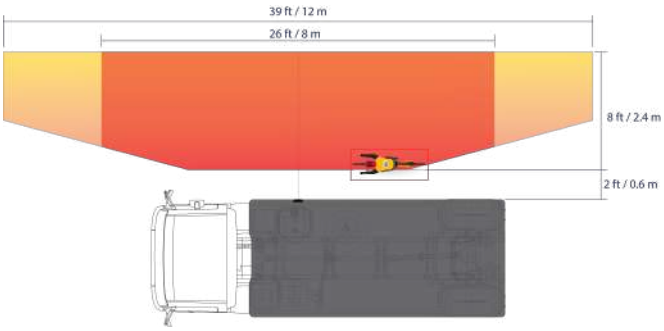


CONNECTOR END VIEW
DEUTSCH DT06-08SA-E008

CONNECTOR PIN OUT	
PIN	DESCRIPTION
1	BATTERY PWR INPUT (+)
2	GROUND
3	CAN HIGH
4	CAN LOW
5	DISPLAY PWR OUTPUT (+)
6	DISPLAY GND
7	N/C (AUX OUT)
8	TURN SIGNAL INPUT



FIELD OF VIEW



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