

Accuspeed Installation Instructions:

FCC Warning:

Changes or modifications not expressly approved by Phoenix International could void the user's authority to operate the equipment.

Installation:

The Accuspeed ground speed sensor is designed as an OEM ground speed sensor, and is to be mounted from 45 cm to 90 cm vertical height above the ground and at 35 degrees from horizontal. The sensor is designed to face the rear of the vehicle.

When designing a mounting bracket, avoid having metal extend beyond the mounting feet of the sensor anywhere around the circumference of the radome, which is the integrated antenna for this device.

The sensor can be mounted directly onto the tractor without need for rubber mounting feet.

Avoid having any moving parts (i.e. tires, treads, 3-point hitch, etc) in the line of sight of the sensor.

AccuSpeed

Doppler Effect Speed Sensor



AccuSpeed Doppler Effect Speed Sensor

The Phoenix International **AccuSpeed** Doppler Effect Speed Sensor uses a concentrated millimeterwave radar signal and the proven Doppler shift principle to accurately measure true ground speed of vehicles that operate in adverse environmental conditions.

The **AccuSpeed** sensor combines in its ruggedized plastic enclosure and a unique radar front end design with highly integrated digital signal processing (DSP) electronics. Output signal and installation details are backward-compatible with older speed sensor products. With its small size and low cost, **AccuSpeed** meets the requirements of OEM customers and retrofit markets.

AccuSpeed's industry-standard output provides a continuous and robust true ground speed signal whenever the vehicle is moving.

While this signal is useful for driver information displays, it also enables closed-loop control systems, such as variable rate application techniques, and intelligent vehicle driveline management. A reliable true ground speed signal will also support emerging autonomous vehicle concepts.

The sensor is typically installed at a height of 0.6 m but can be installed up to 1.2 m above the ground or above the top of the crop. The sensor should be mounted facing rearward and positioned so that it has a clear view of the ground.



The **AccuSpeed** sensor has passed the full spectrum of tests specified in the ASAE EP-455 Standard for electronics on mobile equipment including temperature, vibration, moisture, dust, electrical, and the electromagnetic compatibility (EMC) tests. The unit also meets the requirements of the R&TTE Directive and is CE compliant.

AccuSpeed Speed Sensor Product Specifications

Velocity Range	0.19 to 39.8 mph	Electrical Protection	Signal to ground & signal to power supply protection Electrical transient protection per ASAE EP-455 Standard
Accuracy	< $\pm$ 3% 0.19-1.9 mph < $\pm$ 1% 1.9-39.8 mph	Step Response	$\leq$ 200 milliseconds delay
Mounting Angle	35° depressed below horizontal, rearward-facing (preferred) or forward-facing	Start/Stop Delay	$\leq$ 25 cm
Mounting Height	0.3 to 1.2 m above the ground or above the top of the crop, typical mounting height 0.6 m	Microwave Frequency	24.125 GHz (standard) 24.300 GHz (UK) Tolerance $\pm$ 25 MHz
Mounting Fasteners	To Be Determined	Microwave Power	100 mW (EIRP)
Overall Dimen.	10.2 cm x 10.2 cm x 9.1 cm	Regulatory Compliance	
Weight	0.45 kg		
Connector	CPC: DELPH*12015024 Pin 1 Ground Pin 2 Speed Signal Output Pin 3 +12V DC (nominal 12V vehicle supply) 15 inches or 0.37 meter cable length <i>(European version pictured above with an AMP*206429-1 connector and a cable length of 57.1" inches or 1.45 meters)</i>	Environmental	• ASAE EP-455: includes standards for reverse polarity, electrical transients (such as load dump, inductive load switching), chemical corrosion, dust, salt spray, rain, wash, mechanical shock, and vibration
Electrical Supply	150 mA @ 12 V DC +9 to 16V DC input voltage range	Electro-Magnetic Compatibility	• CE • CSA • FCC
Output Frequency	57.42 Hz/mph (128 pulses/meter) @ 45° mounting angle Other frequencies are available by custom order.	Storage Temperature	-40C to +85C
Square Wave Output	Z OH $\approx$ 1000 ohms Z OL $\leq$ 100 ohms V OH $\approx$ +V (battery)-1.0V V OL $\leq$ 1.0 V at 15 mA I out (max.) = 22 mA		

Specifications and design subject to change without notice.



PHOENIX INTERNATIONAL CORPORATION

Fargo, ND ♦ Springfield, IL

Phone: 701-282-9364 ♦ Fax: 701-282-9365 ♦ www.phoeintl.com

100005GU
Printed in USA