PEGASEM GSS Series
Ground Speed Sensors

PEGASEM Messtechnik GmbH

Features

- Non-contact Measurement
- 24GHz Radar Doppler Technology
- Works on Plain and Rough Terrain
- Excellent Price/Performance Ratio
- Single or Dual Channel Versions
- Direction Sensing
- Vehicle Pitch Compens. (GSS20)
- Excellent Low-Noise Speed Signal
- Low Signal Latency (<10ms)
- Working Range from 0.1-300km/h
- Compact and lightweight
- Robust
- Fits within seconds
- Pulse Output
- Analogue Speed Output (GSS20)
- Serial RS232 Interface (GSS11/20)

Applications

- Overground Vehicle Speed Sensing
- Distance Measurement
- Brake Test
- Fuel Consumption Test
- Vehicle Sound Analysis
- Interval Marking
- Off-Road Test
- Vehicle Homologation

GSS20 with magnetic holders

The newly designed PEGASEM Radar Sensors allow carefree non-contact speed sensing over ground at a very competitive price. The road surface is scanned with a 24 GHz radar beam. The internal processor creates a high precision TTL- output signal with 100 pulses per metre from the raw Doppler signals. For high precision measurements, the GSS20 has automatic internal vehicle pitch compensation using a dual beam design while the GSS10/GSS11, with its single beam approach, is targeted for applications where vehicle pitching during acceleration and braking does not occur e.g. tramways, trains etc. High gain microwave antennas create a Doppler signal with excellent noise margin allowing measurements even in the ultra low speed range. The clean, high quality speed output signal outperforms many competitive non-contact vehicle speed sensors. Both models come in weatherproof housings with five meters of cable and a mounting solution for easy and quick fitting to the vehicle's body.

GSS11 with suction cup holder

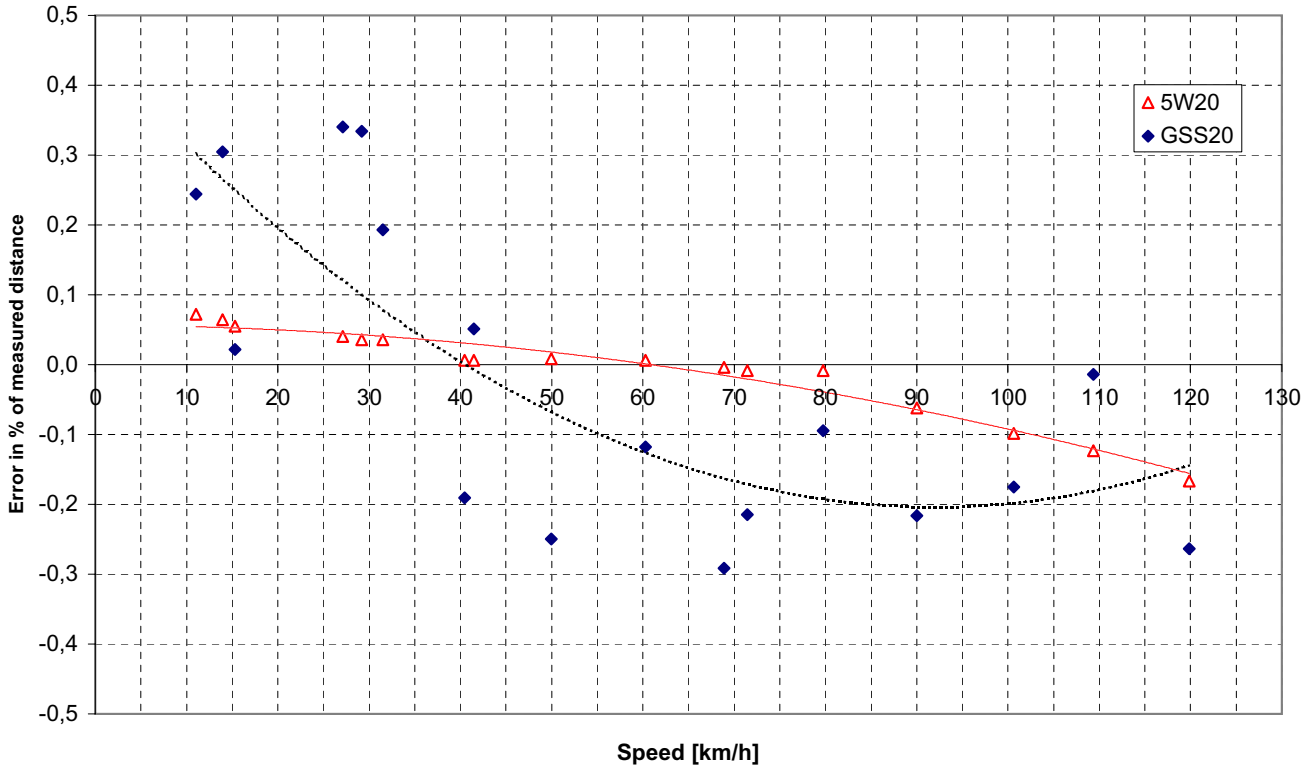
GSS10 with suction cup holders

PEGASEM GSS Series
Ground Speed Sensors

Technical Data	GSS11	GSS14	GSS20	Unit
Size	110x82x65	105x50x40	161x78x55	mm
Weight (Sensor only)	300	270	650	grams
Power Supply Voltage	8 to 32	8 to 48	8 to 48	VDC
Power Supply Current	100	100	150	mA@12V
Pulse output	TTL compatible	TTL compatible	TTL compatible	
Pulse Rate	100	100	100	per m
Transmission frequency	24,125 ± 0,003	24,125 ± 0,003	24,125 ± 0,003	GHz
Output Power	5	5	5	mW/channel
Analog Speed Output	---	---	1	V per 100km/h
Mounting Height	0,2 to 1,0	0,2 to 1,0	0,2 to 1,0	m
Speed Range	0,1 to 300	0,1 to 300	0,1 to 300	km/h
Error Rate	<1	<1	<0,5	%
Pitch compensation	no	no	yes	
Serial Interface	no	yes	yes	
Cable [1)]	5m, waterproof M8 connector at sensor side; 4 open wires at cable end	5m, waterproof push-pull connector at sensor side; 8 open wires at cable end	5m, waterproof push-pull connector at sensor side; 8 open wires at cable end	

1) Other cable lenghts and connectors on request

Comparison of Radar Sensor GSS20 and 5th Wheel 5W20
Measured distance was 500 metres on dry asphalt



Intelligent Test Solutions

PEGASEM Messtechnik GmbH

DISTRIBUTION FRANCE
Motion Dynamics
18 rue Charles De Gaulle 91400 Orsay
Tél: +33(0) 1 64 86 15 60 / +33(0) 6 68 60 15 60
Email: automotive@imagine-optic.com
Web: http://www.motion-dynamics.fr
Capital: 90 000 euros - SIRET 410 072 532 000 30 - APE 2651B RCS EVRY