

# PEGASEM GSS Series

## Ground Speed Sensors



### 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

The newly designed PEGASEM Radar Sensors allow carefree non-contact speed sensing over ground at a very competitive price. The road surface is



GSS20 with magnetic holders

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



GSS11 with suction cup holder

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 micro-

wave 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 wea-



GSS10 with suction cup holders

therproof housings with five meters of cable and a mounting solution for easy and quick fitting to the vehicle's body.

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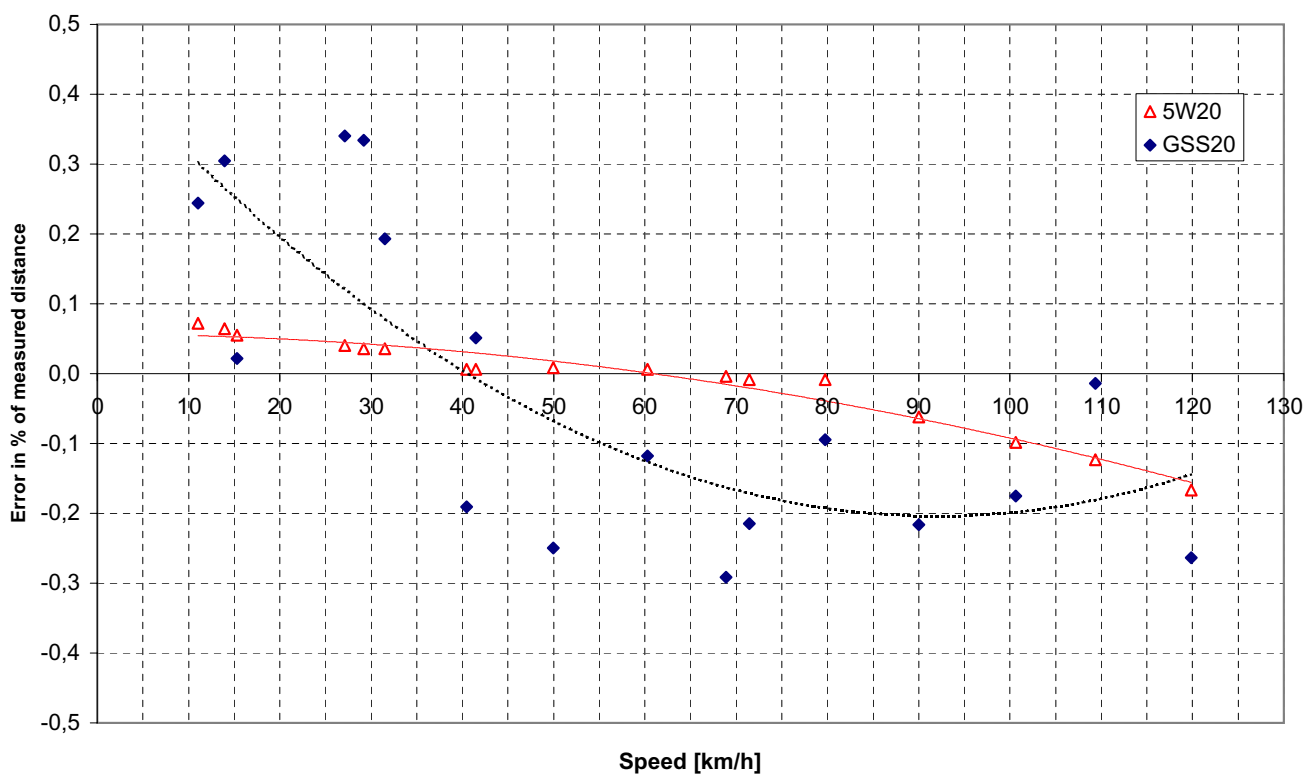
## Ground Speed Sensors

Technical Data	GSS10	GSS11	GSS20	Unit
Size	110x82x65	105x50x40	161x78x55	mm
Weight (Sensor only)	300	270	650	grams
Power Supply Voltage	8 to 32	8 to 32	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 <sup>1)</sup>	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 lengths and connectors on request

### Comparison of Radar Sensor GSS20 and 5th Wheel 5W20

#### Measured distance was 500 metres on dry asphalt



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