TGSS (MkIII) True Ground Speed Sensor

Measurement of true vehicle speed regardless of wheel size or slippage

Application:

- Non-contacting signal input for true measurement of vehicle speed regardless of wheel size or wheel slippage.
- Used where accurate speed measurement is required.
- Essential for anti-slip systems, traction control etc.
- RDS Technology also supplies a wide range of instrumentation to be used with the TGSS.

Principle of operation:

The TGSS uses the well known principle of Doppler shift. A low power K band microwave beam is transmitted at, and reflected from, the ground. The reflected signal differs from the transmitted one by the doppler shift. The difference in frequency is directly proportional to the forward speed.

The kit includes Sensor, Mounting Plate, Extension Cable, Fixings and fasteners.
TGSS (Mk III)

Technical Details:

Velocity Range: 0.3 - 62 km h⁻¹ (0.2-39 mph)

Accuracy: <±3% 0-3.5 km h⁻¹ (0-2.2 mph)
<±1% 3-62 km h⁻¹ (2-39 mph)

Mounting Angle: 45° depressed below horizontal, rearward-facing (preferred) or forward-facing

Mounting Height: 30 - 100 cm (12 - 39") above the ground or above the top of the crop, typical mounting height 60 cm (24")

Mounting Fixings: 3 x M8 Bolts

Overall Dimensions: 10 cm (H)x10 cm (W)x10 cm (D)
(4"x4"x4")

Weight: 0.45 kg (1 lb)

Connections: 3-way Female WeatherPak
Pin A (Red Wire): +12V DC (nominal 12V battery voltage)
Pin B (White Wire): Speed Signal Output
Pin C (Black Wire): Ground
Standard: 32 cm cable length
Optional: 100 cm extension cable:
(3-way male-3-way female WeatherPak)

Electrical Supply: 150 mA @ 12V DC

Output Frequency: 35.68 Hz/km h⁻¹ (128.4 pulses in)
57.42 Hz/mph (3.26 pulses per inch⁻¹)

Square Wave Output:
ZOH approx. 1000 ohms
ZOL less than or equal to 100 ohms
VOH approx. +V(battery)-1.0V
VOL less than or equal to 0.0V at 15 mA
I out(max.) = 22 mA

Electrical Protection: Signal to ground and signal to power supply protection.

Step Response: < or equal to 200 ms delay.

Start/Stop Delay: < or equal to 25 cm

Microwave Frequency: 24.125 GHz (standard)
24.300 GHz (UK)
Tolerance ± 25 MHz

Microwave Power: 5 mW, nominal

Regulatory Compliance:
Environmental:

Electromagnetic Compatibility: CE, CSA, FCC

Storage Temperature: -40°C to +85°C

Operating Temperature: -30°C to +70°C

Available from: