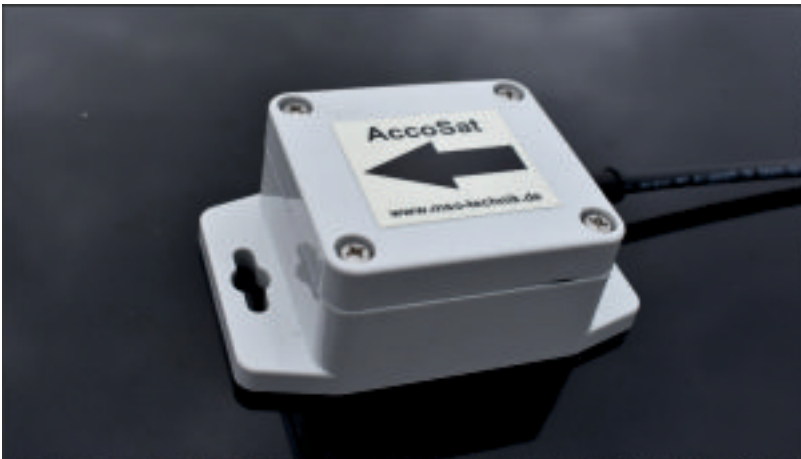


Sensor Fusion of 3D Accelerometer and DGPS for True Ground Speed Measurement and Positioning



The **AccoSat System** combines the advantages of DGPS-based speed measurement with the high dynamics of a 3D accelerometer. Thus a reliable and fast true ground speed measurement is achieved.

In addition to a “RADAR-compatible” pulse signal DGPS positioning data (NMEA-0183) are optionally output.

Speed measurement:

- with high dynamics and accuracy
- with fast detection of start, stop and acceleration
- no calibration, plug and play
- dead reckoning of speed signal on short DGPS outages e.g. in tunnels
- pulse output signal proportional to speed
- “RADAR - compatible” pulse output
- easy mounting, magnet plate optionally

AccoSat Speed Sensor

The **AccoSat** System measures the forward speed by means of a triaxial accelerometer and a DGPS receiver. **AccoSat** deploys a DGPS receiver optimized for speed measurement. The speed measurement - in contrary to detection on gearbox or wheel - is unaffected by effective tyre circumference, sinking-in and wheel slip. This is particularly advantageous for all applications needing an accurate speed signal for example for product application proportional to distance / area e.g. seeding, spraying and spreading.

The **AccoSat** System does achieve high accuracy, dynamics and reliability of the speed measurement by means of a sensor fusion of a 3D accelerometer with a DGPS receiver.

The **AccoSat** provides for real time true ground speed for "outdoor / off - highway" applications for monitoring, control and closed loop control of machinery functions.

BENEFITS

- Accurate measurement of forward speed under adverse soil conditions without calibration
- Contactless speed measurement independent on gearbox / wheel Sensors
- Fast response to speed changes enables accurate control of distribution processes
- Optional NMEA standard data format output (GGA, RMC, VTG)
- Latest generation DGPS receiver (66 channel DGPS receiver with SBAS / EGNOS diff. correction, 1 Hz update rate, tracking sensitivity -165 dBm)

Technical Data:

Sensor Components:	triaxial accelerometer, DGPS-receiver, microcontroller
Power supply:	10 - 16 VDC / 400mA max
Temperature Range:	-20 °C to +70 °C
Output Signal:	frequency signal proportional to speed. 130 pulses / m (36,1 Hz per km/h) according to DIN 9684 / ISO 11786 Option: RS-232, 19,200 Baud, 8Bit, No Parity, 1 Stopbit NMEA GGA, RMC, VTG with 1Hz
Dynamics:	25 Hz
Size:	over all 94 mm x 58 mm x 35 mm (L x W x H, without cable)
Mounting:	level to ground, direction according to arrow showing forward direction bolted on, option magnetic
Warranty:	2 Years

Product of:



MSO Meßtechnik und Ortung GmbH
Hohweg 8-10
D-53902 Bad Münstereifel
Germany
Tel.: +49 (0)2257 9592090
Fax: +49 (0)2257 9592091
e-mail: info@mso-technik.de
Website: www.mso-technik.com