

# Microstar II

## Microwave Speed Sensor for Off-Road Applications

The measurement principle of the Corrsys-Datron Microstar II Sensor is based on the Radar-Doppler-Effect. The sensor consists of a two-beam planar antenna and the new Corrsys-Datron electronics unit with CAN bus.

The very large working distance of 300 ... 1 200 mm makes it ideally suited for applications with utility and off-road vehicles and to accurately measure longitudinal speed under extreme conditions, e.g. in woods or mountains, where GPS or optical sensors are not capable of good measurements.

Within the Corrsys-Datron product range, sensors of the Microstar type are the most cost-efficient solution for measuring longitudinal dynamics.



Fig. 1: Antenna of the Corrsys-Datron Microstar II sensor

### Applications

For non-contact distance and speed measurement, e.g.:

- Driving performance measurements
- Determination of longitudinal parameters
- Fuel consumption measurements
- Off-road measurements
- Monitoring the actual speed of off-road vehicles, e.g. Jeeps, Quads, military vehicles, agricultural vehicles, etc.

Corrsys-Datron Microstar II sensors measure the relative movement between sensor and test surface using a planar antenna, which projects two radar beams at 45° angles. Upon striking the test surface, the beams are reflected back to the sensor antenna. The resulting double frequency (equal to the difference of sent and received frequencies) is directly speed-proportional. The gained signal is converted to the desired dimension via high-performance signal processing and then sent to the corresponding outputs.

Additional connections, such as an interface for flow-measurement systems (for consumption tests), or trigger inputs for light barriers or brake switches, provide exceptional testing power and flexibility in a highly compact package.

When used with the delivered Corrsys-Datron software, the Microstar II sensor functions as a complete data acquisition and evaluation system. The software enables test parameters and definitions to be permanently saved via software, along with on-line displays and evaluations, e.g. charts and plots. All measured signals can be saved and evaluated off-line.

### Technical Data

Speed range	0,5 ... 400 km/h
Working range	300 ... 1 200 mm
CAN Bus	2.0B
USB (full speed)	2.0
Analog output	0 ... 10 V
Digital output (TTL)	1 ... 1 000 Pulse/m
Measurement frequency	250 Hz



Fig. 2: Electronics unit of the Corrsys-Datron Microstar II sensor

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