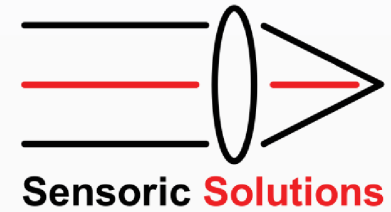


# Our optical sensor OSM 7



The sensor combines non-contact optical sensor technology with inertial measurement technology and provides the user with a wide range of precise measured values for applications in vehicle testing.

Body- and tire slip angle

Non-contact, slip-free

Speed in 3 axis

direct measurement

Yaw rate in 3 axis

1kHz sampling rate

Acceleration in 3 axis

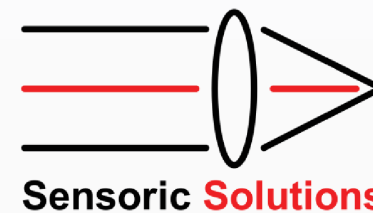
300mm +/-150mm

Calculation of horizontal signals

Recalculation to POI



# Our optical sensor OSM 7



display for status information

Power LED for control

I/O port for trigger input hardware sync

Consumption <25W

UPS for engine start interruptions

Compact housing

USB & Ethernet interface



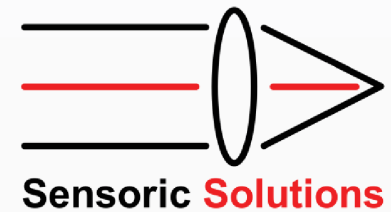
2 independent CAN interfaces

Status LED

Data Stream via Ethernet / CAN

Due to its CAN interfaces, the sensor is compatible with all common data acquisition systems. A simple configuration of the sensor is possible via USB and Ethernet.

# Our optical sensor OSM 7



Compact, lightweight design

Easy set-up / no run-in procedure

IP68

Coated optics

QR code for sensor information

Powerful IR LED's

Integrated displacement measurement

Integrated IMU

Plug outlet top / side selectable

Solid protective glass

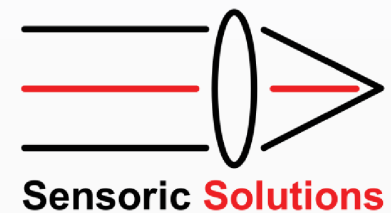
Protection from dirt & gravel

Robust against shock / vibration



In addition to precise signals, the sensor is characterized by simple mounting as well as minimal installation effort. The sensor is mounted and ready for use within a few minutes.

# Sensor Specification

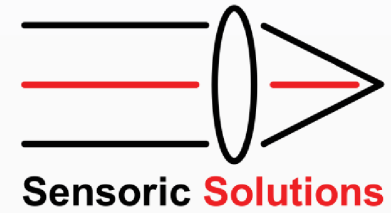


Extract from data sheet:

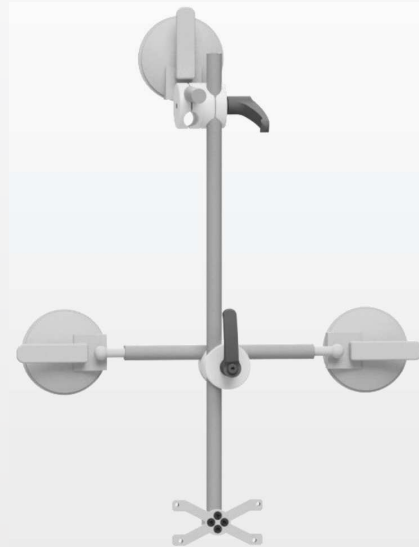
Velocity		
Measuring range	250 / 400	km/h
Nonlinearity	<±0.2	%FS
Angle		
Measuring range	±30 <sup>2)</sup>	°
Accuracy	<0.1	°
Resolution spatial filter	≈0.6	mm
Working distance	300 ±150	mm
Angular rate X, Y, Z		
Measuring range	±500	°/s
Acceleration X, Y, Z		
Measuring range	±20	g
Sampling rate	1000	Hz
Signal delay	4.5 <sup>3)</sup>	ms
Jitter	<100	µs
Conversion to POI		
Axes	X, Y, Z	
Supply		
Voltage	9 ... 36	V
Consumption (@ 12 V)	<25	W
Environmental conditions		
Storage	-40 ... 85	°C
Operation	-25 ... 60	°C

Environmental conditions		
Relative humidity	5 ... 80	%
Shock (half sine 6 ms)	50	g
Vibration (10 ... 150 Hz)	10	g
Dimensions		
Sensor (without connector)	95 x 65 x 40	mm
ECU	155 x 125 x 60	mm
Weight		
Sensor	450	g
ECU	900	g
Degree of protection		
Sensor (cable connected)	IP68	
ECU	IP40	
Illumination	IR	
Wavelength	850	nm
CAN interface		
Individual nodes	2.0B 2 <sup>4)</sup>	
Data rate	125 / 250 / 500 / 1000	kBaud
Termination	switchable	
Ethernet		
Data rate	100 / 1000	Mbit
Parameterization	Webinterface <sup>5)</sup>	
Measurement data	TCPIP (Protocol on request)	
USB	Protocol on request	

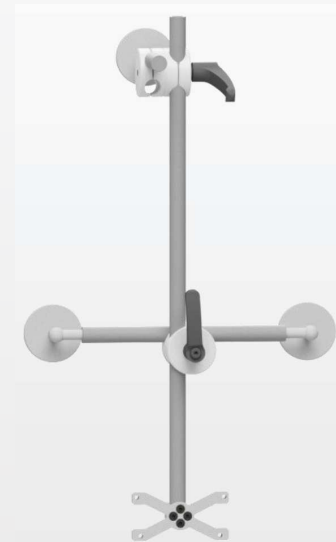
# Sensor Accessories



Towing lug Mount



Side Mounting S1  
Suction Cup



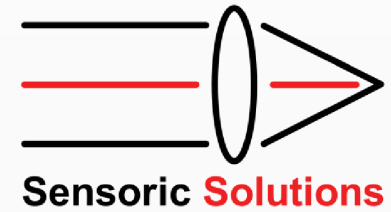
Side Mounting M1  
Magnetic



Universal  
Mounting System

We supply our customers a wide range of accessories for our sensors and systems.  
Our universal mounting concept allows easy mounting on any vehicle.

# USP



- High accuracy: **0,2%** speed and **0.1°** angle
- High output rate **1kHz**
- Large working range **+/-150mm**
- Working point: **300mm**: optimized for easy mounting on the wheel)
- Low power consumption **25 W**
- **Thin cable**, good handling especially door gap feed through
- **Integration of powerful IMU** Advantage: High signal quality for rotation rates, accelerations, speed, slip angle
- **Distance measurement to road surface**: additional measurands
- **Integrated conversion to "point of interest"**
- **Integrated UPS** for bridging voltage dips
- **Very good performance on wet surfaces** due to fusion and filter algorithms
- **Compact, lightweight sensor housing**: Various installation options on the vehicle or on the measuring wheel
- **Multiple, simple, universal mounting options**: Magnet, suction mount, towing lug, wheel, ...
- **Connector outlet for** different installation positions on request
- **2 CAN interfaces**: Compatible with any data acquisition
- **System with data acquisition as well as GPS and cloud connection available**
- **Live view of** measurement data possible on any end device