

VISIBILITY AND PRESENT WEATHER SENSORS MODEL GEOSWS-100 / GEOSWS-200



TYPICAL APPLICATIONS

ROADS

provides roadside weather information and switches road warning signs in snow, ice, spray and fog.

TUNNELS

switches ventilation controls and provides a back up to smoke detection systems to improve fire safety

WEATHER NETWORKS

supplies visibility and present weather data to meteorological networks to assist in forecasting

CLIMATOLOGY

historical, accurate, reliable and repeatable visibility and present weather data

FLOOD FORECASTING

provides detailed precipitation data for predicting and mapping flood events and soil saturation

NAVIGATION/WARNING AIDS

Aviation- automatically switches warning lights to alert aircraft of tall structures. Other - automatically switches lights, horns and equipment to alert of danger

DESCRIPTION

The Visibility and Present Weather Sensors GEO-SWS-100/200 have been designed for continuous environmental monitoring of roads and tunnels for traffic safety, sea ports and harbours, as well as for many other calscial uses in meteorology, climatology and weather networks.

There are available two models: GEO-SWS-100 and GEO-SWS-200. The differences between them are only the visibility measuring range (SWS-100 is 10 m to 2 km and SWS-200 from 10 m to 20 km), and the fact that Model SWS-200 also measures the precipitation intensity. General Specifications of both models are indicated in the table on the next page.

The two models can be connected to our Data Acquisition and Transmission Unit Model METEODATA-2000/3000C for local data recording and data, and alarm trasmission to a Central Station via GSM/GPRS, Radio, Fiber Optic or satellite, as part of our Safe Road System. This unit can also generate SMS Alert Messages or to acitvate Variable Message Sings (VMS) located along side the road for advising drivers about the visibility and present weather environmental conditions ahead.



WHAT DO THEY MEASURE?

The sensors use Forward Scatter Meter Technology to measure Present Weather and Meteorological Optical Range (MOR). Present Weather is the atmospheric phenomena surrounding the sensor.

The atmospheric phenomena include:

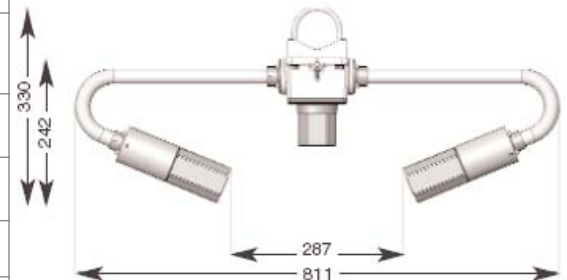
- a) All forms of liquid and frozen precipitation:
e.g.: rain, drizzel and snow.
- b) Suspended particles that are classed as obstructions to vision, namely: fog, haze, dust and smoke



SPECIFICATIONS

	GEO-SWS-100	GEO-SWS-200
Measurement ranges	<10m - 2km	<10m - 20 km
Measures: Visibility (MOR-Meteorological Optical Range), caused by any obstruction to vision (liquid, frozen, dry particulate)	●	●
Measures: Basic precipitation: snow, rain, fog, drizzle, haze	●	●
Additionally measures precipitation intensity and acculmulation with a fixed 24 hour time frame (using an additional back scatter measuring window		●
Detection threshold: 0.015 mm/hr rain Maximum rain rate: >250 mm/hr	●	●
Measurement accuracy error <=100% maximum	●	●
Outputs: - Digital output RS-232, RS-422, RS-485 (not all RS-485 configuratios available) - analogue outputs: 0-10 V (4-20 mA or 0-20 mA optional) - selected WMO 4680 table codes - 2 configurable switching realys / 1 fault relay	●	●
Dimensions: 811 x 315 x 330 mm Weight: 4kg	●	●
Power supply : 9-30 VDC	●	●
Tempertature range: -40 to +60 degrees C	●	●
Window heaters	●	●
Optional hood heaters (requires 24 VDC power supply)	●	●
Extra monitoring on forward scatter receiver	optional	optional
Extra monitoring on back scatter receiver		optional
Date and time stamp on data strings available	●	●
Accesories: Calibration kit, mounting brackets, transit case	●	●

DIRECT CONNECTION TO OUR Data Acquisition and Transmission Units Model METEODATA-2000/3000C



Dimensions in mm

Direct connection with METEODATA 2000/3000C series