VISIBILITY AND PRESENT WEATHER SENSORS
MODEL GEO-SWS-100 / GEO-SWS-200

METEODATA DATA LOGGER

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 airports, as well as for many other classical uses in meteorology, climatology and weather networks.

There are available two models: GEO-SWS-100 and GEO-SWS-200. There's only one difference: 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 **GEONICA** Data Acquisition and Transmission Unit Model **METEODATA-2000/3000C** for local data recording, data and alarm transmission to a Central Station via 3G/GPRS, Radio, Fiber Optic or satellite, as part of our **AWOS and Safe Road** systems. 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 visibililty 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.
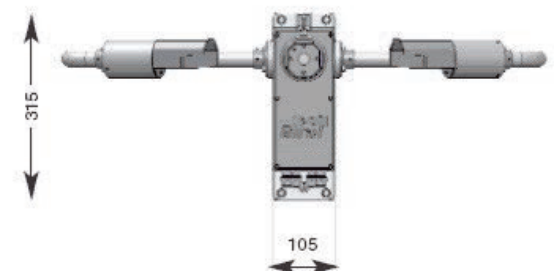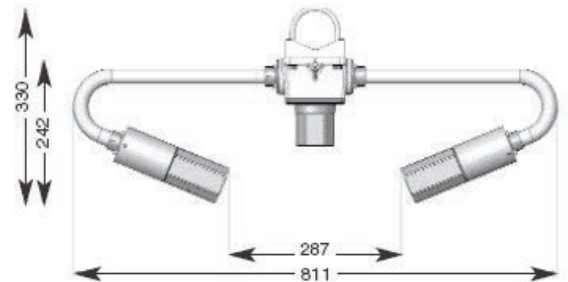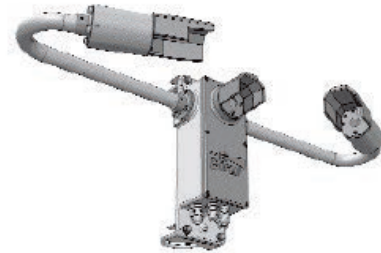
The atmospheric phenomena include:
   a) All forms of liquid and frozen precipitation:
      e.g.: rain, drizzel and snow.
   b) Suspended particles that are classed as obstructions to vision, namely: fog, haze, dust and smoke

SPECIFICATIONS

	GEO-SWS-100	GEO-SWS-200
Measurement range selectable at time of order: <10m - 2 km, 10 km, 20 km, 32 km, 50 km or 75 km	●	●
Measures: Visibility (MOR-Meteorological Optical Range), caused by any obstruction to vision (liquid, frozen, dry particulate)	●	●
Detects precipitation type: snow, rain, fog, drizzle, haze	●	●
Additionally measures precipitation intensity and accumulation with a fixed 24 hour time frame (using an additional back scatter measuring window)		●
Detection threshold: 0.015 mm/hr rain 0.0015 mm/hr snow. Maximum rain rate: >500 mm/hr	●	●
Measurement accuracy error: ≤10% max.	●	●
Outputs: - Digital output RS-232, RS-422, RS-485 (not all RS-485 configurations available) - analogue outputs: 0-10 V (4-20 mA or 0-20 mA optional) - selected WMO 4680 table codes - 2 configurable switching relays / 1 fault relay	●	●
Dimensions: 810 x 315 x 330 mm. Weight: 4.5 kg	●	●
Protection Class: IP66 (NEMA - 4x)	●	●
Power supply : 9-36 VDC	●	●
Temperature range: -40º to +60º 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	●	●
Certifications: CE / EMC EN61326-1997, 1998, 2001 / RoHS and WEEE	●	●

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

330
242
287
811
315
105

Dimensions in mm