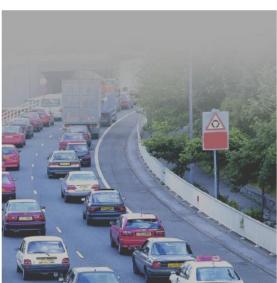# 8-\ oWS-050 VISIBILITY SENSOR

8-\ SWS-050 Visibility Sensor

Monitors visibility and obstruction to vision
caused by dust, fog, rain, drizzle, snow and hail
... easy integration with intelligent systems in road and
aviation applications

- **10m to 40km measurement range**

- **compact forward scatter design**

- **not affected by local lights**

- **easily installed by one person**

- **hood heating for use in extreme environments**

- **easy integration of Biral ALS-2 ambient light sensor**

- **comprehensive self-test and maintenance data**

The SWS-050 is optimised for use in applications where accurate and reliable visibility measurements are required.

The forward scatter measurement principle and unique design ensure the output is both accurate and reliable in all weather conditions and will not be influenced by local lights sources, even those that flash.

With a measurement range of 10m to 40km the sensor is suitable for use in road and aviation applications as well as meteorological observation networks.

Constructed from robust aluminium and finished with a high quality powder coat, the sensor will provide years of reliable service. Heating of the optical windows and sensor hoods is provided as standard allowing use in the harshest of conditions. Both optical windows are monitored for contamination and the visibility output is automatically compensated to reduce maintenance requirements.

Easy integration of the Biral ALS-2 ambient light sensor makes the SWS-050 perfect for use in aviation applications where both RVR and METAR data is needed.

SWS sensors use the same technology as the high specification HSS range of visibility and present weather sensors, which have been in demand world-wide for over 25 years.

SWS-050 Specifications

Visibility measurement

Measures	Visibility (MOR)
Output	Serial data
Range (visibility)	10m to 40km
Measurement Error	<= % at km, <=1 % at 0 km <=20% at 30 km
Measurement principle	Forward scatter meter with 39° to 51° angle

Outputs and Reports

Output rate (seconds)	30 to 300 (selectable)
Serial outputs	RS232, RS422 and RS485

Power Requirements

Sensor power	9-36 VDC
Hood heating power	24 V AC or DC
Basic sensor Window heaters Hood heaters	3.5 W 1.7 W 24 W

Additional features

Hood heaters	Fitted as standard
Window contamination monitoring	Fitted as standard to both sensor head windows

Environmental

Operating temperature	-40°C to +60°C
Operating humidity	0 – 100% RH
Protection rating	IP6

Certification & Compliance

CE certified
EMC compliance with EN61326-1997, 1998, 2001
RoHS and WEEE compliant

Physical

Material	Powder coated aluminium
Weight	3.5 Kg
Length	0.81
Lifetime	>10 Years

Maintenance

Self-test capability	As standard
User confidence check	6 months recommended
Window cleaning	Automatic compensation and warnings
Field calibration	With optional calibration kit

Included with sensor

The SWS sensor is delivered in sturdy recyclable foam filled packaging with:
- Pole mounting kit (2 x U-bolt and saddles)
- User manual and calibration certificates

Accessories - optional

Power and data cables
Mains power adaptor
Calibration kit
ALS-2 Ambient Light Sensor
Hard shell transport case

Specifications subject to change E.& O.E

Dimensions in mm