



SWS-100 VISIBILITY SENSOR

SWS-100 Visibility Sensor

Monitors visibility and obstruction to vision caused by dust, fog, rain, drizzle, snow and hail

... easy integration; includes digital, analogue and switching relay outputs

- Selectable measurement range up to 75km
- compact forward scatter design
- instantaneous and averaged visibility outputs
- limited WMO 4680 present weather codes
- hood heating for use in extreme environments
- digital, analogue and switching relay outputs
- comprehensive self-test and maintenance data

The SWS-100 is optimised for use in applications where accurate and reliable visibility measurements are required with the addition of fundamental WMO 4680 precipitation codes.

The availability of digital, analogue and switching relay outputs provides the flexibility to connect to a wide range of ITS (Intelligent Transport Systems) and other data controllers.

The unique ability to switch equipment using two fog relays and /or a precipitation relay is a feature of the SWS-100 sensor. For example; you

can set the relays to automatically switch a speed reduction sign when the visibility is below 100meters and then switch an additional 'danger of aquaplaning' alert when rains starts.

This is a quality sensor at an affordable price (less expensive than competitive sensors) and includes a remote monitoring and self-test system to keep maintenance call-outs to a minimum. The savings realised from installing and running a network of sws-100 sensors can be substantial. The SWS series sensors are lightweight, portable and easily pole mountable.

www.biral.com/fog

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-100 Specifications

Visibility measurement

Measures	Visibility (MOR)
Output	Digital, analogue and switching relays
Range (visibility)	*Selectable: 10m to 2km, 10km, 20km, 32km, 50km or 75km
Measurement Error	<=5% at 2km, <=10% at 10km, <=15% at 20km, <=20% at 30km
Measurement principle	Forward scatter meter with 39° to 51° angle, centred at 45°

**selectable at the time of order*

Outputs and Reports

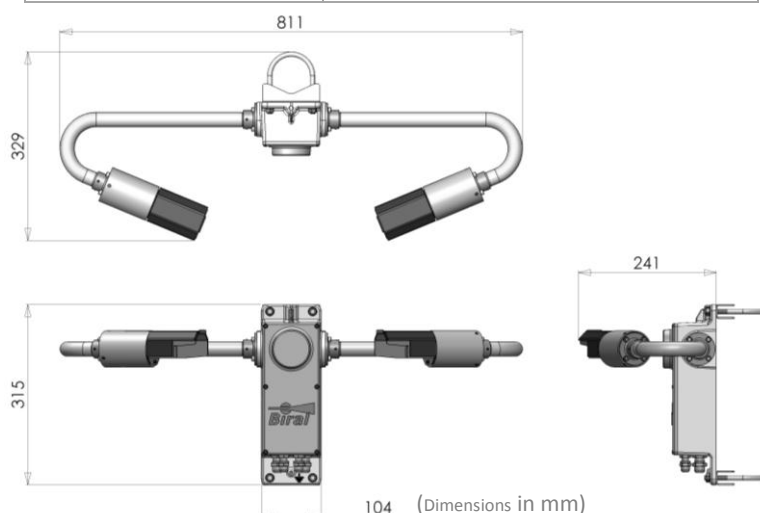
Output rate (seconds)	30 to 300 (selectable)
Serial outputs	RS232, RS422 and RS485
Analogue outputs	0-10V (4-20mA or 0-20mA optional)
Switching Relays (providing flexible configurations)	Relay 1= Fault Relay 2 = visibility (user selectable value) Relay 3 = precipitation yes/no or snow yes/no or visibility (user selectable)
Outputs	Selected WMO 4680 table codes

Power Requirements

Sensor power	9-36 VDC (ACV with optional mains adaptor)
Hood heating power	24 V AC or DC
Basic sensor	3.5 W
Window heaters	1.7 W
Hood heaters	24 W

Additional features

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



Environmental

Operating temperature	-40°C to +60°C
Operating humidity	0 – 100% RH
Protection rating	IP66

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
Warranty	2 Years
Lifetime	>10 Years

Maintenance

Self-test capability	Fitted 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