

The Biral logo features a stylized green dot above the word "Biral" in a bold, italicized green font. The logo is positioned in the upper left corner of the advertisement, partially overlapping a white banner that extends from the top edge.

Biral

ROADSIDE
WEATHER
SENSORS



FOG RAIN SNOW SAND

IDENTIFY and WARN

SWITCH SIGNS and ITS

LOW COST

www.biral.com



Roadside weather can be dangerous and costly

Dangerous driving conditions

If you are responsible for road safety you know the weather conditions which cause the greatest problems.

FOG

Fog can occur in patches at blind spots, such as dips in the road, near a river or around a corner without any previous warning causing an unexpected hazard.

FALLING RAIN, SNOW, HAIL

Falling precipitation such as heavy rain or snow lowers the visibility of the road ahead and affects drivers' vision through the windscreen as the precipitation lands on the glass.

STANDING RAIN and SNOW

Spray from vehicles passing over standing water (from precipitation that has fallen too heavily or quickly to drain away) reduces a driver's visibility especially at higher speeds.

SNOW

When road surfaces are icy or snow has settled, roads need to be treated quickly so drivers have traction in these dangerous conditions.

SAND

Sand or dust storms can blow across large stretches of the road at astonishing speed and very suddenly cause a dangerous driving situation in near zero visibility.

Road Management Costs

Road maintenance, especially in winter, is costly in terms of time, people, machines and materials. Even more so if the weather information on which your action is based does not reflect the local conditions or is badly timed.

Road users rely on very high levels of accuracy from roadside warnings and expect timely gritting of roads so it is important to get it right first time.

Additionally, the economic effects of traffic congestion caused by bad weather can only be minimised by effective action from the agencies responsible.

So how can you make sure you respond quickly and effectively to these requirements?

The Biral SWS present weather sensors are all you need to save valuable time and money when it counts most and satisfy the demands of road users.



Use the Biral SWS visibility and present weather sensors for roadside weather monitoring

Biral SWS sensors are used for single installations or multiple sensor networks where visibility and present weather information is needed to improve road safety.

Use Biral SWS sensors to improve safety

Biral SWS present weather sensors are typically installed within 3 m of the roadside and measure the local weather conditions (fog, snow, rain, spray, sand and related parameters).

The information provided by the sensors is easy to understand and integrates into any control system. The sensor switches a warning sign locally via relay and / or transmits the data via a second data output to an ITS control centre.

The Biral SWS sensors provide reliable, consistently accurate weather information day and night. This allows you to make timely decisions about spraying or gritting road surfaces and switching road warning signs, therefore, achieving the best results from limited and valuable resources. Road users will be less stressed, safer and happier with their journeys and tax payers' money will have been used wisely.

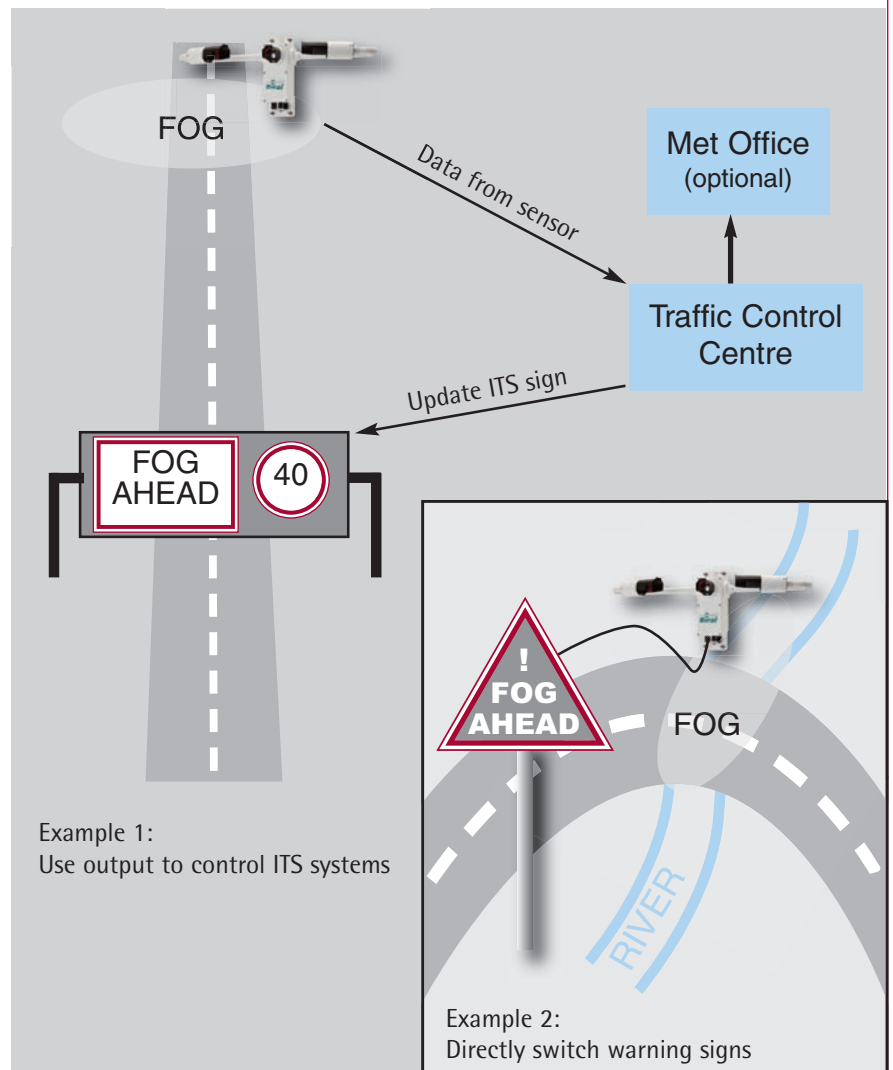
Low running costs

The Biral SWS sensors come with a 24 month warranty and require very little maintenance. There are no consumables so running costs are a thing of the past.

The only maintenance required is to

clean the optical windows once every 3-6 months using a normal clean cloth and some water. The sensors even provide information on how dirty the windows are so that you can

prepare for the maintenance and only clean the unit when it is absolutely necessary, thereby eliminating any expensive fixed or regular scheduled maintenance.



Biral

The Biral SWS delivers reliable and consistent results

Biral visibility and present weather sensors have been used in all weather conditions and locations around the world.

The Biral SWS sensors are based on the legendary Biral HSS sensors which have been used on airports and in extreme weather environments for decades and trusted by professionals and scientists.

Due to the advanced concepts of the Biral SWS sensors they are superior to competitors' sensors for accuracy of measurements, and correct identification of conditions and:

- are robust enough to withstand the aggressive roadside environment for many years without spare parts or consumables
- have a measurement concept that is valid in both rain and snow
- avoid false readings from external sources or from vibrations of the sensor itself
- are not affected by reflections from the road surface in rain or snow or from approaching car headlights

Features of the SWS road weather sensors

	Biral SWS-100	Biral SWS-200
Specific range for tunnels / fire / fog prone areas	●	
Provides quick response to changes in weather (10 seconds)	●	●
Reports when snow, rain, fog or sand are measured	●	●
Reports precipitation details such as accumulation amount and intensity		●
Automated reports output every minute	●	●
User adjustable reporting period (10 seconds to 5 minutes averaging time)	●	●
Fog or heavy precipitation reported in 10 m ranges for accurate reporting to gain road users trust (range 0-2000 m)	●	●
Measures dust, smoke or sand restrictions to visibility	●	●
Measures restrictions to visibility that road users will see from spray (from standing water, even when no precipitation is occurring)	●	●
Indicates when maintenance is required (maintenance takes 10 minutes)	●	●
Remains functional and accurate when maintenance is indicated	●	●
Trusted history and proven reliability	●	●
Does not require any spare parts or consumables	●	●
Switches road warning signs directly when hazard occurs	●	●
One network connection and an extra connection for easy local maintenance (no need to disconnect the sensor from the network during maintenance)	●	●
Sensor can be calibrated by the user when needed	●	●
Annual calibration optional	●	●
Not affected by headlights or other nearby light sources	●	●
Operating status monitored and reported for quality control	●	●
Approved and used on road weather systems internationally	●	●

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