Addition of a "TEST" command to the Visibility and Present Weather Sensors

From April 2017 onwards, the Biral Visibility and Present Weather Sensors will be supplied with enhanced internal software featuring a new test setting, which can be used as part of Factory or Site Acceptance Testing (FAT or SAT) at client handover. The sensors can now be switched into a "Test Mode" via the serial PC connection. This test mode allows the user to force the sensor to report user-defined data for visibility, present weather, window contamination and fault status for a fixed period of time. The test mode is identified by the first character in the self-test data section of the message being set to a 'T'.

Sensors Affected

The sensors that now have this capability are:
- RWS-20 - Program Version SI100306.00A onwards
- SWS050T - Program Version SI100269.02A onwards
- SWS050 - Program Version SI100211.18A onwards
- SWS100 - Program Version SI100211.18A onwards
- SWS200 - Program Version SI100211.18A onwards
- SWS250 - Program Version SI100245.07A onwards
- VPF710 - Program Version SI100211.18A onwards
- VPF730 - Program Version SI100211.18A onwards
- VPF750 - Program Version SI100245.07A onwards

Operation

Using the Biral Interface Software (Ver. SI100242.04A onwards) which can be downloaded from http://www.biral.com/technical-support/downloads/software-downloads/Biral Interface Software the user can now set the sensor into a **"TEST"** mode whereby a defined visibility measurement will be output from the sensor for a fixed time period.

This new feature is designed to allow users to test the operation of other connected equipment, such as aviation or marine warning lights or signs which are configured to operate at specific visibility conditions. In this way, the end-to-end control system operation can be demonstrated and tested for both commissioning as well as client acceptance approvals.

The user can now adjust:

- Time – the length of time to run the test for (0 to 60 minutes)
- Visibility – the MOR in KM required to be output (10m to the range of the sensor)
- Fault Condition – set a particular fault condition (to test a system response, or warning flag)
- Contamination code – mimic window contamination
- WMO Weather Code – for present weather sensors only – ability to set a specific weather code.

In the example below, the user has set the sensor to output a visibility reading of 4.5km for 5 minutes:

© Biral - Bristol Industrial & Research Associates Ltd. 2017
For more information, visit www.biral.com or contact us at enquiries@biral.com
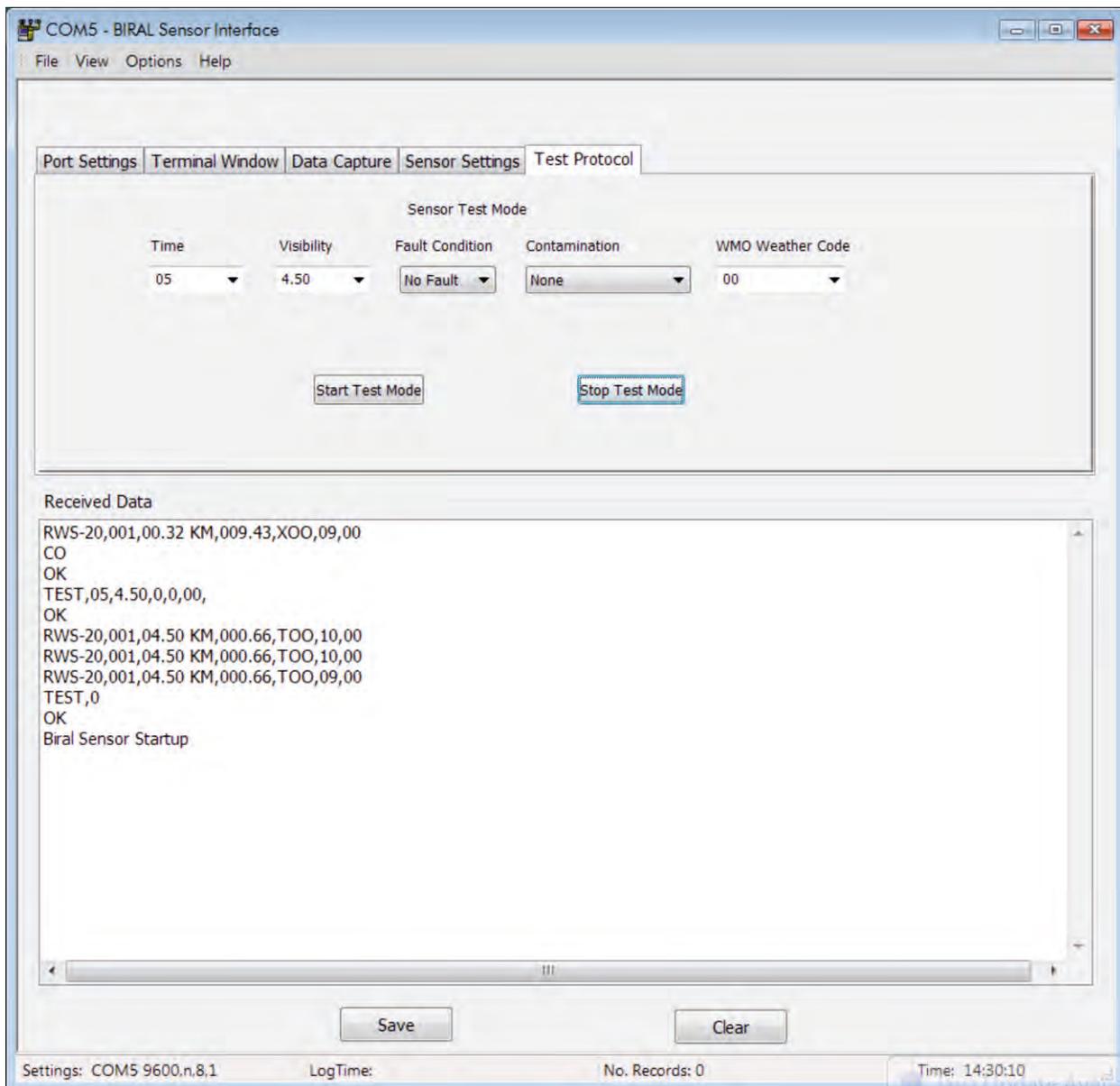
Command and Output

The test settings will be output in the data message and also used to set any analogue outputs and relays that are dependent on the visibility and or fault values (if the sensor has the facility to set analogue outputs or relays).

The output of the sensor will be the standard sensor message with the visibility, weather code, window contamination and fault status set to the required values.

The Test mode will be identified by a T in the first character of the remote maintenance field (e.g. TOO).

Once the time limit has been reached the sensor will reset.

Time Setting

A Time Drop down box is used to set the length of time for the test. The user can select one of the default times or key in a specific time in the range 0 – 60 minutes. A time of zero will stop the test.
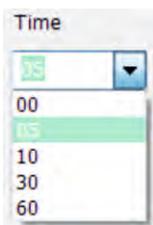
Time

05
00
05
10
30
60

Visibility Setting

A Visibility drop down box is used to set the visibility. The user can select one of the default visibilities or key in a specific visibility in the range from 0.01KM up to the range of the sensor.
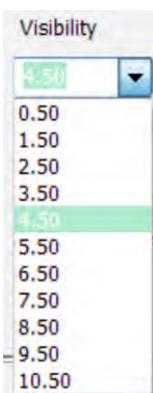
Visibility

4.50
0.50
1.50
2.50
3.50
4.50
5.50
6.50
7.50
8.50
9.50
10.50

Fault Setting

A Fault drop down box is used to select the fault condition. This can be either Fault or No fault.
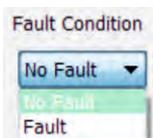
Fault Condition

No Fault
No Fault
Fault

Contamination Setting

A Contamination drop down box is used to select the contamination condition. This can be either None, Warning or Fault.

WMO Weather Setting

For present weather sensors the user can select a WMO code to output in the data string. The user can either select one of the default values or enter their own in the range 0- 89. The code entered must be in the WMO 4680 code table for it to be of use.
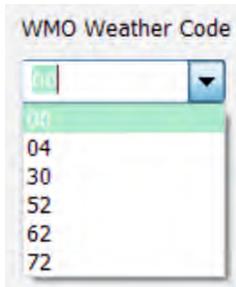
Further Information

The latest version of the Biral Sensor Interface software incorporates a **TEST Protocol** tab that the user can use to set up the test mode parameters. Please contact Biral for the complete User Manual for the Sensor Interface software.