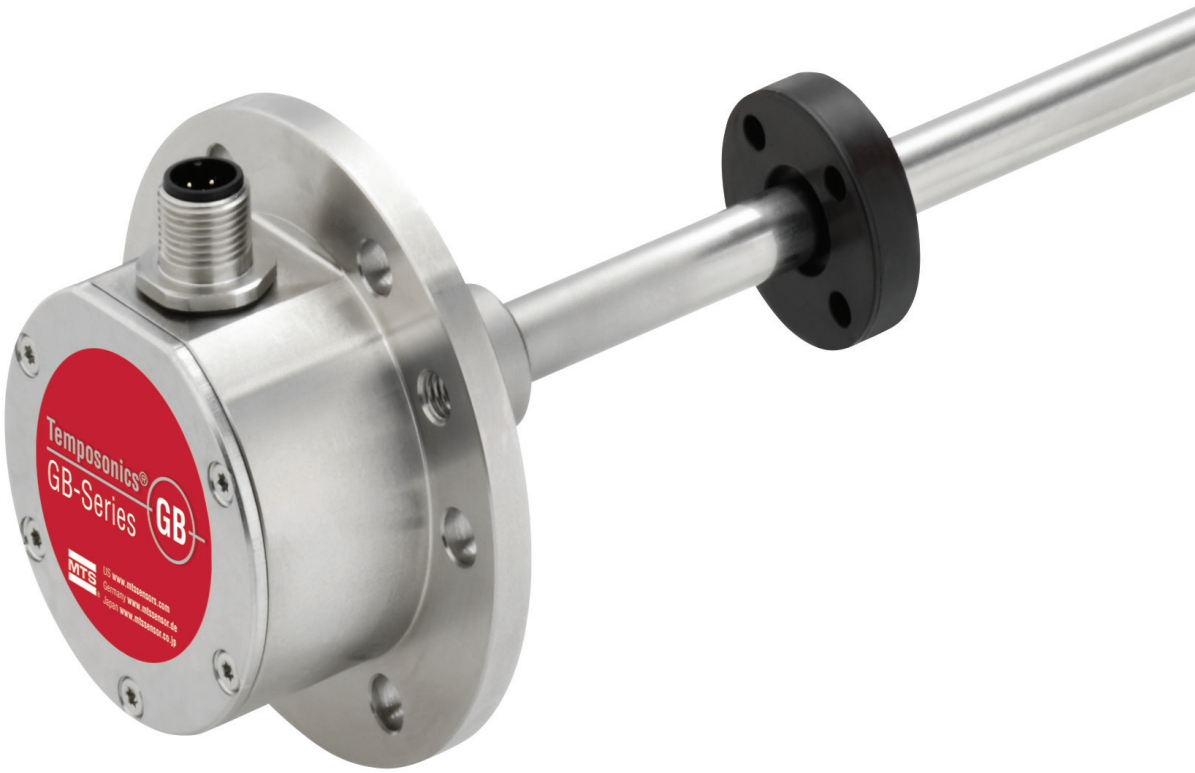
MTS SENSORS

Temposonics®

Magnetostrictive Linear Position Sensors

PROGRAMMING & CONFIGURATION

GBS Analog via Bluetooth®



The Measurable Difference

These instructions describe the installation and configuration of the MTS GBS Analog sensor using the “GBS Analog Bluetooth® Configurator”. The Bluetooth® connection (Bluetooth® 2.1) is used to make settings during the installation and service mode.

NOTICE

It is still possible to program the sensor via cable connection.

System requirements

– Operating system Windows 7
– .NET Framework from version 4.5.1 or higher

1. SOFTWARE & DRIVER INSTALLATION

☐ **Step 1: Bluetooth® USB adapter installation**
☐ Step 2: Sensor installation
☐ Step 3: Choose SPP profile

In this step, you will install the CSR Harmony Bluetooth® stack. Run the installation as an administrator. First remove any previously installed Bluetooth® stack versions. Insert the CSR Bluetooth® adaptor into the USB port. Follow the instructions given in the operating manual of the Bluetooth® stack and the information displayed on the screen. The standard settings for the CSR Harmony are:

Discovery Mode: Discovery On
SCMS-T: Deactivated
Device: Desktop / Laptop

After successful installation, the Bluetooth® symbol will be displayed in the notification area of the task bar (fig. 1).

Fig. 1: CSR Bluetooth® Stack is installed

NOTICE

To successfully establish a connection between sensor and receiving system (computer), the maximum operating distance between sensor and receiver is 5 m and the maximum ambient temperature is 75 °C. Establishing a connection between sensor and receiver is not possible at higher temperatures and established Bluetooth® connections are cut automatically when the temperature is exceeded.

☑ Step 1: Bluetooth® USB adapter installation
☐ **Step 2: Sensor installation**
☐ Step 3: Choose SPP profile

NOTICE

Note that the procedures in step 2 must be completed within 15 seconds of sensor switch-on. If the time window is exceeded, the sensor must be switched on again.

1. Ensure that the sensor has been switched on shortly before starting the procedure and that it can be discovered. The sensor is in the “discovery mode” only during the first 15 seconds. Subsequently, the output is enabled and the sensor cannot be detected any more. In the notification area, right-click on the Bluetooth® symbol. Select “Add Bluetooth Device” and then “All” (fig. 2).

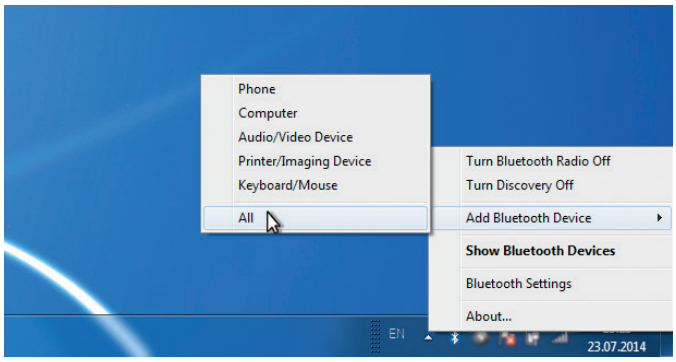


Fig. 2: Sensor installation

2. Window “Add Bluetooth Device” opens. All discoverable Bluetooth® devices located within the operating range are displayed. The name of the sensor for the wireless connection comprises “MTS” and the sensor serial number. Select the MTS unit you want to connect to and click “Next” (fig. 3). After that click “Finish” (fig. 4).

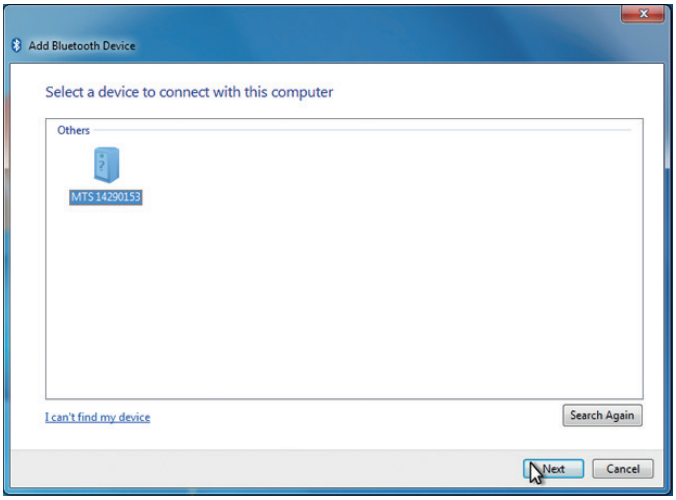


Fig. 3: Add Bluetooth® device

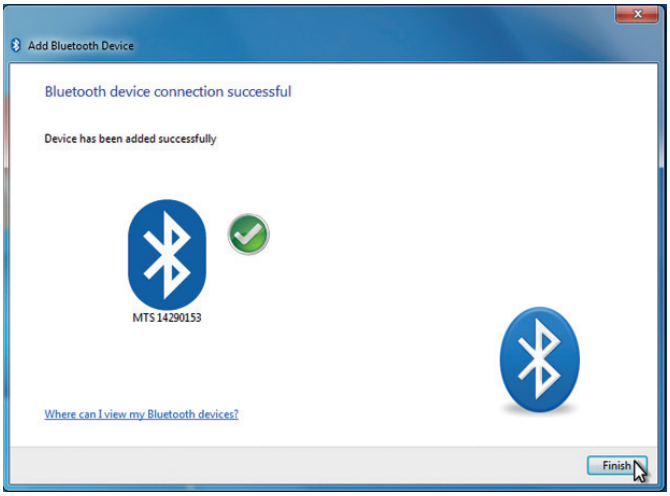


Fig. 4: Connection was successful

☑ Step 1: Bluetooth® USB adapter installation
☑ Step 2: Sensor installation
☐ **Step 3: Choose SPP profile**

NOTICE

Note that the procedures described in 2 and 3 below must be completed within 15 seconds of sensor switch-on. If the time window is exceeded, the sensor must be switched on again.

1. To create the SPP profile open “My Bluetooth Devices” via Windows explorer, or right-click the Bluetooth® symbol in the notification area and select “Show Bluetooth Devices”.

2. Re-start the sensor. Right-click the MTS sensor and select “Service Refresh” (fig. 5).

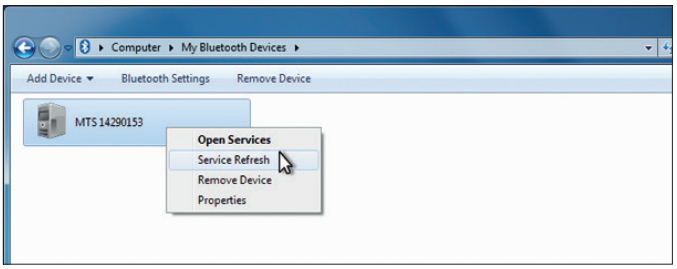


Fig. 5: Open Services

3. Right-click “Serial Port Profile” and select “Create Port”. Alternatively you can double-click “Serial Port Profile” to create a virtual COM (fig. 6).

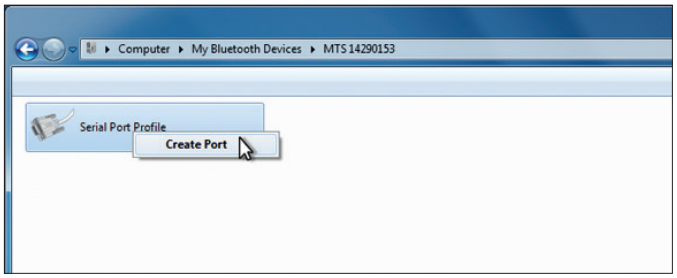


Fig. 6: Create COM Port

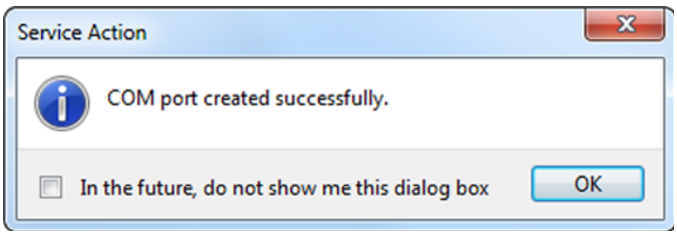


Fig. 7: Installation of Bluetooth® SPP driver was successful

2. SOFTWARE CONFIGURATION

☐ **Step 1: Install GBS Analog Bluetooth® Configurator**
☐ Step 2: Start sensor
☐ Step 3: Start GBS Analog Bluetooth® Configurator

Double click “GBS_BT_Analog-setup.exe”.
Click “Run as administrator”.

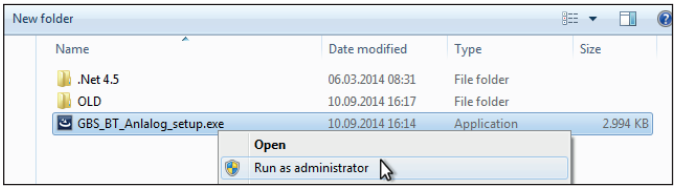


Fig. 8: Run the installation as administrator

☑ Step 1: Install GBS Analog Bluetooth® Configurator
☐ **Step 2: Start sensor**
☐ Step 3: Start GBS Analog Bluetooth® Configurator

Restart the sensor.

☑ Step 1: Install GBS Analog Bluetooth® Configurator
☑ Step 2: Start sensor
☐ **Step 3: Start GBS Analog Bluetooth® Configurator**

The GBS application software should start automatically. If you receive a COM[X] Unavailable error (fig.9), select a different COM (fig. 10). Then re-start the sensor.

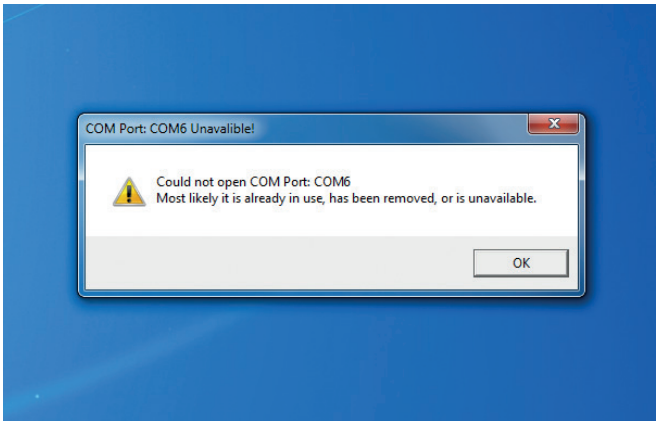


Fig. 9: COM Port is not available

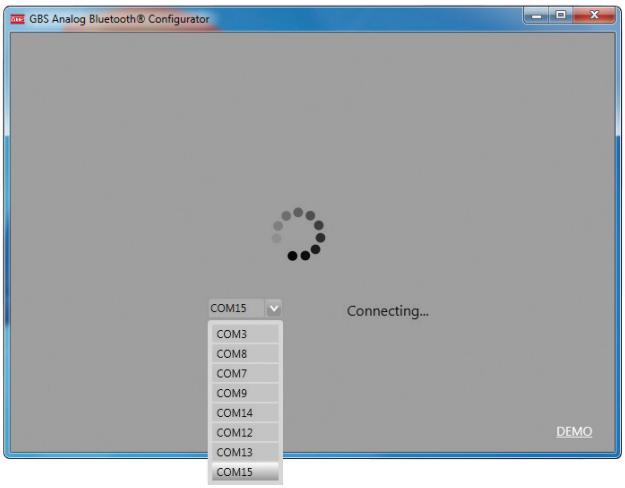


Fig. 10: Choose the right COM Port

When the COM port is set correctly, a message displays at the bottom right of the monitor. CSR Harmony indicates that the sensor is attempting to establish a connection to your computer. Click the Bluetooth® symbol twice (do not double-click) to allow the connection (fig. 11).

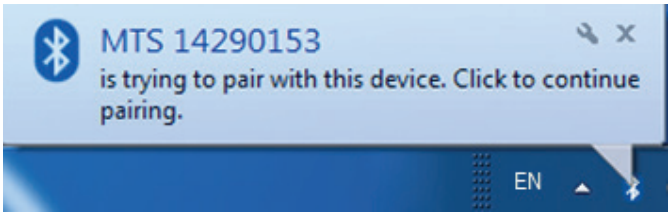


Fig. 11: Click on the Bluetooth® symbol twice (no double-clicking)

3. GBS Analog Bluetooth® Configurator

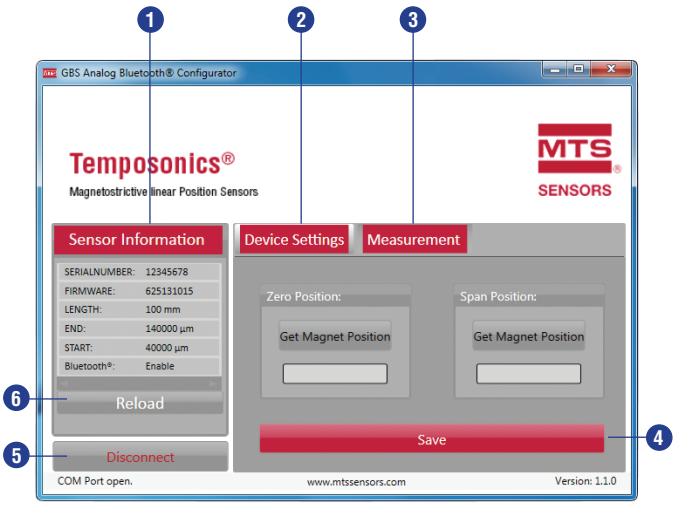


Fig. 12: GBS Analog Bluetooth® Configurator user interface

1. **Sensor Information** contains the sensor parameters,which are read in automatically when connecting the sensor.
2. In the **Device Settings** menu the configurable parameters (Zero Position, Span Position) of the sensor can be set.
3. The **Measurement** menu shows the current position of the magnet.
4. The **Save** button saves any parameter changes you have made.
5. The button **Disconnect** breaks the Bluetooth® connection to the sensor and closes the GBS Analog Bluetooth® Configurator.
6. The **Reload** button updates the sensor information.

Device Settings

Under “Device Settings” you can change the magnet’s Zero and Span Position. To change the magnet’s Zero Position, move it to the desired position, then click “Get Magnet Position”. Do the same to change the Span Position. Confirm your entry by clicking “Save” (fig. 13).

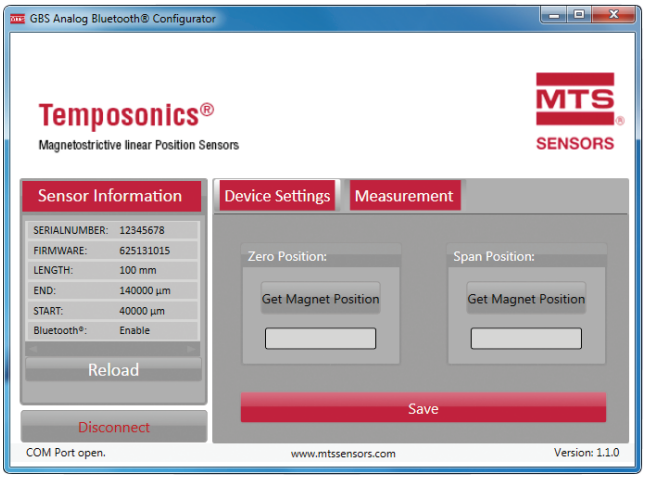


Fig. 13: Change Zero and Span Position

Measurement

After pressing the “Start Read” button (fig. 14) the current position of the magnet is shown (fig. 15). The “View” button provides a graphic display of the magnet’s positions (fig. 16).

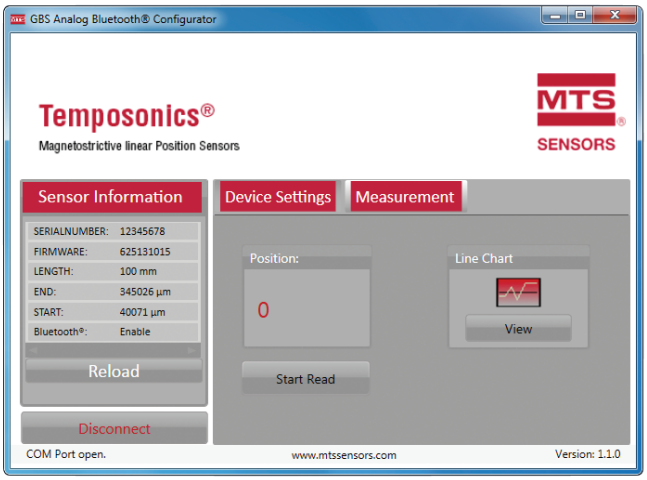


Fig. 14: “Start Read” button

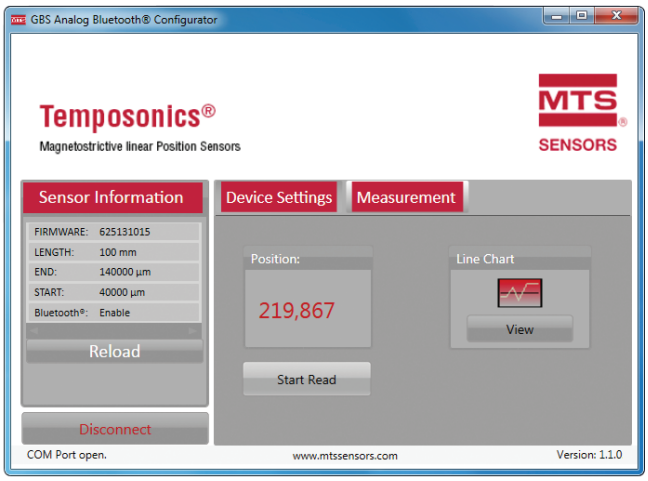


Fig. 15: Current magnet position

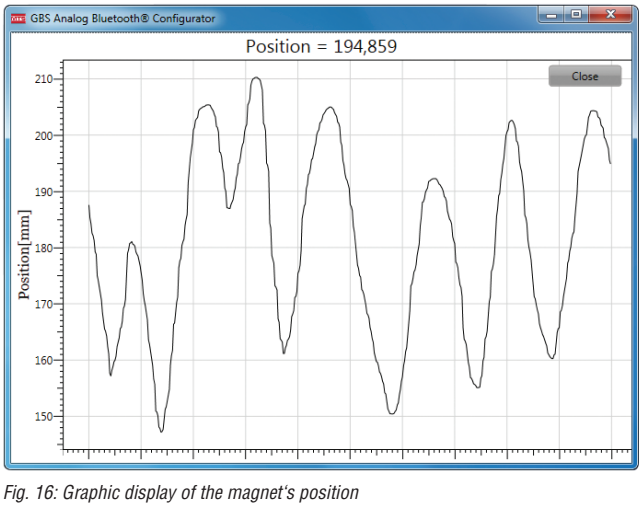


Fig. 16: Graphic display of the magnet‘s position

Notes

MTS®
SENSORS

Document Part Number:
551595 Revision A (EU.EN) 09/2014

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