



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

 \Box 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).

Add Bluetooth Device	×
Select a device to connect with this computer Others Tothers T	
Lean't find my device	Search Again
	Next Cancel

Fig. 3: Add Bluetooth® device

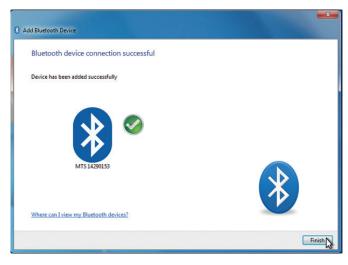


Fig. 4: Connection was successful

✓ 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).

dd Device 🔻 🛛 Blueto	oth Settings Remove Device	
MTS 14290153		
	Open Services	
	Service Refresh	
	Remove Device	
	Properties	

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).

Computer + My Bluetooth Devices + MTS14290153
Serial Port Profile Create Port
Fig. 6: Create COM Port

Service Action	×
COM port created successfully.	
In the future, do not show me this dialog box	ОК

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

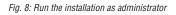
2. SOFTWARE CONFIGURATION

□ 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".

Net 4 E 06 02 2014 09:21 Eile 6-14	OLD		10.09.2014 16:17	File folder	
	.Net 4.5		06.03.2014 08:31	File folder	
	Net 4 5		06.03.2014.08:31	File folder	



COM15 Connecting... COM3 COM3 COM4 COM12 COM15 COM15 COM14 COM15

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)

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.

COM Port: COM6 Unavalible!	
Could not open COM Most likely it is alread	1 Port: COM6 ly in use, has been removed, or is unavailable.
	ОК
	OK

Fig. 9: COM Port is not available

3. GBS Analog Bluetooth® Configurator

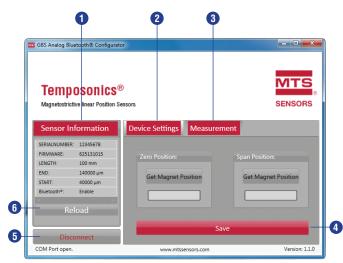


Fig. 12: GBS Analog Bluetooth® Configurator user interface

- Sensor Information contains the sensor parameters, which are read in automatically when connecting the sensor.
- In the Device Settings menu the configurable parameters (Zero Position, Span Position) of the sensor can be set.
- The Measurement menu shows the current position of the magnet.
- 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).

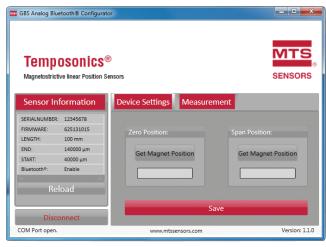


Fig. 13: Change Zero and Span Position

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).

GBS Analog Blu	etooth® Configura	itor	
	OSONICS tive linear Position		
Sensor In	formation	Device Settings Mea	surement
SERIALNUMBER	: 12345678		
FIRMWARE:	625131015	Position:	Line Chart
LENGTH:	100 mm	r osition.	
END:	345026 µm		
START:	40071 µm	0	
Bluetooth®:	Enable		View
Re	load	Start Read	
Disc	onnect		
COM Port open.		www.mtssensors.co	vm Version: 1.1.0

Fig. 14: "Start Read" button

Temposonics Magnetostrictive linear Position :			
Sensor Information	Device Settings N	Measurement	
FIRMWARE: 625131015			
LENGTH: 100 mm	Position:	Line Chart	
END: 140000 μm			
START: 40000 μm	219,867		
Bluetooth®: Enable	219,007	View	
Reload			
	Start Read		
	Start Kead		
Disconnect			
Disconnect			

Fig. 15: Current magnet position

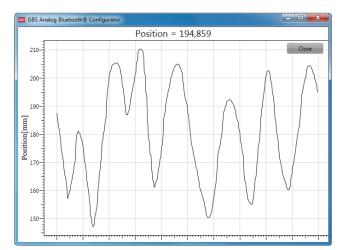


Fig. 16: Graphic display of the magnet's position

Programming & Configuration Temposonics® GBS Analog via Bluetooth®

Notes



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OCATIONS

GmbH & Co. KG Auf dem Schüffel 9 58513 Lüdenscheid, Germany Tel. + 49 2351 9587-0

MTS Sensor Technologie

Fax + 49 2351 56491 info.de@mtssensors.com www.mtssensors.com

USA

MTS Systems Corporation Sensors Division 3001 Sheldon Drive Cary, N.C. 27513, USA Tel. +1 919 677-0100 Fax +1 919 677-0200 info.us@mtssensors.com www.mtssensors.com

JAPAN

MTS Sensors Technology Corp. 737 Aihara-machi, Machida-shi. Tokyo 194-0211, Japan Tel. +81 42 775-3838 Fax +81 42 775-5512 info.jp@mtssensors.com www.mtssensors.com

FRANCE

MTS Systems SAS Zone EUROPARC Bâtiment EXA 16 16/18, rue Eugène Dupuis 94046 Creteil, France Tel. + 33 1 58 4390-28 Fax + 33 1 58 4390-03 info.fr@mtssensors.com www.mtssensors.com

ITALY

MTS Systems Srl.Sensor Division Via Diaz,4 25050 Provaglio d'Iseo (BS), Italy Tel. + 39 030 988 3819 Fax + 39 030 982 3359 info.it@mtssensors.com www.mtssensors.com

CHINA

MTS Sensors Room 504, Huajing Commercial Center, No. 188, North Qinzhou Road 200233 Shanghai, China Tel. +86 21 6485 5800 Fax +86 21 6495 6329 info.cn@mtssensors.com www.mtssensors.com

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