Complies with
IMDA standards
DB101762

BOSCH
Technik fürs Leben

CISS – Connected Industrial Sensor Solution

Quick Start Guide

Connected Industrial Sensor Solution | CISS

The Robust Acceleration, Vibration & Condition Detector

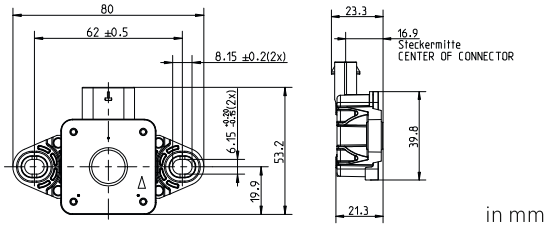
The full documentation of the CISS is available at:
https://www.bosch-connectivity.com/media-and-downloads/.

General Information

Warning: Do not open the housing without authorization! Opening the housing without authorization will void any warranty and includes risks of injury to the user.
Using the CISS according to its intended use and functionalities does not require the opening of the housing.
Do not open the housing.

Scope of Delivery

- CISS device



in mm

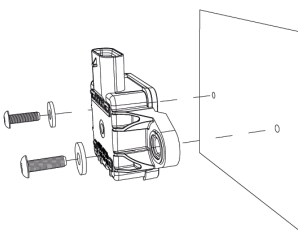
- USB cable (2m)
- Fasteners (2 screws, 2 washers and 2 magnetic bases)
- Quick Start Guide

Software Downloads

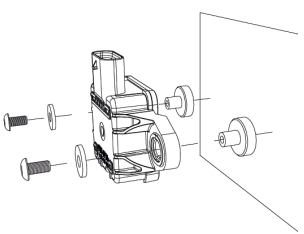
- CISS Driver for Windows (32-bit, 64-bit, available at:
  https://www.bosch-connectivity.com/media-and-downloads/
  (CISS Driver Installer Windows)
- Example Implementation (Demo Python Script, available at:
  https://www.bosch-connectivity.com/media-and-downloads/
  (CISS Demo Scripts Python)

Mounting

Direct Mounting



Magnetic Mounting



Note: The use of the mounting magnets influences the measurements of magnetic fields. The mountingmagnets should not be used if the magnetometer is activated. Do not cover the membrane; otherwise, the humidity and pressure measurement cannot be guaranteed within the specified performance.

INFO: Depending on the target mounting place, the provided screws might not fit – please use appropriate screws for target.

Setting up data connections

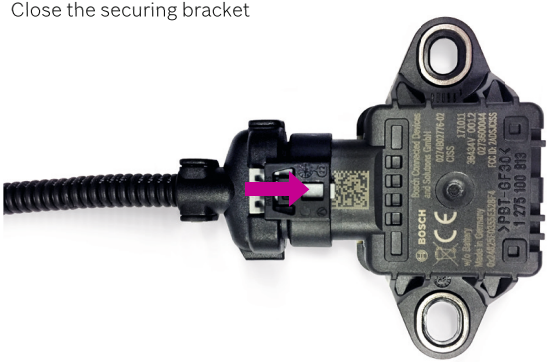
The CISS device can either be connected via Bluetooth Low Energy (BLE 4.0 peripheral) to a mobile device or via the USB connection to your host computer, to transfer the data.

Option 1: Connection / data transfer by Bluetooth Low Energy (BLE)

Connect the CISS

1. Connect the USB cable included in delivery to the CISS and to a USB power supply (USB Power supply, USB port of PC, etc.).

2. Close the securing bracket



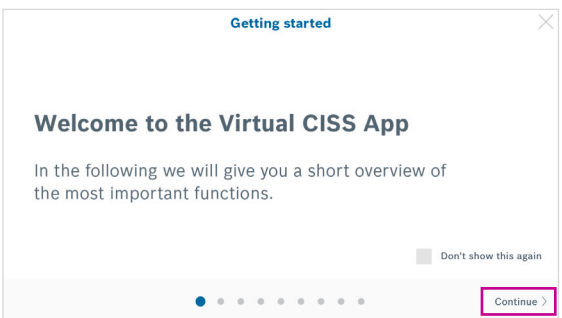
3. The CISS is now ready to be put into operation

4. Download and install the “Virtual CISS App” (Apple App Store / Google Play Store)

5. Ensure that Bluetooth is activated on the device you want the CISS to connect with (smartphone, tablet etc.)

6. Start the “Virtual CISS App”

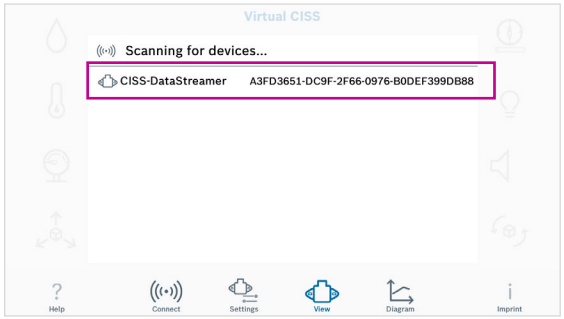
7. After the start screens you get a short overview of the most important functions via the help screens.



INFO: The help screens, fitting to the area you are at that moment, are accessible at any time.

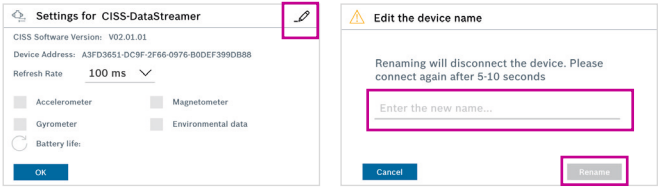
8. At the start of the App the search button is shown.
   Click on the search-button to find devices.

9. Choose your CISS by tapping on the CISS device from the listed devices to establish the connection between the CISS device and the smartphone / tablet.



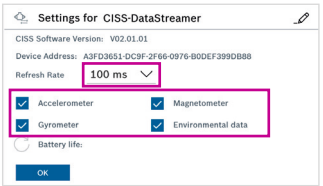
10. Tap on the settings icon

11. To ensure an easy identification of your devices, please rename your CISS by tapping on the pencil and typing in your preferred name. Tap on rename.



After the renaming, you have to wait for 5 – 10 sec. Afterwards you have to establish the connection again.

12. Tap on the setting icon to select the sensors based on your requirements and adapt the corresponding sampling rate.

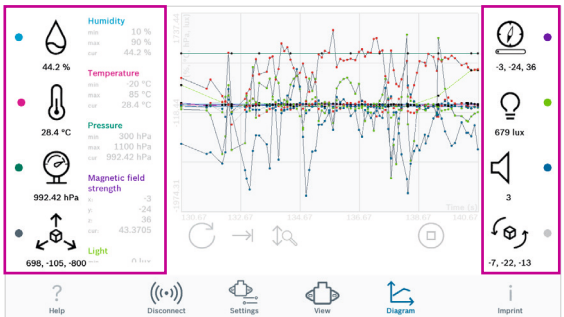


INFO: The battery life is only relevant, if a CISS version with battery will be launched.

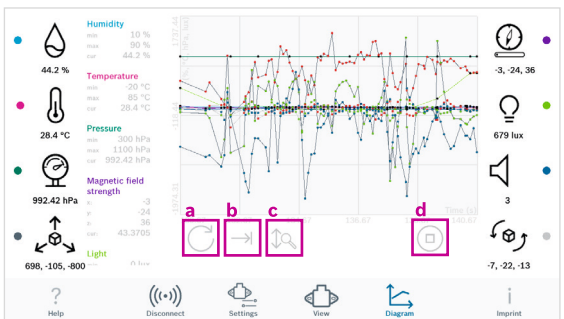
13. Tap on the streaming button to start streaming the measured data. The data is shown under the respective sensor icon.

14. Tap on the chart icon

15. Select the sensors you want to see in the chart by taping on the sensor icons. The graphs and the values become displayed.

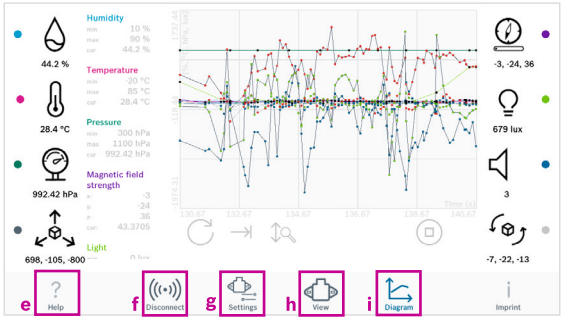


Options using the chart view



a. Refresh: If the chart is zoomed by the user, click on this icon to recover the original view.
b. Enable / disable the scrolling of the visible window to show all X values in the graph
c. Enable / disable auto scale of the y axis of the graph
d. Play / stop: tap on to button to show streaming data in the graph / to freeze streaming data in the graph

Summary



e. See the help screens, fitting to the area you are now.
f. Disconnect: Click on the disconnect icon, if you want to disconnect your device
g. Rename your device, select your sensors, adapt your sampling rates
h. Start / stop data streaming
i. Show the streamed data in a chart

Option 2: Connection /data transfer by USB Cable

Prerequisites:

- Host computer is running on Linux (kernel version 2.6 or later) or Windows 7 or later.
- Make sure Python 2.7 environment is installed on your host computer.
- Make sure that the following modules are installed within your Python environment:
  - serial
  - signal
  - Config Parser
  - csv
  - time
  - os
- In case you are using Windows 7/8, please install the CISS Driver for Windows (not needed for Windows 10 or Linux environments). The driver and corresponding instructions are available at: **https://www.bosch-connectivity.com/media-and-downloads/** (CISS Driver Installer Windows / CISS Driver Installer Windows Operating Instructions).
- Download the example Python Script and the corresponding instructions at: **https://www.bosch-connectivity.com/media-and-downloads/** (CISS Demo Script Python / CISS Demo Script Python Operating Instructions)

Connect the CISS

1. Connect the USB cable included in the delivery to the CISS and to a host computer.

2. The CISS is now ready to be put into operation.

Configure the CISS

1. Adjust the settings in the “sensor.ini” file, especially adjust the serial interface (e.g., “COM5” for Windows environments or “/dev/ttyACM0” for Linux environments).

Data transfer

1. Start the Python Script (Terminal).

2. Data will be logged in CSV format in the output data file “datastream.csv”.

Regulatory and legal information about the CISS

Accompanying information

- Radio power: 2 mW (peak conducted)
- Frequency band: 2400 – 2483.5 MHz

European Union notices

Radio Equipment Directive
Hereby, Bosch Connected Devices and Solutions GmbH declares that the radio equipment type "CISS" is in compliance with Directive 2014/53/EU (Radio Equipment Directive). The full text of the EU declaration of conformity is available at the following internet address:
https://www.bosch-connectivity.com/media-and-downloads/
(CISS Declaration of Conformity).

RoHS
The CISS meets the requirements of the Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS Directive).

REACH
The CISS meets the requirements of the Directive 1907/2006 (REACH Directive) and does not contain substances of very high concern as specified in the REACH Directive in concentrations which require notification.

USA: FCC notices

FCC has issued an EQUIPMENT AUTHORIZATION to Bosch Connected Devices and Solutions GmbH for CISS according to FCC rule parts 15 C with the FCC ID: 2ADSJCISS

Note: Changes or modifications not expressly approved by Bosch Connected Devices and Solutions GmbH could void the FCC certificate and therefore user's authority to operate the equipment."

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

IMDA Singapore notices

The CISS has been registered with the Info-communications Media Development Authority under regulation 20(6) of the telecommunications (Dealers) regulations (Cap 323, Rg 6) and approved for sale in Singapore under Dealer's License DB101762.

ACMA Australia notices

This device complies with the requirements of the relevant ACMA Standards made under the Radiocommunications Act 1992 and the Telecommunications Act 1997.

China Notice

This device has passed the type approval by SRRC and has been granted the CMIIT ID: 2018DJ2794

Japan Notice

This device is granted pursuant to the Japanese Radio Law (電波法).
This device should not be modified (otherwise the granted designation number will become invalid).

Other certifications

The CISS is certified for operation in the European Union, the U.S.A., China, Singapore and Australia. Use of the CISS is subject to validation and observation of local legal regulation by the customer. For information on other certifications – which gradually may be issued over time – please, contact our CISS support at **support-@bosch-connectivity.com.**

Bluetooth®

The CISS has been granted the Bluetooth® listing by the BT-SIG.

Disposal

The unit, accessories and packaging should be sorted for environmental--friendly recycling. Do not dispose of the device into household and industrial waste!

According to the European Guideline 2012/19/EU, electric and electronic devices that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

Restrictions of use

CISS housing is not to be opened or tampered with. CISS is designed for use within environmental conditions as further detailed in this operating instructions. It is the customer's responsibility to validate and test any use or operation under deviating environmental conditions. Neither the CISS nor a potential product derivation, are designed, intended, or authorized for use as components in systems intended for surgical implant into the body, or other applications intended to support or sustain life, or for any other application in which the failure of the Bosch product could create a situation where personal injury or death may occur. The same applies for any kind of weapon, or any device or application which is potentially dangerous for human life.

The CISS is designed for monitoring purposes and shall not be used as an element of control and safety in machines under the scope of the Machinery Directive 2006/42/EC.

Bosch Connected Devices and Solutions GmbH shall not be held liable for any damages resulting from any use of the CISS outside/beyond the certified types of operation and/or defined field of application.

Open source license condition

The CISS embedded software contains open source software (OSS) components.

The OSS copyrights and license conditions are provided in the file "DataStreamer_v02.01.01_FOSS_Disclaimer.txt" which can be read after connection of the CISS via USB as a mass storage device to your PC.

Certification activities for CISS are ongoing, therefore the list in this document with status 31.05.2018 might not show all available certifications. Please find the complete list of certifications at:
https://www.bosch-connectivity.com/media-and-downloads/
(CISS Operating Instructions).

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