



Manual

SLS

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List of abbreviations / Glossary

API DLL	Software interface to enable interaction between the application and the Key Reader
Firmware	Sequence program of the Key Reader
Flashing the firmware	Change the firmware
FlashTool	Application to change the firmware
IR	Infrared
LED	Light Emitting Diode
SLS	Key Reader
SLS.DLL	API DLL
Driver	Software used to interface a hardware device with an operating system
USB	Universal Serial Bus



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1. Introduction

1.1. Trade marks

Windows, Windows NT and other names of Microsoft products which are mentioned in this manual are trade marks or registered trade marks of the Microsoft Corporation. Other trade marks and product names mentioned in this manual are trade marks belonging to their legal owners and are hereby acknowledged as such.

1.2. System requirements for operating the Key Reader

To install and start the Key Reader software, your system must meet the following minimum requirements:

- Pentium (at least 100 MHz) or higher processor
- Windows XP (32Bit or 64Bit), Windows Vista (32Bit or 64Bit), Windows 7 (32Bit or 64Bit)
- Installed Java Runtime Environment 1.6 (32 Bit Version)
- 9 MB free storage space
- A free serial or USB interface
- CD-ROM Disc Drive

1.3. Unpacking the Key Reader

Please check the packaging for possible damage during transport. If the packaging is badly damaged, you should not install the device. In this case please refer to your Service Partner.

1.4. Scope of supply

- Key Reader with standard USB connection cable
- Installations-CD with the operating instructions as a PDF file

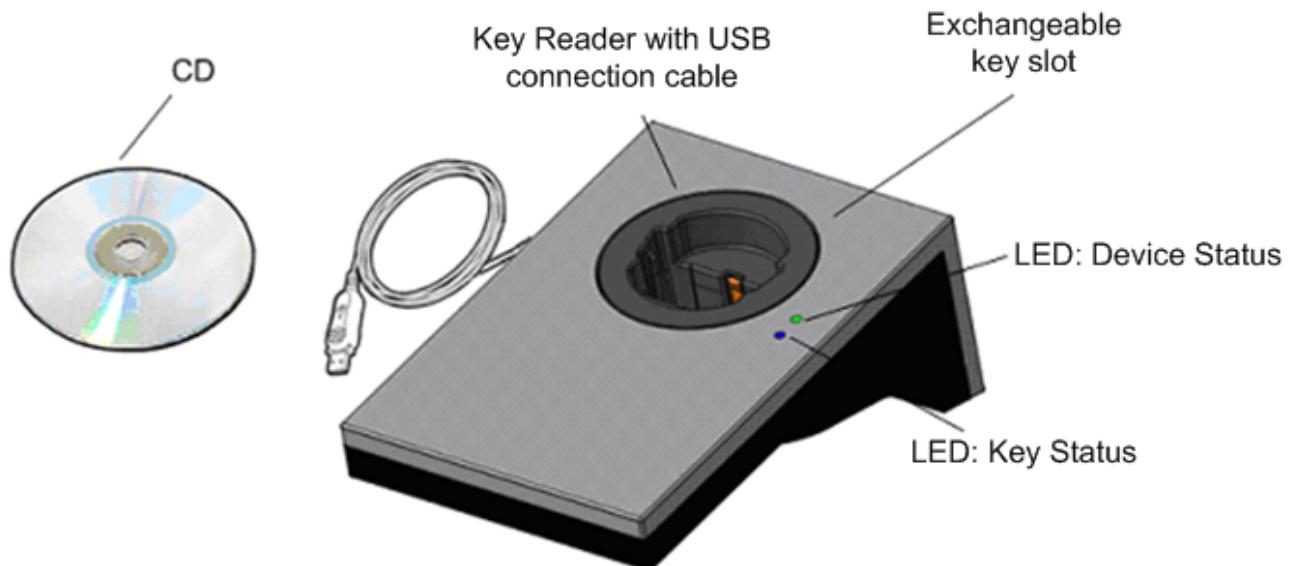


Figure 1: scope of supply



2. Operation

The device reads data from car keys of different types via its IR Interface.

An inductive field (125kHz) generated by the device supplies the car keys with energy. Communication between the Key Reader and the car keys is realized by using infrared (890nm) LEDs.

The Key Reader has an USB connection and will be supplied from the USB port. After connecting the SLS to the computer it will be recognized automatically by Windows. A message is displayed on the screen and the driver installation starts.

After successful installation, the Key Reader is ready for operation. The device status is indicated by the upper LED:

	Description	Upper LED
SLS-Status	SLS not working	off
	SLS in working condition but no communication to PC	yellow
	SLS in working condition communication to PC running	green
	SLS malfunction of memory	flashing red
	Firmware Download in progress	blue

The device scans automatically for a valid car key. The inductive field is switched on and off periodically. If a valid key is inserted, the key will be supplied with energy from the inductive field and sends an infrared message to the Key Reader. After receiving the message from the key, the device will identify the key as valid and the data transfer starts automatically. Now Key Reader sends an infrared message to the key to request the data. The key then answers with the requested data by sending an infrared message back to the device. The received data will be stored in a memory of the Key Reader.

The data transfer between car key and Key Reader is indicated by the lower LED:

	Description	Lower LED
Car Key Communication Status	SLS reading data	flashing blue
	Data transfer complete	blue
	Error while reading data	red
	Car Key contains no data	flashing red

The key data is stored in the memory of the Key Reader. A special software on the computer collects the data via USB.



3. Installation

To install the driver on any given Windows operating systems administrator rights are necessary. This is a standard setting of Microsoft.

3.1. Choice of location

Please do not install the Key Reader at locations in which the device is exposed to the following environmental conditions:

- Strong vibrations
- Strong electromagnetic fields, older types of monitors.
- Temperatures outside the range of 5°C - 40°C (Key Reader is IP30)

For optimal use of the Key Reader, you should set up the device as follows:

- Near the computer on which the software has been installed, whereby the distance to the nearest CRT monitor should be at least 0.5 m
- On a level, stable surface

3.2. Installing the Hardware

1. Plug in the USB connector coming from the Key Reader into a free USB connection on your computer

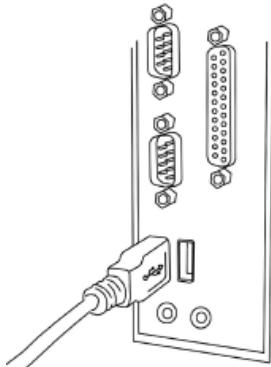


Figure.2: USB Device Connection to the computer

3.3. Installing the USB driver

Admin rights are necessary to install the driver on each operating system. This is a standard setting of each operating system.

The installation of the USB driver on the 32Bit and 64Bit versions of each operating system is the same.

3.3.1. Installing the USB driver on Windows XP

After connecting the SLS to the computer it will be recognized automatically by Windows. A message is displayed on the screen indicating „Welcome to the Found New Hardware Wizard“.

In the following dialog, select the option: **No, not this time** and press **Next**



Figure 3: Start dialog for driver installation

Please insert CD delivered with the package now and select the option: **Install the software automatically (recommended)** and press **Next**.

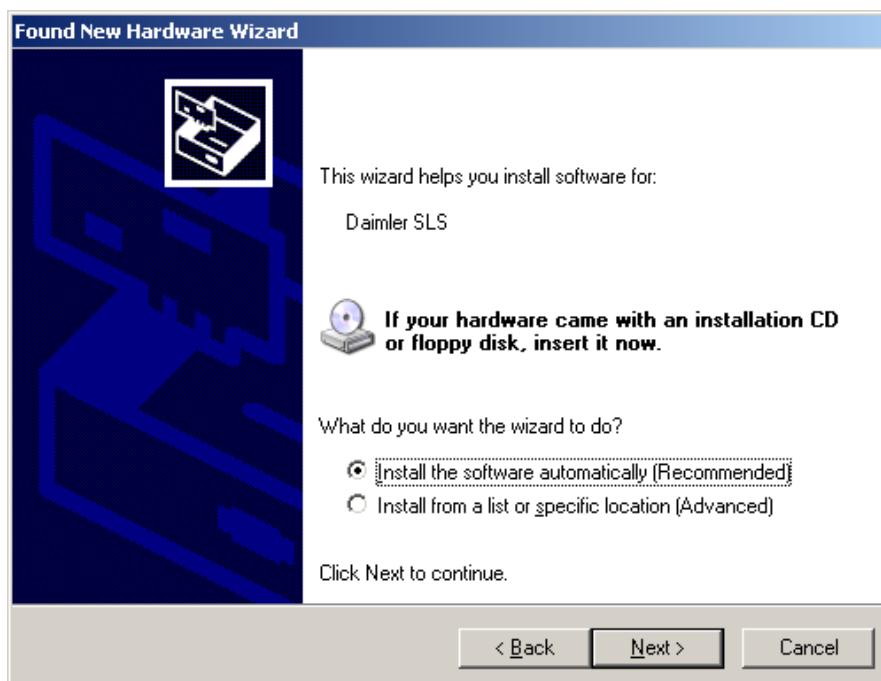


Figure 4: Selection of automatic or manual installation

When the following dialog appears, click on: **Continue Anyway**



Figure 5: Installation warning

Wait for the files to be installed.

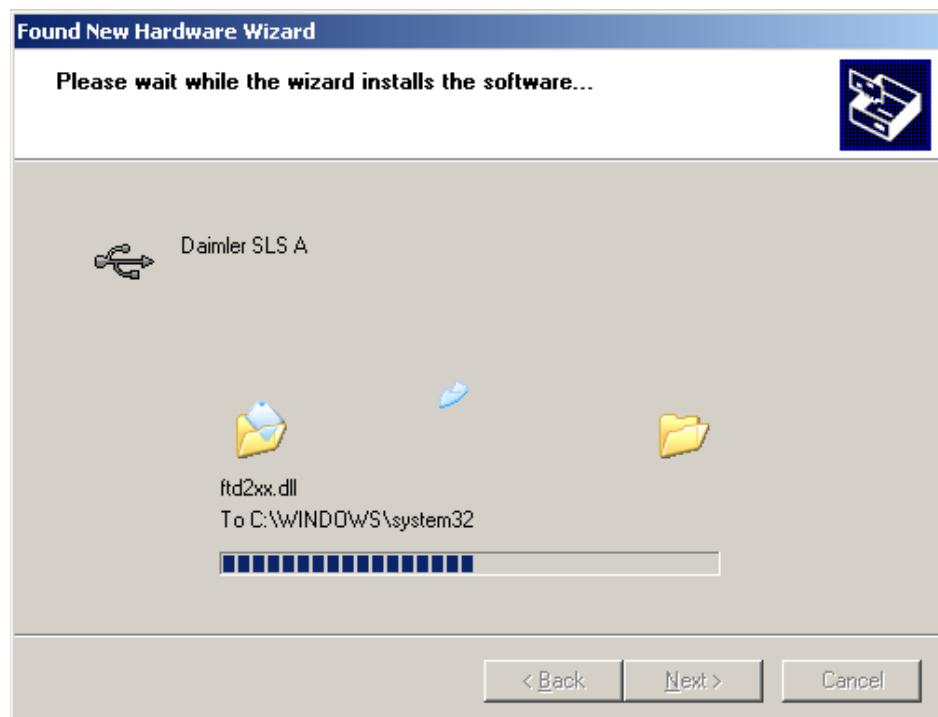


Figure 6: Installation screen for Key Reader

After completion click on: **Finish**



Figure 7: Completing the installation

The SLS will be recognized by Windows a second time, please run through the installation again. This is necessary to provide full functionality of the SLS. Please select the option **not this time** in the dialog and press **Next**.



Figure 8: Start dialog for driver installation

Please insert CD delivered with the package now and select the option: **Install the software automatically (recommended)** and press **Next**.

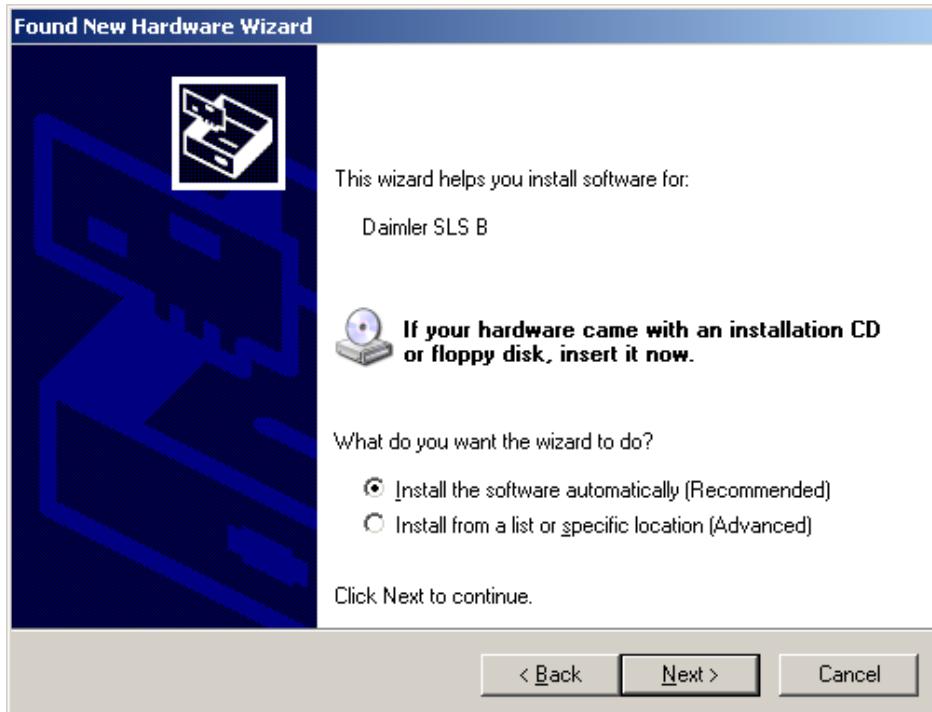


Figure 9: Selection of automatic or manual installation

When the following dialog appears, click on: **Continue Anyway**



Figure 10: Installation warning

Wait for the files to be installed.

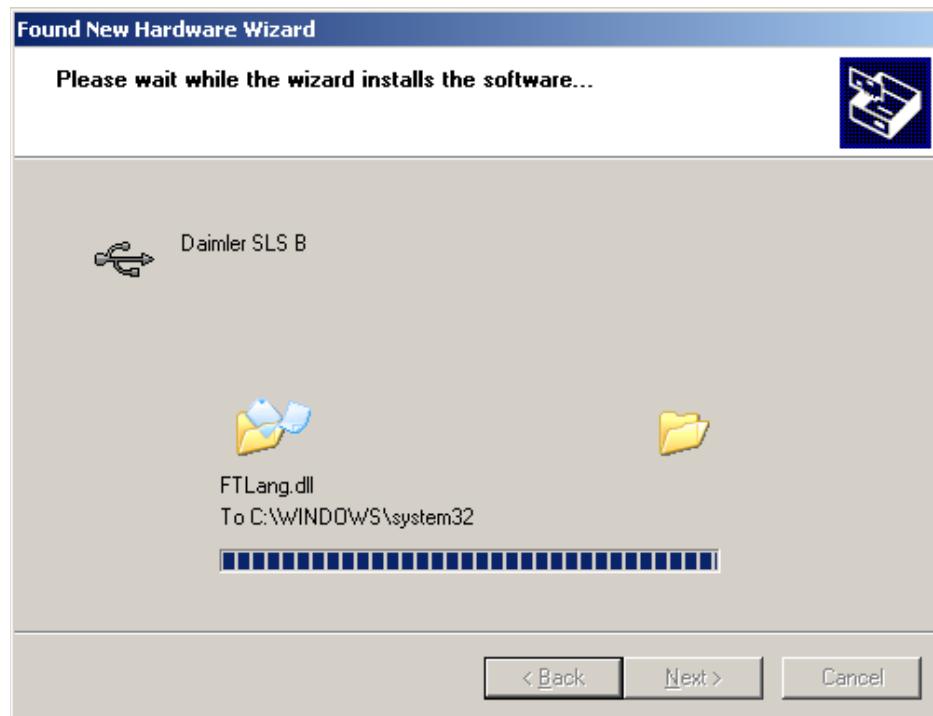


Figure.11: Installation screen for Key Reader

After completion click on: **Finish**

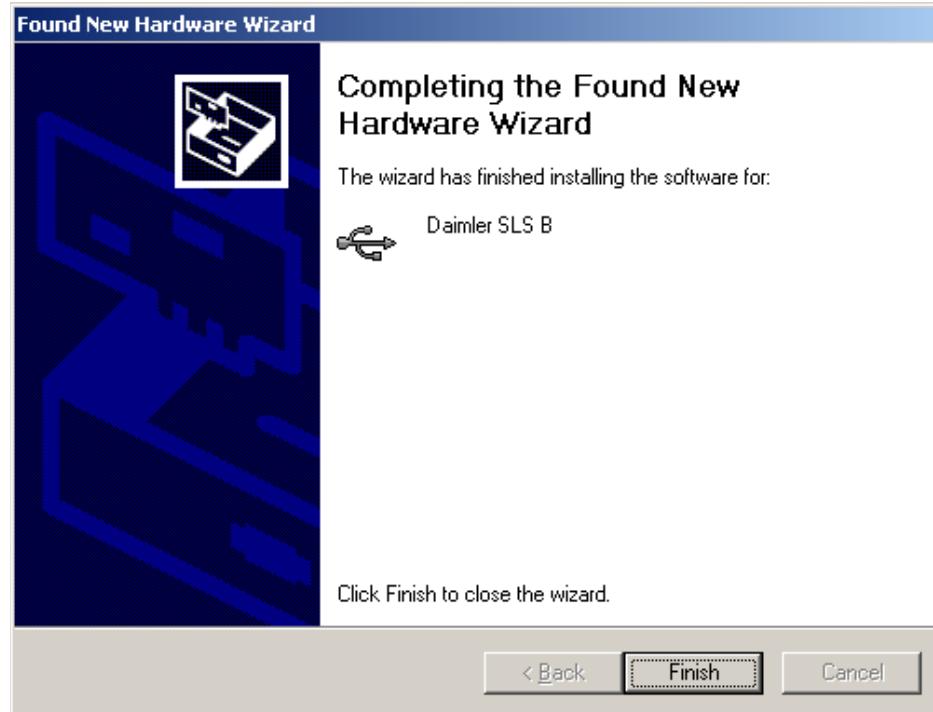


Figure 12: Completing the installation

Installation is complete now.

3.3.2. Installing the USB driver on Windows Vista

After connecting the SLS to the computer it will be recognized automatically by Windows. A message is displayed on the screen indicating “**Found New Hardware**”.

Click on **Locate and install driver software (recommended)**.

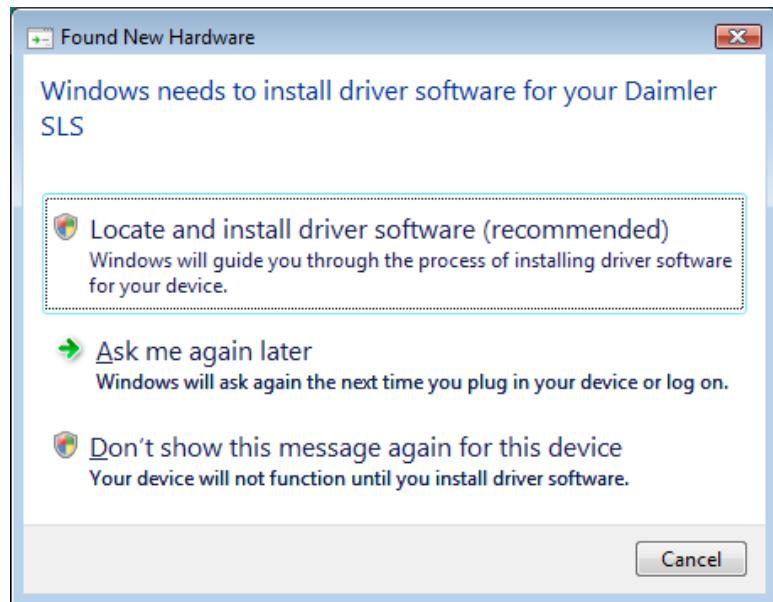


Figure 13: Start dialog for driver installation

At the Task Bar an icon occurs, clicking the icon opens a status Dialog if wanted.

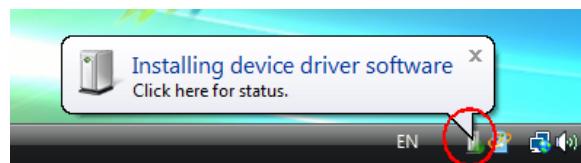


Figure 14: taskbar

Windows tries to find the driver from different sources, after a waiting time of up to several minutes the next dialog occurs.

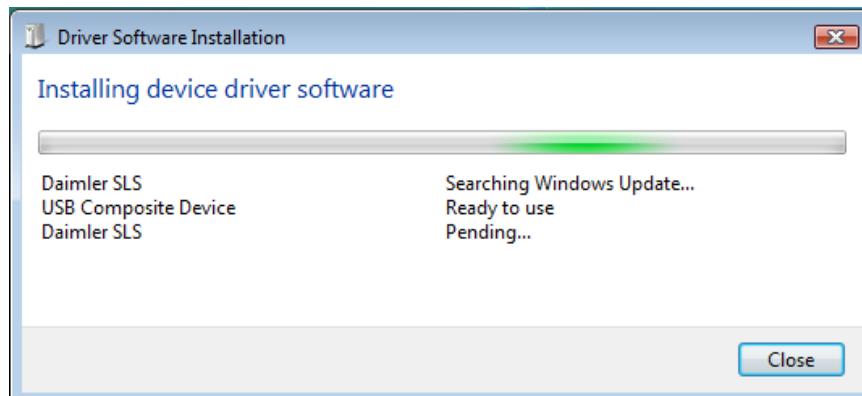


Figure 15: status of search for driver



The hardware manager opens, please insert the CD delivered with the package. Now the driver will be found quickly.

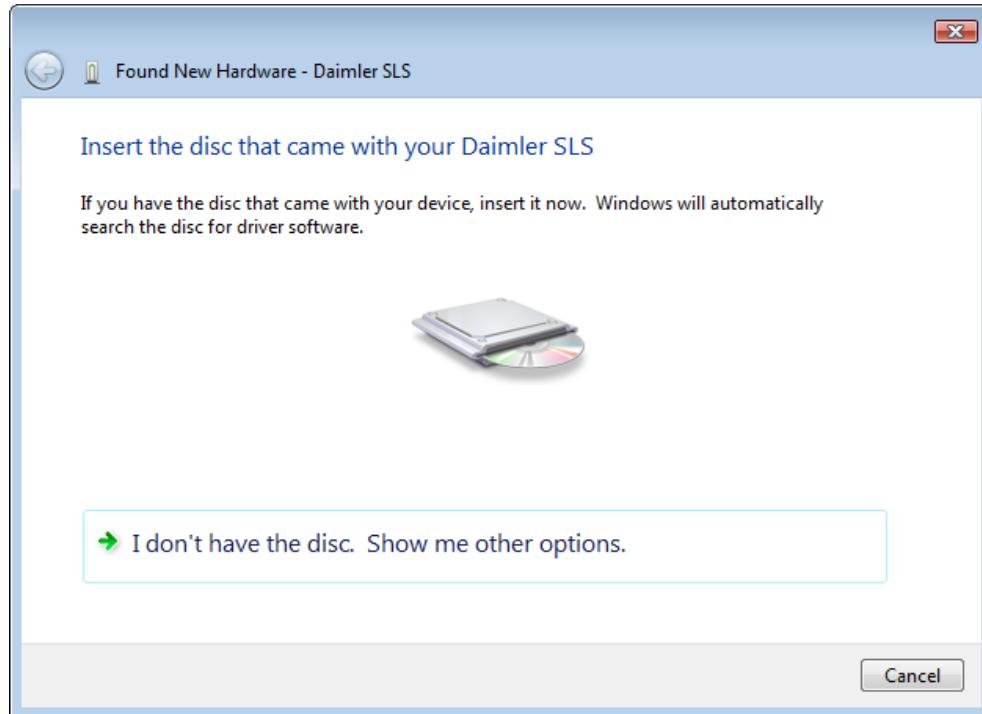


Figure 16: search for driver on CD

The USB driver is not certified, it may cause appearance of warnings. In this case carry on with the installation process, the software will not harm any function of your computer. Select **install driver software anyway**.

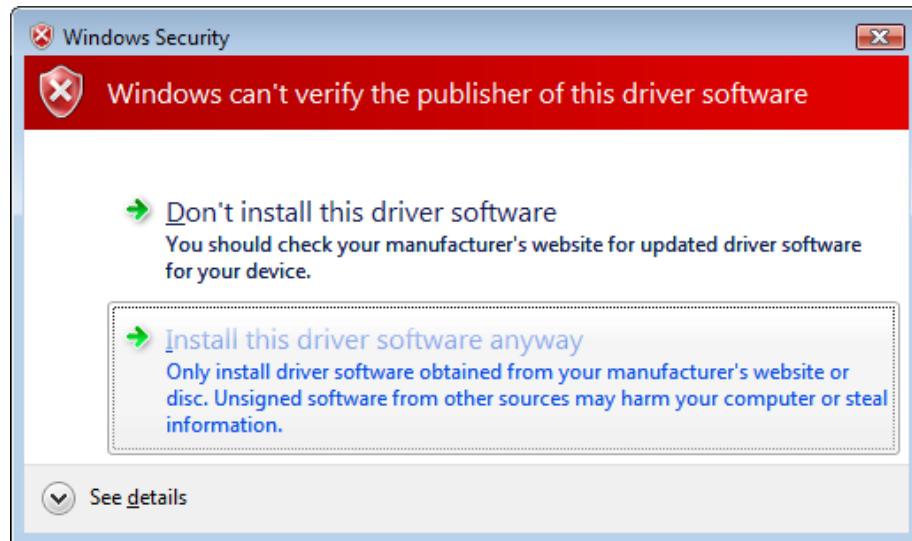


Figure 17: Installation warning

The driver is installed now. Please click on **Close**.

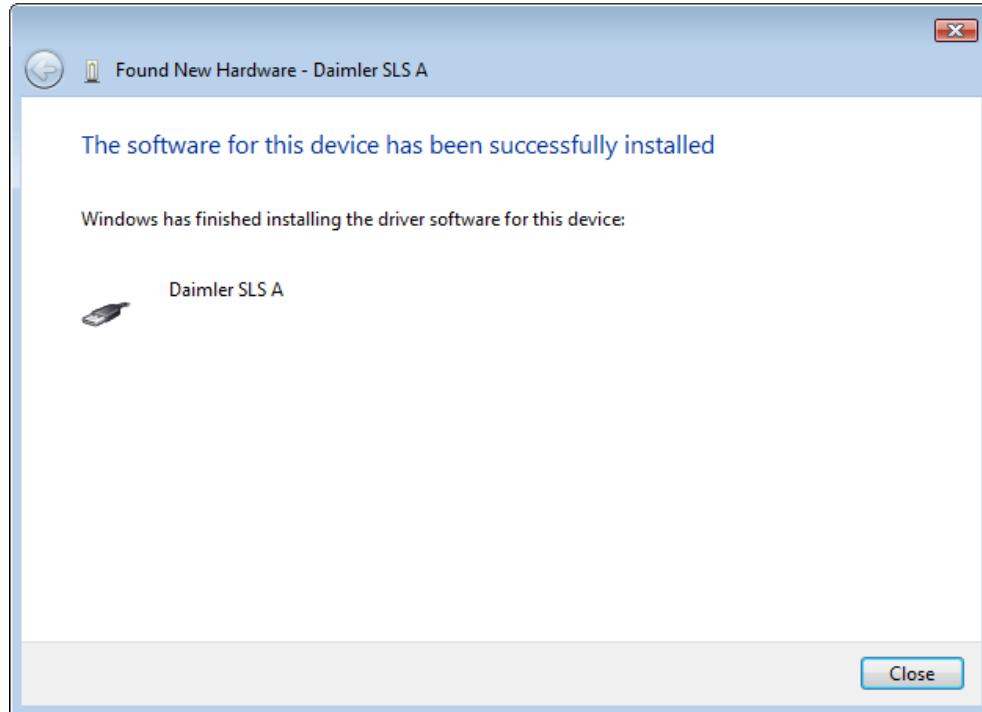


Figure 18: Finish of installation

The SLS will be recognized by Windows a second time, Windows must install the driver again. This is necessary to provide full functionality of the SLS. The installation process can take a few minutes.

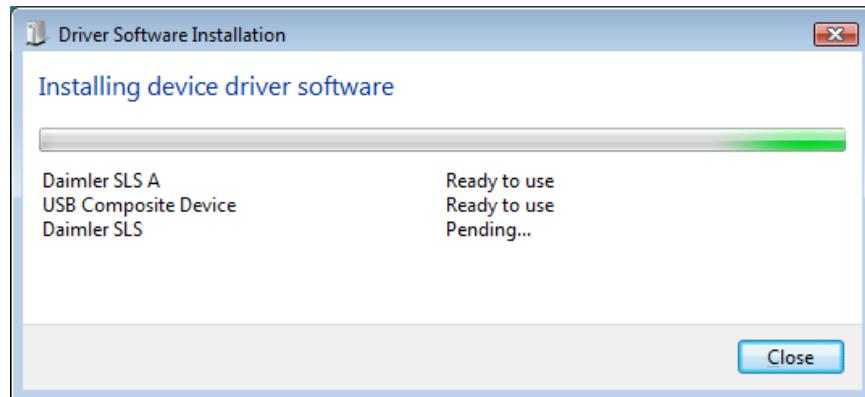


Figure 19: Installation of second port

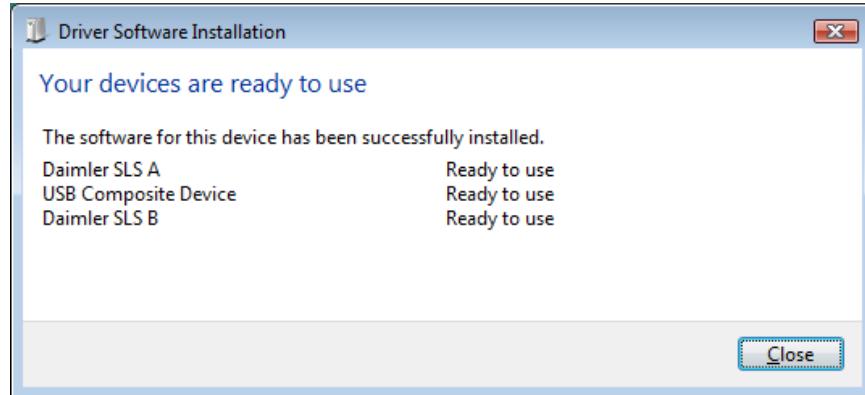


Figure 20: Installation finished

Installation is complete now.

3.3.3. Installing the USB driver on Windows 7

After connecting the SLS to the computer it will be recognized automatically by Windows. A message is shown on the screen, that the driver will be installed.

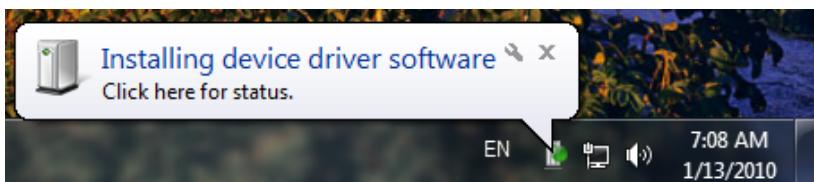


Figure 21: Windows install message

After a short time an error message appears, indicating the driver was not installed.

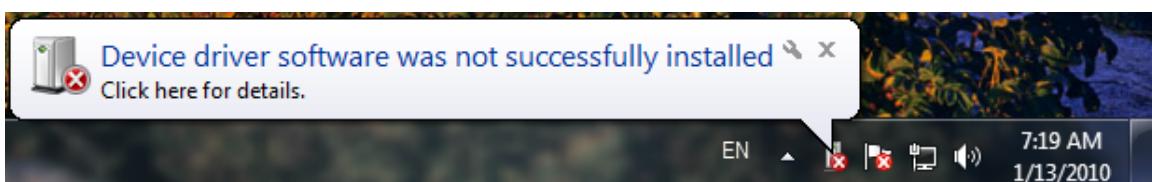


Figure 22: Error Message

The driver has to be installed manually. Please open the device Manager. The device Manager is a part of the operating system. More information about the device manager is in the help of the operating system. Now there are displayed two unknown devices with a *Daimler SLS* description. Right click on the upper device and choose **Update Driver Software**.

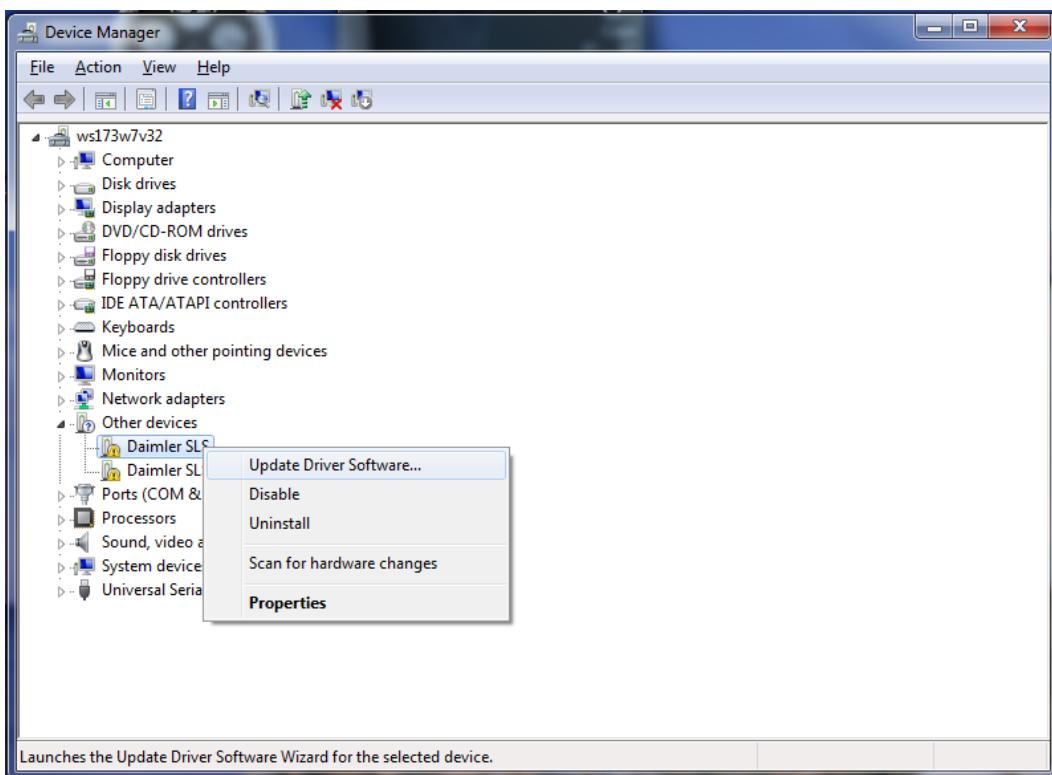


Figure 23: Device Manager

In the next dialog click on: **Browse my computer for driver software**.

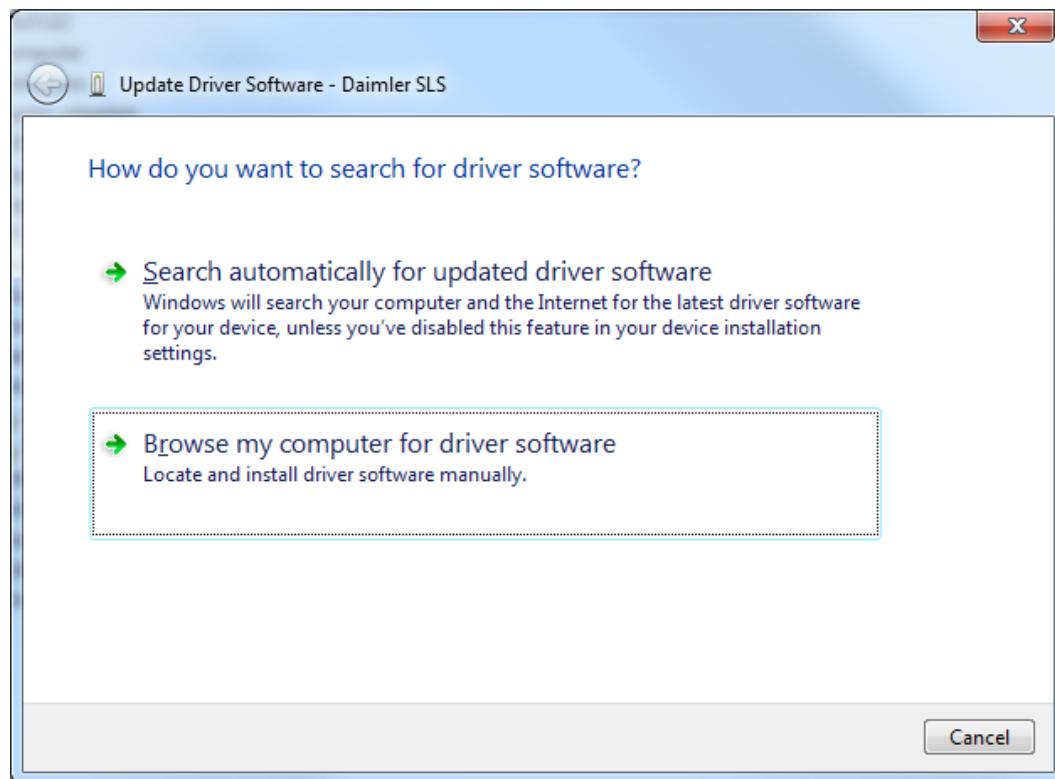


Figure 24: Selection of automatic or manual installation

The driver files are in the *USB Treiber* folder on the CD ROM. Choose the folder and press **Next**.

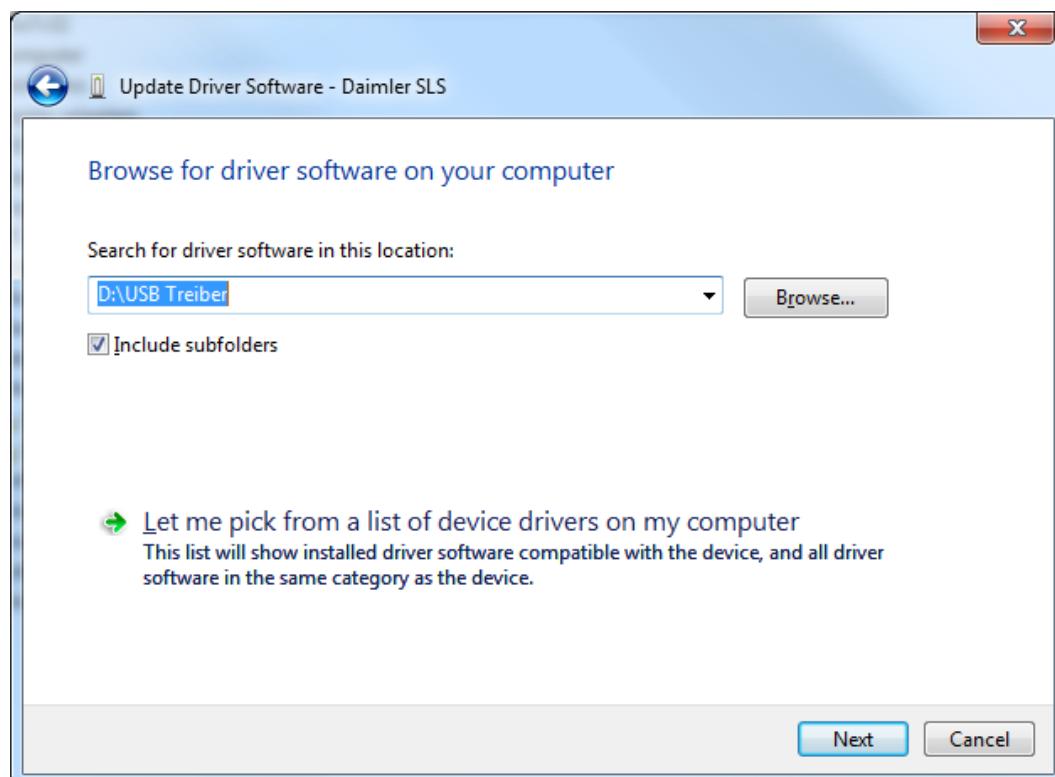


Figure 25: Search for the driver

When the following dialog appears, click on: **Install this driver software anyway**.

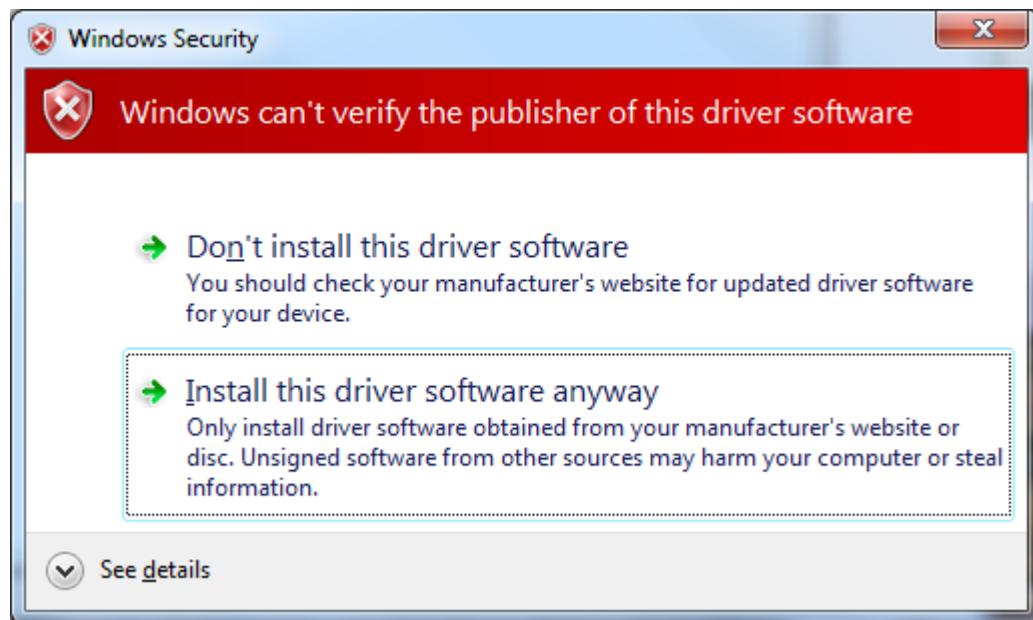


Figure 26: Installation warning

Wait for the files to be installed.

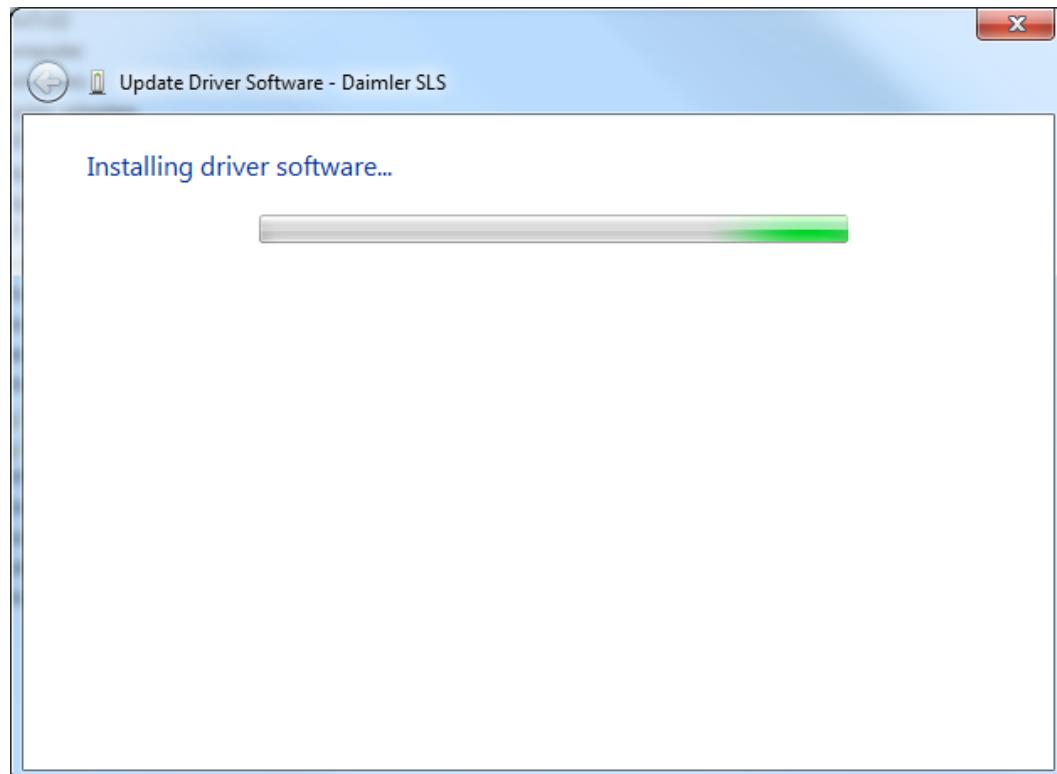


Figure 27: Installation screen for Key Reader

After completion click on: **Close**

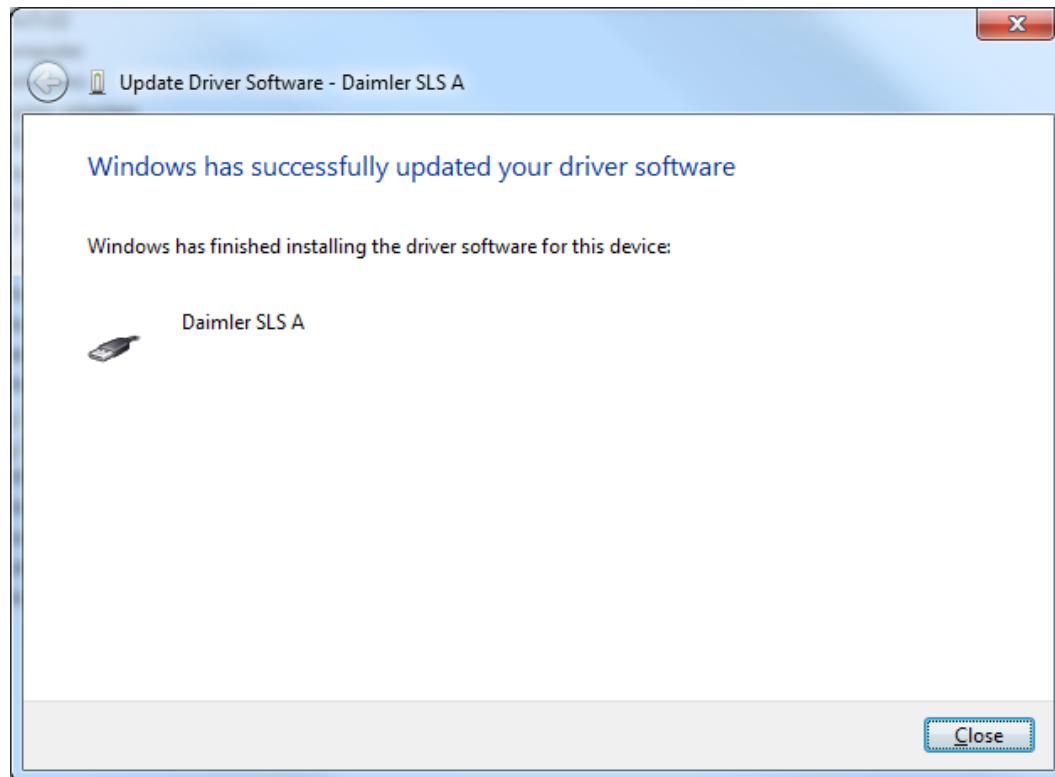


Figure 28: Completing the installation

There is still a remaining unknown *Daimler SLS* device displayed. Right click on this device and choose **Update Driver Software**.

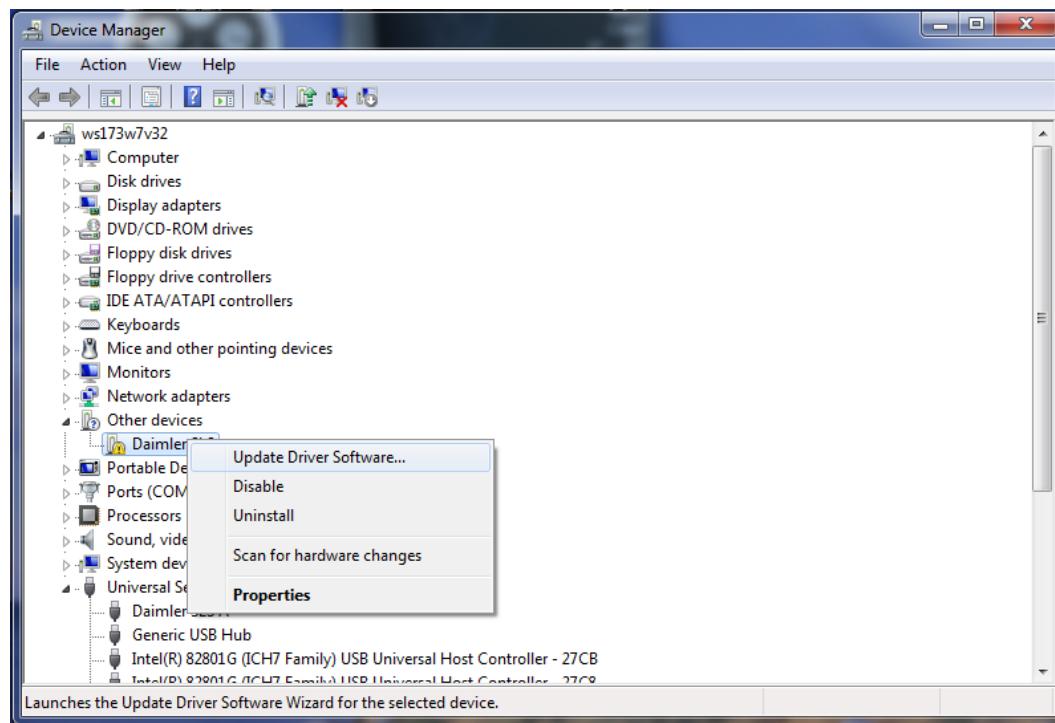


Figure 29: Device Manager

In the next dialog click on: **Browse my computer for driver software**.

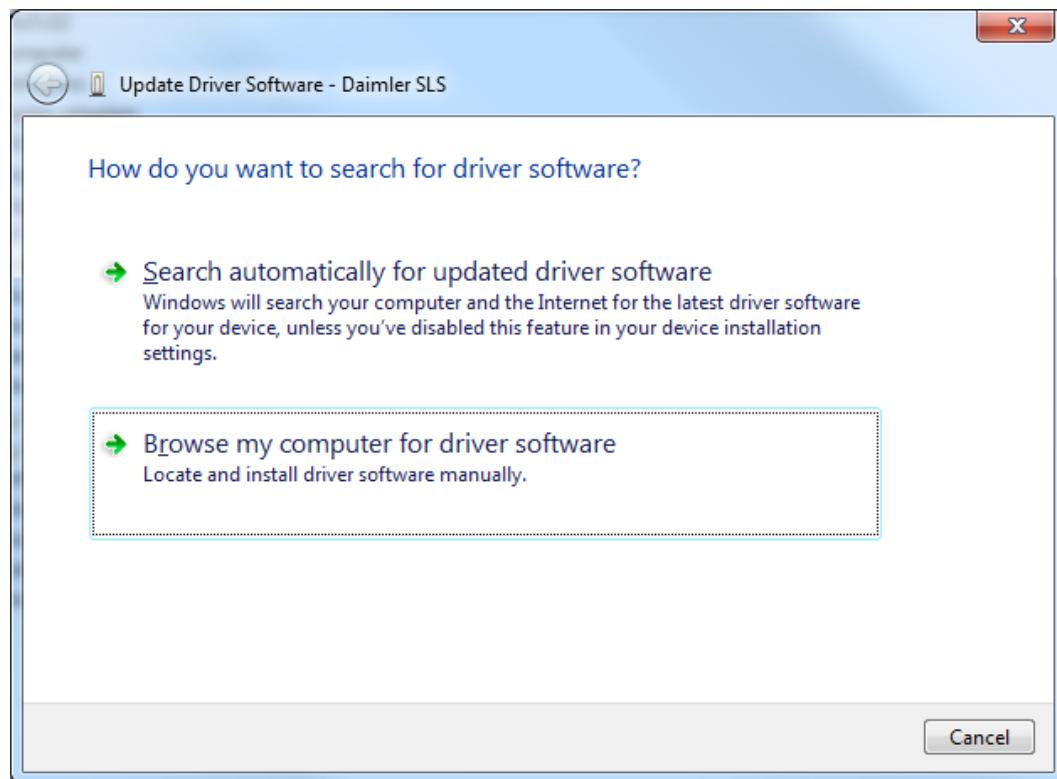


Figure 30: Selection of automatic or manual installation

The driver files are in the *USB Treiber* folder on the CD ROM. Choose the folder and press **Next**.

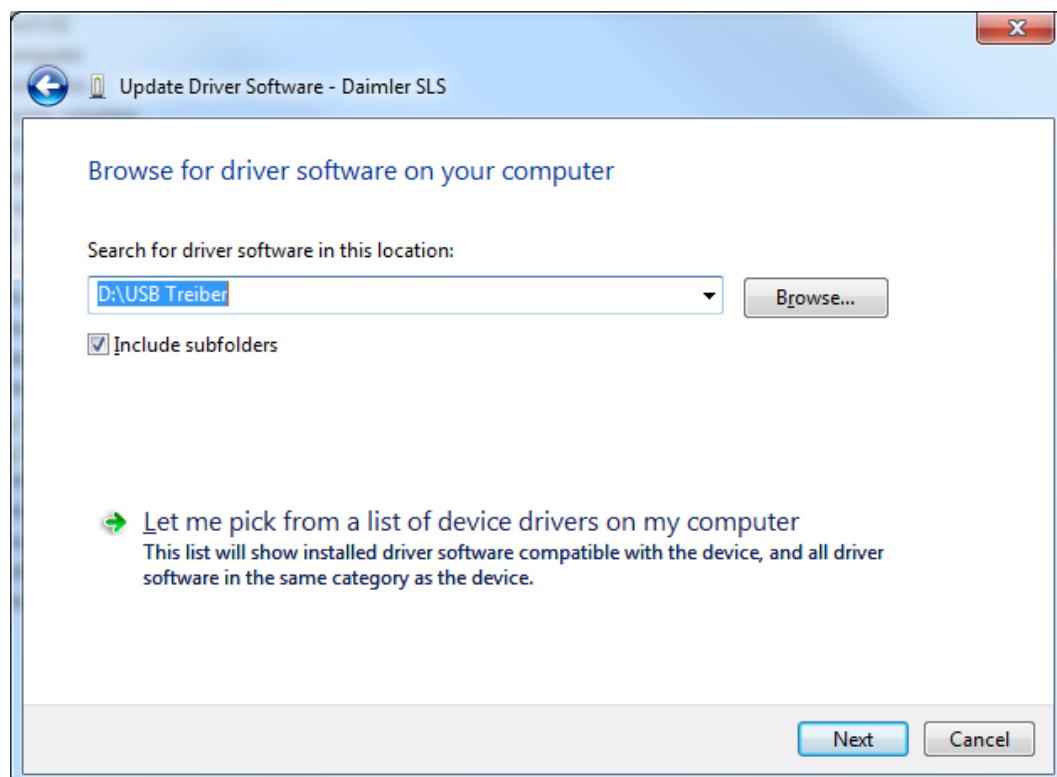


Figure 31: Search for the driver



When the following dialog appears, click on: **Install this driver software anyway**

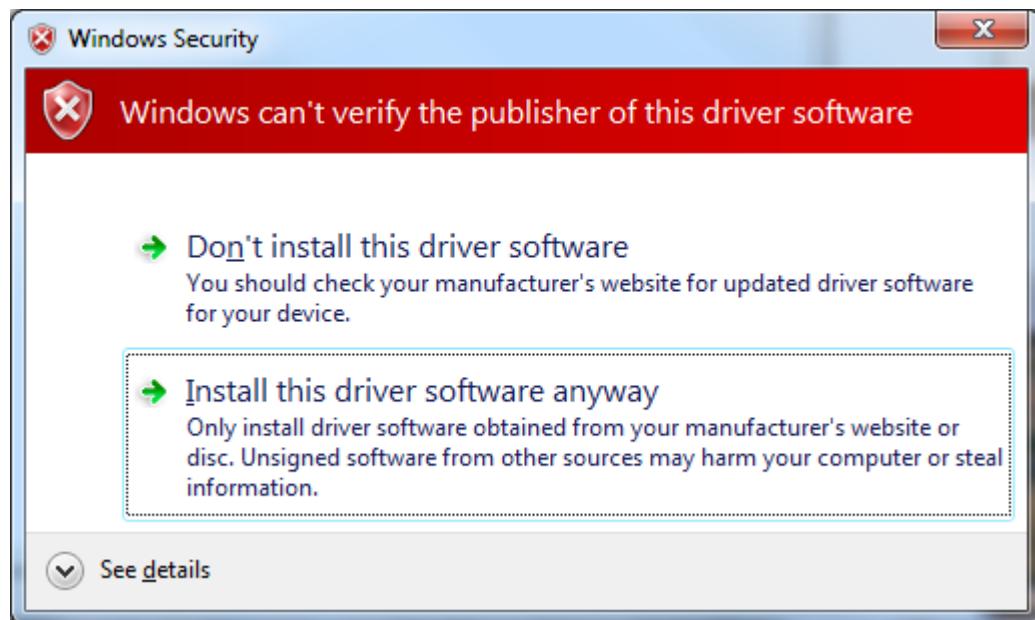


Figure 32: Installation warning

Wait for the files to be installed.

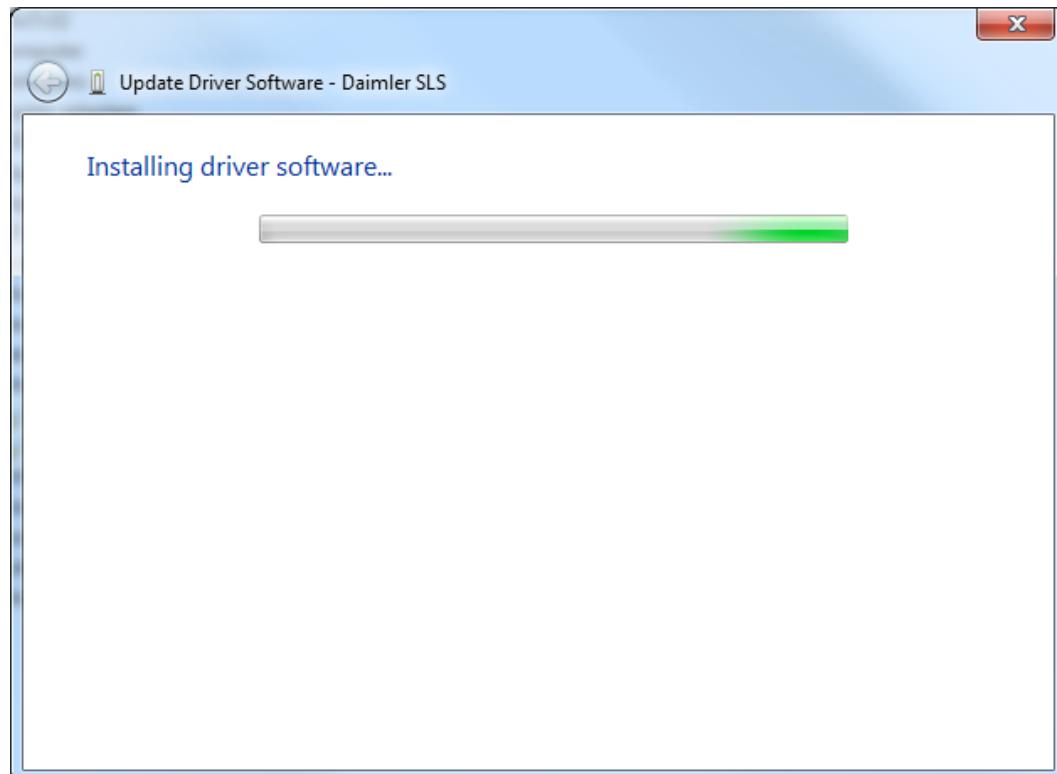


Figure 33: Installation screen for Key Reader



After completion click on: **Close**

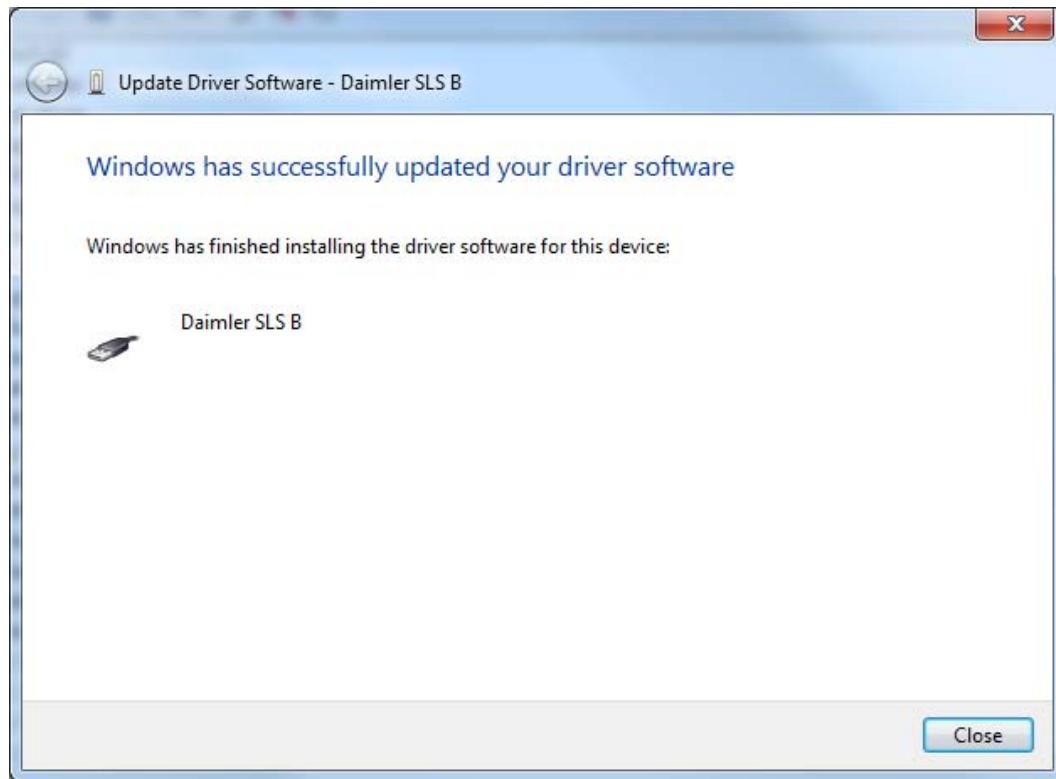


Figure 34: Completing the installation

Now installation is complete.



3.4. Installing the SLS.dll

The SLS.DLL represents the application interface (API) between an application program and the SLS. It must be stored on the target system to enable the functions for different applications. The installation location could be different and depends on the operating system. Furthermore it is important, that the java runtime environment 1.6 is installed as 32Bit Version for every operation system, because the SLS.dll is a 32 Bit API and doesn't work with a 64Bit java runtime environment.

3.4.1. 32Bit Windows Operating System

The SLS.DLL has to be copied to the windows subdirectory *System32*.

3.4.2. 64Bit Windows Operating System

The SLS.SLL has to be copied to the windows subdirectory *SysWOW64*.



4. Flashing of the Firmware

The firmware of the Key Reader can be updated with a standalone windows application (FlashTool). To change the firmware, all applications that use the Key Reader have to be closed.

It is possible to download any version of the firmware to the SLS. So it is possible to downgrade the SLS. It is not possible to back up the current firmware of the SLS.

Now the FlashTool to update the firmware could be started. The place, where the FlashTool is started, is irrelevant. No more files are needed.

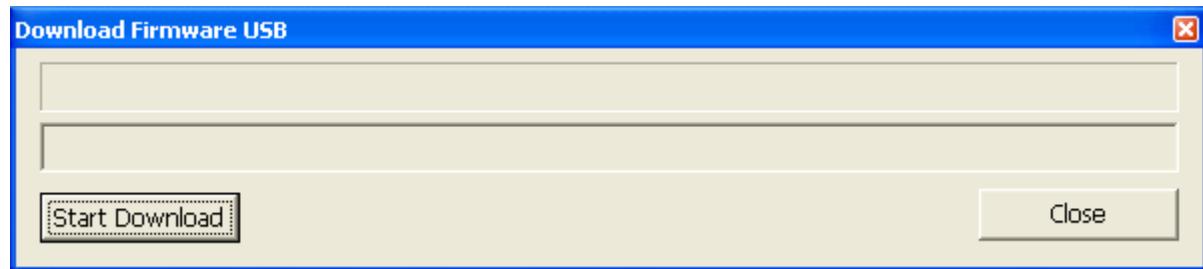


Figure 36: Windows application to download the new firmware

The button "Start Download" starts the download of the firmware. During the download the upper LED of the SLS illuminates blue.

After a successful download the SLS will restart and the new firmware is active.

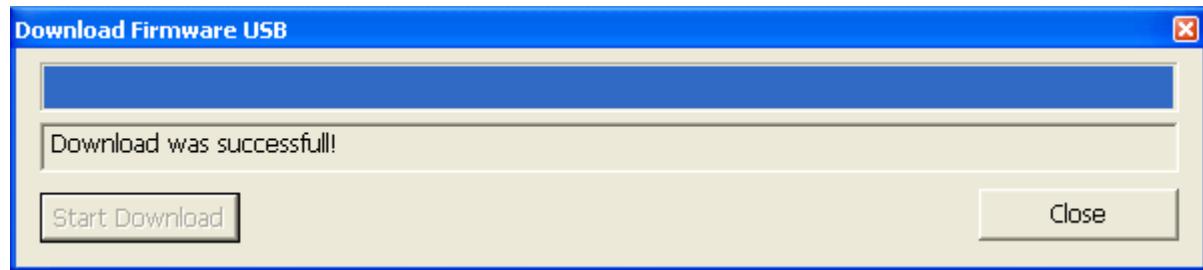


Figure 37: Completing the download

Close the download application and the Key Reader could be used from any other application again. If the download was not successfully finished and the Key Reader doesn't work correctly, try to download again the firmware.



5. Licences

5.1. FCC

5.1.1. Part 15.19 Statement

NOTICE:

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

5.1.2. Part 15.21 Statement

NOTICE:

Changes or modifications made to this equipment not expressly approved by (manufacturer name) may void the FCC authorization to operate this equipment.

5.1.3. Part 15.105 Statement

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.

5.2. IC

RSS-GEN – User Manual Statements (English/French)

Licence exempt

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.