

# **Quick Start Guide**

# Sensor Studio IO-Link USB-Master 2.0



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## **1** General Information

#### 1.1 Sensor Studio and IO-Link USB-Master

The Sensor Studio von Leuze electronic together with an IO-Link USB-Master is used to operate, configure and diagnose sensors and actuators (IO-Link devices) with an IO-Link interface.

The set at hand consists of several components. Delivery contents:

- IO-Link USB-Master V2.0
- International plug-in power supply unit
- High-Speed USB 2.0 Anschlussleitung, USB-A auf Mini-USB
- Installation CD with software and drivers
- Brief manual

Every IO-Link device is described in its associated IODD file (IO-Link Device Description. After reading this IODD file into the software, the IO-Link device connected to the IO-Link USB-Master can be conveniently operated, configured and checked in several languages. If no device is connected, it can still be configured offline.

Configurations can be saved and opened as projects, thus allowing them to be transmitted to the IO-Link device at a later point in time.

## 2 Software and Hardware Installation

#### 2.1 Software Installation

To install the Leuze electronic Sensor Studios, you will need the installation CD-ROM included in the delivery contents.

As an alternative, you can choose the article **SET MD12-US2-IL1.1 (50121098)** on <u>www.leuze.com</u>. Please download and unzip the ZIP archive **Software** to your local PC.

Apart from that, you need to have administrator rights on the computer on which the software is to be installed.

#### Attention!

Do not connect the IO-Link USB-Master to your computer yet. Install the software first!

#### 2.1.1 Leuze electronic Sensor Studio

Insert the installation CD in the CD/DVD drive on your computer. Execute the **SensorStudioSetup.exe** file located in the **\01\_SensorStudio\_Vx.x.x** directory. Please, follow the instructions on the screen.

#### 2.1.2 IO-Link USB-Master

#### 2.1.2.1 Driver Installation

That followed, execute the IOLinkUSBMaster20\_Setup.exe file located in the directory \02\_IOLink\02a\_IOLinkUSBMaster20\_Vx.x.x .

Please, follow the instructions on the screen.

#### 2.1.2.2 Connecting the IO-Link USB-Master 2.0 to the PC

After successfully installing, connect the USB IO-Link Master to your computer using the USB cable included in the delivery contents.

After connecting the IO-Link USB-Master to the computer, the **Found New Hardware Wizard** starts to install the USB driver for the new device. The IO-Link USB-Master 2.0 is now ready for use.

#### 2.1.2.3 Connecting an IO-Link Device

IO-Link devices (sensors/actuators) are connected to the IO-Link USB-Master at the M12 socket **IO-Link** via 3-, 4- or 5-pin cord sets with A-coded, M12 plug and socket.

#### Attention!

When connecting IO-Link devices with a current consumption of more than approx. 40 mA at +24 V DC, it is important to connect the plug-in power supply unit to the IO-Link USB-Master! This is also applicable for switch-on/starting currents where appropriate.

#### 2.1.3 IO-Link Device DTM (User Interface + IODDs)

That followed, execute the IOLinkDTM\_Setup.exe file located in the \02\_IOLink\02b\_IOLinkDTM\_Vx.x.x directory.

Please, follow the instructions on the screen.

## 3 First Steps

#### 3.1 Starting the Sensor Studio

To start the Leuze electronic Sensor Studio, double-click on the program icon on the desktop



or click on All Programs in the start menu and then on the Leuze electronic → Sensor Studio.

#### 3.2 **Program Interface**



- 1. Menu Bar
- 2. Toolbar
- 3. Window area "Project Topology"
- 4. Window area "Device Data"
- 5. Window area "Device Catalog"

In the window area **Project Topology**, the configured devices are shown. In the first level of the topology the communication interface is shown; in the second level the sensor, which is connected to the interface follows.

In the window area **DTM-Catalog** all devices are listed, their communication DTM or Device DTM is installed. These can be filtered by manufacturer or communication interface.

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#### 3.3 The Toolbar



#### 3.4 Import Device Description (DTMs + IODDs)

Device specific DTMs are always installed using a setup program referencing the DTM in the Windows registry. Therefore, you can at any time uninstall these programs using the Windows Control Panel.

The setup of Leuze electronic IO-Link Device DTMs also contains the valid Leuze electronic IODDs and the necessary extensions for the operation with the Sensor Studio. For an update of the IODDs, simply run the setup of the current Leuze electronic IO-Link Device DTMs.

In order to manually add any IO-Link devices from Leuze electronic to the DTM-Catalog of the Sensor Studio, open the file directory containing the installed device descriptions IODDs:

#### START $\rightarrow$ All Programs $\rightarrow$ Leuze electronic $\rightarrow$ IODDS for IO-Link device DTM



Leuze electronic

Please make sure having the required IODD extensions at hand in addition to the device-specific IODDs. The IODD extensions control the graphical visualization of the IO-Link parameter and process data in the Sensor Studio.

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🛃 admpc1825	ieuze_electronic-hrtr46b_384-20121121-IODD1.0.1-de	26.11.2012 08:41	HTML-Dokument	758B	
🕌 Application Data	Sace_Electronic-hrtr46b_384-20121121-80001301Fen	45.11.201248:40	HTML-Soloiment	5588	
🎽 Desktop	Feuze_electronic-hrtr46b_384-20121121-IODD1.0.1Extensions	18.06 14 11:17	3ME-Doltument	25.8 B	
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🌺 Eigene Musik	₩ leuze_electronic-logo	94.19-2011 09:03	MarWew PNG File	6.4/2	
📓 Eigene Viskos	- ReadMe	16.11.2011 12:15	Rich Test Format	36 KB	

Please copy the file directory containing the IO-Link device descritopn IODD and the corresponding extension file to **IODDs for IO-Link device DTM**:

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esse 🖨 C:\Dokumente und Einstellungen	All Users\Anwendungsdaten\Leuze electronic\IC	-Link Device DTM\IO	-Link DDs		~
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	CML720-1.0.1-20131028		Dateicroner	05.11.2013 16:39	
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Having started the Leuze electronic Sensor Studio (see Chapter 3.1) please launch the device catalog management by selecting **Tools**  $\rightarrow$  **DTM-Catalog Management...** 

Date Beabelen Anschr Gerät Projektbaum v 4. × Neues Projekt Neues Projekt Parmeten Projektbaum v 4. × Projektbaum v 4	P. C.C.N.L. D. N.B.	( DTR+sauluq
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nown DTI	Ms:					Current DTM Catalog:	
Name	Vendor   Pro	otocol	Туре	Version	Dab	Name	1
						(I)GSU Serial Communication	
					_	IJGSU Ultrasonic Forked Sensor	
					ſ	CML720 [2 Bytes and CUM2] IUDD1.0.1	
						CML/20 [2 Bytes and CUM3] IUDD1.0.1	
					1	CML720 [32 Bytes and COM2] IODD1.0.1	
						CML720 [32 Bytes and COM3] IDDD1.0.1	
					_	CML720 [8 Bytes and COM2] IODD1.0.1	
						CML720 [8 Bytes and COM3] IODD1.0.1	
						CML730 [2 Bytes and COM2] IDDD1.0.1	
						CML730 [2 Bytes and COM3] IODD1.0.1	
						CML730 [32 Bytes and COM2] 10DD1.0.1	
					1	CML730 [32 Bytes and COM3] IODD1.0.1	
					6	CML730 [8 Bytes and COM2] IODD1.0.1	
						CML730 [8 Bytes and COM3] IODD1.0.1	
						MU-LTC IODD1.1	
					1	MU-LTV IODD1.1	
				_	-	WHRTR 468/L.221-S12 IODD1.0.1	
		2111			>	K	>

#### Next, you may start the automatic search for new devices:

Search for installed DTMs

Please transfer the newly found devices to your local catalog and confirm with OK:

lekannte DTMs:		Aktueller DTM-Katalog:	
Name	Herste	Name	*
Light Curtain CML720 [2 Bytes and COM2] V0.1.8 IODD1.0.1	Leuze (	(I)GSU Serial Communication	
Light Curtain CML720 [2 Bytes and COM3] V0.1.8 IODD1.0.1	Leuze (	(I)GSU Ultrasonic Forked Sensor	
Light Curtain CML720 [32 Bytes and COM2] V0.1.8 IODD1.0.1	Leuze	CML720 [2 Bytes and COM2] IODD1.0.1	
Light Curtain CML720 [8 Bytes and COM2] V0.1.8 IODD1.0.1	Leuze	CML720 [2 Bytes and COM3] IDDD1.0.1	
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		CML720 [8 Bytes and COM2] IODD1.0.1	
		CML720 [8 Bytes and COM3] IODD1.0.1	
		CML730 [2 Bytes and COM2] IODD1.0.1	
		CML730 [2 Bytes and COM3] IODD1.0.1	
		CML730 [32 Bytes and COM2] IODD1.0.1	
	-	CML730 [32 Bytes and COM3] 10DD1.0.1	
		CML730 [8 Bytes and COM2] IODD1.0.1	
		CML730 [8 Bytes and COM3] IODD1.0.1	
		OMU-LTC IODD1.1	
		OMU-LTV IDDD1.1	
	-	HRTR 468/L.221-S12 IODD1.0.1	~
< ] · · · · · · · · · · · · · · · · · ·	>		>

Now, you can create a new Sensor Studio project to configure the newly installed devices (see Chapter **Fehler!** Verweisquelle konnte nicht gefunden werden.).

#### 3.5 Exit the Sensor Studio

When finished, the Sensor Studio can be closed by the command Exit in the File menu.

The last configuration can now be stored to the computer and can then be opened with the **Project Wizard** or by the command **Open** in the menu **File** again.

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## 4 Device Configuration

#### 4.1 Setting up a project

In the File menu select the New menu item to set up a new project.

The topology of the **Project Tree** is empty without any selected devices.

#### 4.2 Set up a topology

#### 4.2.1 Select a device from the DTM-Catalog



Select the IO-Link Master 2.0 USB as the communication interface out of the DTM-Catalog and connect it per Drag&Drop to the Project Tree. Preset the filter to Manufacturer and then **IO-Link**.

ject tree + 4 X	DTP	-Cetalog		<b>a</b> 🗙
New Project	Filer	Vendar		•
He JO-Link USB Master 2 D		O-Link		
	Device		Proto DTM Type	_
	204	or 1156 Master 2.0	Ourie Comunication	2=

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Then select the sensor you want to run on the IO-Link USB Master. Preset the filter of the DTM-Catalog to **Manufacturer** and then **Leuze electronic GmbH + Co. KG**.

Project Tree + 4 X			a 1	DTM-C	atalog	* # X
New Project			Fiter	- 1	/endor	•
Id-Link USB Master 2.0 IHR146B HR1R 46B/L4 23-512 1				1	euze electronic GmbH + Co. KG	-
			2	vice BR18 B Light C Light C Li	PRK188 V0.9 (0001.1 utan CML720 [32 Bytes and C0 utan CML720 [32 Bytes and C0 utan CML720 [32 Bytes and C01 utan CML720 [31 Bytes and C01 utan CML720 [31 Bytes and C01 utan CML720 [32 Bytes and C01 utan CML720 [32 Bytes and C01 utan CML720 [32 Bytes and C01 utan CML730 [32 Bytes and C01 utan CML730 [32 Bytes and C01 utan CML730 [32 Bytes and C03 utan CML730 [32 Bytes and C03 utan CML730 [32 Bytes and C03 utan CML730 [34 Bytes and C03 utan CML730	N3 V2 0 000 M2 V2 0 000 43 V2 0 000 44 V2 0 000 51 9 0.1 9 0.1 9 0.2 9 0.0 9 0

Next, you may start the communication with the device. To do so, please follow the description of Chapter 4.4.

#### 4.2.2 Select a device by IO-Link topology scan



Select the IO-Link Master 2.0 USB as the communication interface out of the DTM-Catalog and connect it per Drag&Drop to the Project Tree. Preset the filter to Manufacturer and then **IO-Link**.

ke Edit Vew Device Tools Window ?	A CCA SODING.				
Project Tree + 4 ×		TO	1-Cetalog	* 4	×
New Project		Filter	Vendar		•
Be 30-Link USB Master 2.0			(O-Link		
		Device	P	toto DTM Type	_
		20	ة 25 سلسلة 155 مس	Selve Company	-

Click with the right mouse button on the entry IO-Link USB master 2.0 in the Project Tree. From the context menu, select the function Scan Topology... → Channel\_Id\_IO link.

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ject Tree 👻 A 💥	DTM-Catalog	* # X
New Project	Filter: Vendor	
Add	IO-Link	-
Delete	Device ProtoDTI	М Туре
Cut	Column USB Master 2.0 10-Link Con	mmunication Dtm
Сору		
Paste		
Rename		
Show/Hide Channels		
Canad		
Connect All		
Disconnect		
rement ·		
Offline Compare		
Online Compare		
Online Compane All		
Configuration		
Scan Topology   Channel Id IOLink		
Observe		
Diagnosiș		
Import / Export		
Info		

Alternatively, start the topology scan wizard from the toolbar. To do this, click the button Scan Topology ...

opology Scan Wizard	EDT version 1.2.1)
nonung apport on the sporegy scan	A backup of the current project will be created. Please click "Continue" to start the scan. You may abort the current scan process by clicking "Cancel" at any time.
	Continue Finish Cancel

Start the topology scan with the button **Continue**.



Providing support for the topology scan	(FDT version 1.2.1).	
⊡- IO-Link USB Master 2.0 ⊡- Channel_id_JOLink 384	Please choose one of the view Select <u>a</u> utomatically Select <u>manually</u>	ne compatible Dtms shown in the list / (First in list)
	Name	Support Level
		, opcone.
	Continue	Finish Cancel

Confirm the scanned device to be integrated in your project topology. Click to the button Continue.

Providing support for the top	alogy scan (FUT version 1.2.1).
	The scan has finished. To keep the results click "Thrish". To restore the project click "Cancel".
	Centrue Finish Cancel

Confirm the final confirmation prompt, click to the button **Finish**. The Topology Scan Wizard now integrates the sensor selected in the project tree.

Next, you may start the communication with the device. To do so, please follow the description of Chapter 4.4.

#### 4.3 Select IO-Link Device with the Project Wizard

Prior to the main software, the Project Wizard helps you to establish the communication with the connected device:

	lensor Studio			
	fule selection		Leuze •	electronic he sensor people
ofine the subs	equent procedure.			
Device s	election with device search and establishm	ent of connection (online)		
O Opening	a stored project file	(part of t		
(PADak)	mente und Einstellungen\ihaumgar\Eigene	e Dateien/Meine FUT-Frijek	deVLeuze 014 mk 101 M 2	10 http://

Alternatively, you may start the Project Wizard by clicking on the button **Project Wizard** in the toolbar:



By clicking on the **Next>** button, a list containing all installed Leuze electronic IO-Link device descriptions (IODD) will be shown:

Project W Device a	fizard dection		4 Leuze electrol	nic
detinue from the la	ni.	Unreise	Moutober	
04.51	Light Contain CML720 [32 Bytes and COM3] V1.5	V1.5	Leave electronic GmbH + Cv. KG	
or a	Light Coltain CML730 (32 Byles and COM3) V1.5	V1.5	Leuze electionic GmbH + Co. KG	
ON TH	Light Cuttain CML730 (32 Byles and COM2) V1.5	V1.5	Lease electronic GuildH + Co. KG.	-
100.0	Light Cuitain CML730 (2 Bytes and COM3) V1.5	V1.5	beauerelectionic GmbH + Co. KG	
ONE TH	Light Collain CML730 (2 Bytes and COM2) V1.5	V1.5	Leave electronic GmbH + Cu, KG	4
Cares .	Light Cultain CML730 (B Bytes and COM3) V1.5	V1.5	Leuze electionic GmbH + Co. KG	
CHE.TH	Light Curtain CML730 (8 Bytes and COM2) V1/5	V1.5	Lease electronic GuildH + Co. KG	
		(Back	Tiest) Cano	d

Select the reference of the connected IO-Link device. By clicking on the **Next >** button, the Sensor Studio will start with the OFFLINE view of the selected device

Next, you may start the communication with the device. To do so, please follow the description of Chapter 4.4.

#### 4.4 Connect with Device

Um die Konfiguration des IO-Link Devices verändern zu können, oder um Messdaten auszulesen, müssen Sie zuerst eine Verbindung zum Sensor aufbauen.

Before you may change any configuration parameter of the device, or read any process data from the device, an online connection needs to be established.

Please select the device entry in the Project Tree with the left mouse button:



Next, you may start the communication by clicking on the button **Connect with Device**:

Connect with device	4 Leuze electronic
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Now, you can configure the connected device. Please follow the descriptions in Chapter 5.

## 5 Device Configuration

The configuration of IO-Link sensors in the Sensor Studio can be done in two ways:

#### **ONLINE-Configuration**

During the ONLINE-Configuration, the data displayed in the Sensor Studio are the current device settings. Changes will be immediately effective in the device (see chapter 5.1).

#### **OFFLINE-Configuration**

In the OFFLINE-Configuration, the individual parameters are kept in an instance dataset on the PC. Changes are initially effective only in this instance dataset.

In order to transfer the changes to the device a parameter download must explicitly be performed (see chapter 0).

The instance dataset can be stored on the PC or can be reloaded from the PC using the OFFLINE view (see chapter 5.2.1).

#### 5.1 ONLINE-Configuration



Select the ONLINE configuration if you want to test individual device functions. In this mode, changes are transferred and enabled immediately into the device.

By clicking on the button **Online Parameter**, the online view is started:

 Chine Parameter	4 Leuze electronic
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The IO-Link USB-Master is now synchronizing all parameters with the data of the connected device.

The register **IDENFIKATION** displays all relevant device characteristics and links to the technical documentation:

HETR 458/4.4.23-5.12 Diffuse Hellection Lig	t Scamer With Background Suppression	Leuze electronic     the sensor people
<b>•</b> •	CONTRACTOR CONT	REDAVIDUR PROCESS
IDENTIFICATION	DEVICE INFORMATION	
Device Information	VENDOR INFORMATION	
Tool Info	Nendor Neme	Louze electronic (JimbH + Co. K/J
Datasheet	Vendor Leat	www.beaze.com
- HR IN 400/14.20-312	DEVEL INCORMACION	
	Product Name	HRTR 468/L4.23 \$ 12
	Product ID	50114037
	* Poduct Text	Offuse Reflection Light Scanner With Background Suppression
	COMPONENT INFORMATION	
	Sertal Number	11108000382
	I immune Version	01.15
	Hardware Verstori	В

The register **CONFIGURATION** displays the actual device configuration:

HET458 HETE 468/14/23-512 V1.5	0001.0.1 - Office Pagneter 🔰 HRT468 HRTR 468 (14.23-512 )	1.5 ICDD1.0.1 - Online Parameter I	
HRIF 462,0,4,25 Diffuse furfaction	1812 Light Scamer With Background Suppression		IZE electronic
•	INCOME ASSOCIATE		2 EN
ONFIGURATION	SWITCHING POINTS		
Switching Points	SWITCHING POINT 1		
Outputs Lock Button	Scanning Range	120	-
Factory setting	Reserve Teach Mode	3	2
		Teach on Background Teach on Object	
	System Command	Teach Scanning Range 1	
	SWITCHING POINT 2		
	Scanning Range	275	nin E •
	Reserve	10	*
	Teach Mode	<ul> <li>Teach on Background</li> <li>Teach on Object</li> </ul>	
	System Command	Teach Scanning Range 2	
	STORE PERMANANT		
	System Command	Store Scanning Ranges permananter	

Several views allow changing individual parameters. Changes will become effective immediately in the device.

To reload / update the configuration from the sensor, please click on the **Upload** button in the DTM toolbar, only:

Edit View Device Tools Wi	ndow ?		
🖉 🖬 🍐 🖉 🗖 📲 🖉 👘 🚺	SOFFCCALL CA.		
( HR7468 HR78 468 L4 23-S12 V1 1	5 10001 0.1 - Office Parameter 🔰 HRT468 HRTR 468./(.4.23-512 \.1.	5 IODD1.0.1 -Online Parameter	
HETR 468/14.2	3-512	4	Leuze electronic
Oiffuse Reflectio	on Light Scameer With Background Suppression		the second neonle.
			no contra produce
		CONTRACTOR AND A CONTRACT	
	dealer of a	CONFIDENCIAL PROCESS	
P	acat be ca	CONTRACTOR PHOLESS	2 EN
	death the	CONFIDENCES PROLESS	0 - EN
COMMON Uptons the device of	and from the descer to refresh the shown values a	CONFIDENCES PROLESS	en
CDANIGUE (proof the device date Writely (proof the device date Optional)	and the store rates of the store rates a	CONFIDENCES PHOLESS	2 EN
COMPACIE (place the object of Switching) - Solar Outputs Lock Button	and the clean to come along a set from the device to refresh the shown values a switching Podet 1.	127	2 EN
CONNEUT (Josephine deuce dat Switching Freiner Outputs Lock Button Factory setting	acced the store of the shown values as store of the shown values as store of the shown values as a store of the shown values	127 1	() EN
CONVERCENT Classes in the device of the Switching : Series Outputs Lock Bution Factory setting	ased from the device is reflect the shown values a switching Bods - Switching Bods - Scanning Range Reserve Teach Mode	127 3 Teach on Backgound Teach on Deject	@ - EN

#### ATTENTION:

The UPLOAD / DOWNLOAD buttons in the toolbar of the Sensor Studio are not effective in die ONLINE view of the IO-Link Device-DTM.

The register **OBSERVATION** offers different visualization of the measurement data of the device:

#### **IMPORTANT:**

The cyclic update of the measurement values is started by clicking on the button START.



Please refer to the Sensor Studio online help and the information given in the graphical user interface itself for additional functionality of the software.

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#### 5.2 OFFLINE-Configuration



In the OFFLINE-Configuration, the individual parameters are kept in an instance dataset on the PC. Changes are initially effective only in this instance dataset.

The OFFLINE view shows only the registers IDENFICATION and CONFIGURATION. Cyclic process cannot be read from the device.

By clicking on the button Offline Parameter, the OFFLINE view is started:

atel Bearbeiten Ansicht Gerät Werkzeuge Fenster 2	
084, C., FR440 PCCALL TO,	-
Offline-Parameter	
	9

To edit the data of the connected device, you need to upload the actual configuration from the device first. To do this, click the button **Upload from the device** in the toolbar of the Sensor Studio:



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The register **IDENFIKATION** displays all relevant device characteristics and links to the technical documentation:

E LERETARD LERETS ADD/S 1 20(512 V1 5100.01	11 - Office Parameter	s 1000101-Online Personaler II	- 24
HEIR 468/(4/23-512 Liftuse Hellection Ligh	t Scanner With Background Suppression	Leuze electron     the sensor per	nic <sup>Iople</sup>
•	UENIFICATION I	CONFIDENCIES	EN
IDENTIFICATION	DEVICE INFORMATION		
Device Information	VENDOR INFORMATION		
IO I ink	Mandor Nama	Leuze electronic GmbH + Co. KG-	
Datasheet	Vendor Leaf	www.leaze.com	
HR I R 46B/L4.23-S12	2 DEVICE INFORMATION		
	Product Name	HRTR 468/L4 23-512	
	Product ID	5/0114/07/	
	* Poduct Text	Diffuse Reflection Light Scenner With Background Suppression	:
	COMPONENT INFORMATION		- 1
	Sertal Number	1(108000382	
	Limwere Version	01.15	
	Hartware Version	R	

The register **CONFIGURATION** displays the actual device configuration:

	0101.0Eme Pa		10 J. Orline Parameter	
APTR 458 (4 22-5). Diffuse Reflection Li	l2 ght Scanner Wi	b Reckgoand Suppression		Leuze electronic the sensor people
	SWITCH	HING POINTS		🕐 - EN
Switching Points Outputs	SWIIC	ING FOINT T	120	
Factory setting	Reserve		3	2.
	leach M	nde	Teach on Background     Go Toach on Object	
	System C	ommand	Teach Scanning Rance 1	
	: SWITCH	ING POINT 2		
	Soanning	Range	2/5	mm =
	Reserve		10	2
	Teach M	ode	<ul> <li>Teach on Hackground</li> <li>Teach on Object</li> </ul>	
	System C	ommand	Teach Scanning Range 2	
	SIGUU	I'I JIMANAN I		
	Svetem C	ommand	San Senara Bears ware with	

Several views allow changing individual parameters. Changes only become effective with a parameter download.

To do this, click the button **Download to the device** in the toolbar of the Sensor Studio::



#### 5.2.1 Save configuration to the PC

In the OFFLINE view, the instance dataset can be stored to the PC and loaded again from there. In this way, devices of the same type can be configured uniformly (duplicated).

To do this, proceed as follows:

Please upload the actual configuration from the device. To do this, click the button **Upload from the device** in the toolbar of the Sensor Studio:



Next you can save the Sensor Studio project including all device settings to your PC. To do this, please select **Save as...** in the **File** menu:

Edit View Device Tools	Mindow 7	
New Ctrl+N	1 2 & DIPPICC	
Open Ctrl+O	15 CEED 0 1- Office Parameter	
Save Ctrl+5	22.010	
Same as	Lender Commune Mittle Development of Communities	4 Leuze electronic
Project Warand	Internet in the second second second	the second people
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Page 4	IDENTIFICATION CONFIGURATION PROCESS	16
Close		0
Ventiy Project		(2) - EN
Recent Rie List	SHITCHING BOINTS	
Ext	SWITCHING POINTS	
wanning the same	SWITCHING BOINT 1	

Define a representative name of your project:

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Proj	ekte	7	4 <u>m</u>		
Dateiname	HRTR 46B				
Dateityp:	Sensor Studio Project (".fdx)	_			•
• Ordner ausblende			Speichern	Abbrech	en

#### 5.2.2 Load Configuration from PC

In order to download a stored configuration to a sensor, please start the Sensor Studios and then open the project file corresponding to the connected device. To do this, please select **Open...** in the **File** menu

the sensor people

File Edit View	Device To	ols Window ?	
New	Ctrl+N	1 SADPPCC SAD	
Dpen	Ctrl+O	512/15/000101_01ee Parameter ( HST/68 HSTB 685/14 25512/15/0001/01_00/ce Parameter	
Save As. Project Wizard Export Project. Cose Verfy Project.	4	8/14.23.512 effection Light Scanner With Rackground Suppression IDENTIFICATION DOWFFGURATION PROCESS	Leuze electronic     the sensor people
Recent Rie Lis Ext	•	SWITCHING POINTS	
	omge anna	SWITCHING POINT 1	

#### Confirm the file selection:

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adminleo 🔺	Name	Änderungsdatum	Тур
adminleo.L	CML720i 20_default.fdx	19.03.2014 10:24	FDX Date
admpc1823	LIRTR46B.fdv	71.18L/IR4 18:76	1108-Date
Destrop			
Produk *	•	- 1	
	LIDTO LCD CL	- Company Charles Designed A	* [.].) -

Activate the sensor in the Project Tree with the left mouse button.



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Next, you may start the communication by clicking on the button Connect with Device:

H 🖕 🗧	Contractor Contractor Contractor	
*	Connect with device	Leuze electronic
		the sensor people

By clicking on the button Offline Parameter, the OFFLINE view needs to be started...

Then the configuration can be transferred to the device.

To do this, click the button **Download to the device** in the toolbar of the Sensor Studio::



#### ATTENTION:

Some sensors apply the configuration only in the volatile memory (RAM). To save the data permanently, an explicit SAVE command must be transmitted after downloading the parameters. Please follow the instructions of the technical description of the device.

## 6 Specifications IO-Link USB-Master

#### 6.1 USB connection

The USB connection serves as communication interface between the interface and the PC. The connection can be realized through the enclosed cable.

	Signal	Function
Pin 1	+5V	VBUS +5VDC/500mA
Pin 2	D-	Data -
Pin 3	D+	Data +
Pin 4	ID	not connected
Pin 5	GND	Ground



#### 6.2 IO-Link connection

M12 connector, A-coded: Interface to a sensor / actor with IO-Link.

	Signal	Function	
Pin 1	+24V	+24V 1,0 A / 80mA	
Pin 2	SIO	SIO	
Pin 3	GND	0V	+
Pin 4	IO-Link	IO-Link	
Pin 5	-	NC	



#### 6.3 LED display

The light emitting diodes on the USB IO-Link Master have the following meaning:

Inscription	Color	Meaning
PWR	Yellow	Indicates Power from USB Port
CH1 (C/Q)	Green	IO-Link Mode
		The LED blinks slowly, if there is no IO-Link connection,
		blinks fast in pre-operate and flashes if the IO-Link connection is
		active (operate).
	Yellow	SIO Mode
CH1 (DI/DO)	Yellow	Indicates state of SIO mode
Error	Red	Flashes in case of errors (short circuit, errors in data transmission).

## 7 Types and Accessories

SET MD12-US2-IL	1.1	50121098
Including	IO-Link USB-Master V2.0	
5 5	International plug-in power supply unit	
	High-Speed USB 2.0 cable, USB-A to Mini-USB	
	3 -1	
7.1 Adapter of	cable for HRTR 46B, ODSL 9, ODS(L) 96B:	
K-DS M12A-M12A	-4P-2m-PVC	50110126
Cord set:	M12, 4 pins, male	
	PVC cable, length 2.000 mm	
	M12, 4 pins, female	
K-DS M12A-M12A	50110125	
Cord set:	M12, 4 pins, male	
	PVC cable, length 5.000 mm	
	M12, 4 pins, female	
7.2 Adapter of	cable for KRT 3B / 53 / 55, LVS 463:	
K-DS M8A-M12A-4	4P-0,3m-PVC	50107276
Cord set:	M12, 4 pins, male	
	PVC cable, length 300 mm	
	M8, 4 pins, female	
72 Adapter	able for CML 700%	
7.3 Adapter C		
K-DS M12A-8P-4P	P-2m-L-PUR	50120999
Cord set:	M12, 4 pins, male	
	PUR cable, length 2.000 mm	
	M12, 8 pins, female	
K-DS M12A-8P-4P	P-5m-L-PUR	50121000
Cord set:	M12, 4 pins, male	
	PUR cable, length 5.000 mm	
	M12, 8 pins, female	