

SX_123_02_N0_Quick_Start → Devices & networks		_ # =×	Hardware catalog
	🛃 Topology view 🔥 Network view	Device view	Options
💦 Network 🔡 Connections 🛛 HMI connection 🖃 🐯 📲	🖿 🔲 🖪 🛨	<b>2</b>	1
PLC_1 CPU 1214C	siebert-disp SX102/SX20 Not assigned		✓ Catalog        ✓ Catalog       ✓ Filter       Profile:       < □
			Gateway
			General     General
		z	<ul> <li>Siebert Industrieelektronik GmbH</li> </ul>
		etw	Siebert C9302
			Siebert \$102/\$202/\$302
		data	<ul> <li>Diedentakting</li> </ul>
			<ul> <li>Siebert SX102/SX202/SX302</li> </ul>
			Extectscickas
			SX102/SX202/SX302
			Seden Stade
			Siebert SX402
			Siebert SX502/SX602/SX702
			Siedert ACPLUS

SX_123_02_N0_Quick_Start + Ungrouped devices + siebert-display [SX102/SX	202/SX302]						_ 🗖 🖬	
			[	🛃 Topol	ogy view	h Network view	N Device view	
🔐 🛛 siebert-display [SX102/SX20 🔍 🔛 🔛 🔛 🛄 🍳 ±	Device overview							
^ (G)	Module	Rack	Slot	I address	Q address	Туре	Article number	
NS <sup>Q</sup>	<ul> <li>siebert-display</li> </ul>	0	0			SX102/SX202/SX302	SX_123_02N0	
- BIT	DAP INTERFACE MODULE	0	0 X1			siebert-display		
4.eD	Simplified page module_1	0	1		6495	Simplified page mo		
·▼		0	2					
		0	3					
	<u> </u>	0	4					
		0	5					
	<u>.</u>	0	7					
		0	8		Hard	ware catalog		
		0	9		Tiare	ware catalog		
		0	10		Opti	Options		
		0	11					
		0	12		× c	atalog		
×		0	13		- Sea	rch>		
<u>&lt; m</u> <u>&gt;</u> 100% <u>- </u>	<		11	1			>	
				🔍 Pro	per 🖉 🗄	Iter Profile: <a href="https://www.example.com">All</a>	> • • •	
General IO tags System constants Texts					- 1	Head module	02	
General					- 1	Module	02	
Module parameters						Display		
IO addresses Dage number parameter III similied page module								
rage name e parameter						Standard main r	module	
Logical page number 07: Page #00 (standard pa	ige)					_	•	
Visualization mode		-						
and the second se				_			and the second second	
							_	

## Series SX102, SX202 and SX302

Alphanumerical digital display with PROFINET IO RT interface QuickStart for TIA Portal (Version 2.10)

## 1 Contact

#### www.siebert-group.com

### GERMANY

Siebert Industrieelektronik GmbH Siebertstrasse, D-66571 Eppelborn Phone +49 (0)6806 980-0 email: info.de@siebert-group.com

## AUSTRIA

Siebert Österreich GmbH Simmeringer Hauptstrasse 24, A-1110 Wien Phone +43 (0)1 74040153 email: info.at@siebert-group.com

## FRANCE

Siebert France Sarl 4 rue de l'Abbé Louis Verdet, F-57200 Sarreguemines Phone +33 (0)3 87 98 63 68 email: info.fr@siebert-group.com

#### ITALY

Siebert Italia Srl Via Galileo Galilei 2A, I-39100 Bolzano (BZ) Phone +39 (0)471 053753 email info.it@siebert-group.com

#### THE NETHERLANDS

Siebert Nederland B.V. Jadedreef 26, NL-7828 BH Emmen Phone +31 (0)591-633444 emailinfo.nl@siebert-group.com

#### SWITZERALND

Siebert AG Bützbergstrasse 2, CH-4912 Aarwangen Phone +41 (0)62 922 18 70 (german) +41 (0)62 922 20 44 (french) +41 (0)62 922 28 38 (italien) emailinfo.ch@siebert-group.com

### 2 Legal note

© Siebert Industrieelektronik GmbH

This operation manual has been prepared with the utmost care. However, we do not accept any liability for possible errors. We always appreciate your suggestions for improvement, corrections, comments and proposals. Please contact us: editing@siebert-group.com

Siebert<sup>®</sup>, LRD<sup>®</sup> and XC-Board<sup>®</sup> are registered trademarks of Siebert Industrieelektronik GmbH. All other product names mentioned herein may be trademarks or registered trademarks of their respective owners.

We reserve the right to make alterations to the technical data and delivery options without notice. - All rights reserved, including the rights of translation. No part of this document may in any form or by any means (print, photocopy, microfilm or any other process) be reproduced or by using electronic systems be processed, copied or distributed without our written permission.

#### **Table of contents**

1	Contact	2
2	Legal note	3
3	QuickStart	5
	Step 1: Open project	5
	Step 2: Install the GSDML file of the ad and add the display	6
	Step 3: Switch to the project view and add the device	6
	Step 4: Establish a connection to the display	7
	Step 5: Add sub-module to the display and define address range	7
	Step 6: Assign a PROFINET device name to the display	9
	Step 7: Define text	9
	Step 8: Loading hardware configuration and program into the control	.10



#### 3 QuickStart

These instructions apply to all alphanumeric displays of the SX102-...-N0, SX202-...-N0 and SX302-...-N0 series with firmware V1.0.5 or higher and device ID 0x1302. The firmware of a device can be checked in advance, for example, using the PRONETA Basic software from SIEMENS.

Hersteller-ID	Geräte-ID	Firmwareversion	Hersteller-Name	Bestellnummer
0x0161	0x1302	V1.0.5	Siebert Industrieelektronik GmbH	SX102N0

The display is put into operation by following these steps. The display then shows the values sent via PROFINET.

The screenshots were created using the following hardware and software. With other engineering frameworks, the illustrations may differ.

Display	SX102-06/18/0R-000/0B-N0
Engineering-Framework	Siemens TIA Portal V17, Update 4
PLC	Siemens S7-1214C DC/DC/Rly, V4.5, 6ES7 214-1HG40-0XB0
Operating system	Microsoft Windows 10 Professional, 64 Bit

The QuickStart describes the parameterization of the display. The operation of the TIA portal is not the subject of the instructions.

The devices are delivered without PROFINET names.

#### Step 1: Open project

Open a new project in the engineering framework and define the CPU. When creating this QuickStart, Siemens S7-1214C DC/DC/Rly version 4.5 was used.

Add new device				×
Device name:				
PLC_1			]	
	- 🖬 SIMATIC S7-1200	^	Device:	
	🛨 🛅 CPU			
	CPU 1211C AC/DC/Rly			in mar
Controllers	CPU 1211C DC/DC/DC			-
	CPU 1211C DC/DC/Rly			
	CPU 1212C AC/DC/Rly			
	CPU 1212C DC/DC/DC			cro 1214c Debenny
	CPU 1212C DC/DC/Rly			
	CPU 1214C AC/DC/Rly		Article no.:	6ES7 214-1HG40-0XB0
HMI	CPU 1214C DC/DC/DC		Version:	V4.5
	👻 🛅 CPU 1214C DC/DC/Rly	≣		
	6ES7 214-1HE30-0X		Description:	
	6ES7 214-1HG31-0X		Work memory	100 KB; 24VDC power supply with
	6ES7 214-1HG40-0X		on board; 6 hi	oh-speed counters and 4 pulse
	CPU 1215C AC/DC/Rly		outputs on-bo	ard; signal board expands on-
PC systems	CPU 1215C DC/DC/DC		board I/O; up t	to 3 communication modules for
	CPU 1215C DC/DC/Rly		for I/O expansi	ion; PROFINET IO controller, I-
	CPU 1217C DC/DC/DC		device, transp	ort protocol TCP/IP, secure Open
	CPU 1212FC DC/DC/DC		User Commun	ication, S7 communication, Web
	CPU 1212FC DC/DC/Rly		server, or c or	
	CPU 1214FC DC/DC/DC			

Define the IP address, name, protection level, etc. for your project.



#### Step 2: Install the GSDML file of the ad and add the display

Install the GSDML file 'GSDML-V2.43-Siebert-SX\_123\_02-XX-...' of the display. The instructions and the GSDML file are available at the following links:



#### Series SX102

manuals.siebert-group.com/sx102-profinet



### Series SX202

manuals.siebert-group.com/sx202-profinet



#### Series SX302

manuals.siebert-group.com/sx302-profinet

After installation, the display is listed in the hardware catalog.

In the device catalog, activate the 'Filter' checkbox and navigate to 'General / Siebert Industrieelektronik GmbH / Siebert SX102/SX202/SX302'.

#### Step 3: Switch to the project view and add the device

Switch to the view 'Devices & Networks / Network View'

Drag the 'SX102/SX202/SX302' head module from the catalog to the 'Devices & networks / Network view' area.



#### Step 4: Establish a connection to the display

Assign the display to the desired control in the network view. After that, the PROFINET connection is displayed as a dashed green line.



#### Step 5: Add sub-module to the display and define address range

Add the module 'Simplified page module' from the hardware catalog to the device overview.

This defines that the display expects the values to be shown in ASCII String format. The module occupies 32 bytes (in this example the addresses 64 to 95).

SX_123_02_N0_Quick_Start	<ul> <li>Ungrouped devices</li> <li>siebe</li> </ul>	ert-display [SX102/S>	(202/5)	(302]						_ * *
							🖑 Topolo	gy view	h Network vie	w 🛐 Device vie
siebert-display [SX102/SX20	🗖 🗄 📅 🍊 🗄 🛄 🍳 ±		De	vice overview						
	1 the	^	- <b>Y</b>	Module	Rack	Slot	I address	Q address	Туре	Article number
is	51.	=		<ul> <li>siebert-display</li> </ul>	0	0			SX102/SX202/SX302	SX_123_02N0
orto		_		DAP INTERFACE MODULE	0	0 X1			siebert-display	
siebe		_		Simplified page module_1	0	1		6495	Simplified page mo	
~	1	_			0	2				
					0	3				
			•		0	4				
			-		0	5				
-			-		0	6				
					0	/				
					0	0		Hard	ware catalog	
					0	10		Optio	ons	
		-			0	11				
		_			0	12				
		~			0	13		V C	atalog	
K III	> 100%	💌 🛄	<				1	Sea	rch>	
Simplified page module 1 [Si	mplified page module]						O Prov	Fi	lter Profile: <al< td=""><td></td></al<>	
									Head module	
General IO tags Sy	stem constants lexts								SX102/SX202/SX3	02
General	Module parameters							- 1	Module	
Module parameters									Display	
I/O addresses	Page number parameter								Simplified page	module
	Leciel et al anti-	Dana #00 (standard a							Standard main	module
	Logical page number 07:	rage #00 (standard p	aye)							•
	Visualization mode									
	visualization mode									

You can change the name given by the TIA Portal.

In the module parameters section you can set the initialization parameters for brightness and text alignment.



SX_123_02_N0_Quick_Start → Ungrouped devices → siebert-display [SX102/SX202/SX302] 🛛 🗖 🖬 🗙									
					ar Topol	oav view	A Network vie	w 📑 Device v	iew
siebert-display [SX102/SX20		Device overview				57	uuu		
	^ ^	W Module	Rack	Slot	I address	Q address	Туре	Article number	
Aisc	2 <sup>1</sup>	<ul> <li>siebert-display</li> </ul>	0	0			SX102/SX202/SX30	SX_123_02N0	^
entru		DAP INTERFACE MODULE	0	0 X1			siebert-display		
sieb		Simplified page module_1	0	1		6495	Simplified page mo.		=
· · ·			0	2					
			0	3					
		<u> </u>	0	4					
			0	6					
•			0	7					
			0	8					
			0	9					
			0	10					
			0	11					
			0	12					
	×		0	13					~
< [ III ]	▶ 100%	<	_	1					>
Simplified page module_1 [Sir	nplified page module]				🧟 Pro	perties	🗓 Info 🛛 🗓 Di	agnostics	
General IO tags Sys	stem constants Texts								
General     Module parameters	Module parameters								
I/O addresses	Page number parameter								
	Logical page number 07: Page #00 (standard page	age)							-
	Visualization mode								
	Visualization mode value 08 (display attribute): 100% intensity								-
	Text alignment								
	Alignment mode (left, centered, right): Left aligned								-

Leave the first entry 'Page number parameter' for this QuickStart unchanged at the value Page #00.

With the parameter 'Visualization mode' you can select different values for brightness and/or the flashing pattern.

With the parameter 'Text alignment' you can select different values for the text alignment on the display. Texts that are longer than the display are truncated according to the selected alignment.

Page number parameter	Page number parameter
Logical page number 07: Page #00 (standard pa	Logical page number 07: Page #00 (standard pa
Visualization mode	Visualization mode
Visualization mode value 08 (display attribute): 100% intensity 25% intensity	Visualization mode value 08 (display attribute): 100% intensity
Text alignment Alignment mode (left,	Alignment mode (left,
centered, right): Blinking 50%/25% Blinking 50%/off Blinking 25%/off	centered, right): Left aligned Left aligned Centered Right aligned



#### Step 6: Assign a PROFINET device name to the display

In the device view, open the context menu for the display. The IP address and the device name can be assigned under the menu item 'Assign device name'.

After the data is transferred successfully to the display, the configuration is displayed as follows in the engineering tool.

ssign PROFINET devic	e name.				_		×
-		Configured PR	OFINE	T device			
		PROFINET device n Device	ame: g	siebert-display sx102/5x202/5x302		•	
		Online access Type of the PG/PC inter PG/PC inter	face:	_ PN/IE Intel(R) 82574L Gigabit N	letw	ork Connection 💌 💎	
		Device filter					
		🛃 Only show dev	vices of the	e same type			
		Only show dev	vices with vices witho	bad parameter settings out names			
	Accessible device	es in the network:	- ·			<b></b>	
	192.168.20.97	40-ED-98-B0-00-01	SX102	siebert-display	•	OK	
🔲 Flash LED							
	<			Upda	ate	list Assign na	ame

#### Step 7: Define text

To send a value to the display, you can for example create a function chart with 'MOVE' instructions. In the following screenshot the text 'Siebert' is sent. This requires two 'MOVE' function blocks.

SX 123 02 N0 Quick Start → PLC 1 [CPU 1214C DC/DC/Rlv] → Program blocks → Main [OR1] ■ ■ ■ X	Instructions	
	Ontions	
AR AR W M T T T T T T T T T T T T T T T T T T	Ten ten	⊻o <b>"o</b>
Block interface	> Favorites	
8 x=1 1777 01	✓ Basic instructions	
	Name	Description Version
lain Program Sweep (Cycle)"	🕨 🛅 General	
	Bit logic operations	V1.0
	Timer operations	V1.0
	E1 Counter operations	V1.0
	Comparator operations	
	Image: Math functions	V1.0
MOVE	<ul> <li>Move operations</li> </ul>	<u>V2.5</u>
	I MOVE	Move value
%OD64	Deserialize	Deserialize V2.2
	Serialize	Serialize V2.2
··· — EN —¥ OUT1 — "Tag_1" MOVE	MOVE_BLK	Move block
	MOVE_BLK_VARIANT	Move block V1.2
SIED IN ENO	UMOVE_BLK	Move block uninterrup
	FILL_BLK	Fill block
	UFILL_BLK	Fill block uninterruptible
ert - IN - ENO	SCATTER	Parse the bit sequence i. V1.2
in eno	SCATTER_BLK	Parse elements of an A V1.2
	GATHER	Merge individual bits in V1.2
	GATHER_BLK	Merge individual bits in V1.2
	E SWAP	Swap
	Variant	
	Array[*]	
· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	



#### Step 8: Loading hardware configuration and program into the control

After the display is switched on, depending on the size and type, the start text 'SX102' 'SX202', 'SX302' or a short form is displayed.

As soon as the configuration and the program function block are loaded into the control, the control connects to the display via PROFINET and the display shows the text 'Siebert'.