

Operation Manual

PRODUCT NAME

Fieldbus system IO-Link Setting tool

MODEL / Series / Product Number

IO-Link Device Tool V5.1 PE

SMC Corporation

Contents

1. Outline	<u>2</u>
2. System Requirements and How to Obtain the Software	<u>3</u>
3. Connection between an EX series and aPC	<u>4</u>
4. Software Installation	<u>5</u>
5. Starting the Software	<u>8</u>
6. Importing an IOLM File	<u>9</u>
7. Importing an IODD File	<u>11</u>
8. How to Use the Software	<u>13</u>
8.1. The IO-Link Module setting screen	<u>13</u>
8.1.1. Search Master	<u>13</u>
8.1.2. Individual selection	<u>14</u>
8.2. IO-Link Module Setting Screen	<u>15</u>
8.3. Common Screen	<u>15</u>
8.4. Port Config Screen	<u>16</u>
8.4.1. Reading the IO-Link Port Setting	<u>16</u>
8.4.2. Changing the Setting of the IO-Link Ports (for EX600-SEN3-X80 only)	<u>17</u>
8.4.3. Scanning IO-Link Devices	<u>18</u>
8.4.4. IO-Link Device Checking / Data Storage Function Setting (for EX600-SEN3-X80 only)	<u>19</u>
8.4.5. Port Config Details	<u>20</u>
8.5. Setting Screen	<u>21</u>
8.5.1. Reading IO-Link Module Parameters	<u>21</u>
8.5.2. Setting the IO-Link Module Parameters (for EX600-SEN3-X80 only)	<u>22</u>
8.6. Setting the IO-Link Devices	<u>23</u>
8.6.1. Reading Information on IO-Link Devices	<u>23</u>
8.6.2. IO-Link Device Process (Example using the ISE20B-L)	<u>24</u>
8.6.3. IO-Link Device Identification (Example using the ISE20B-L)	<u>24</u>
8.6.4. IO-Link Device Observation (Example using the ISE20B-L)	<u>25</u>
8.6.5. IO-Link Device Parameter (Example using the ISE20B-L)	<u>26</u>
8.6.6. IO-Link Device Diagnosis (Example using the ISE20B-L)	<u>27</u>
8.6.7. IO-Link Device Scope (Example using the ISE20B-L)	<u>27</u>
8.6.8. IO-Link Device Generic (Example using the ISE20B-L)	<u>28</u>
8.6.9. IO-Link Device IODD (Example using the ISE20B-L)	<u>29</u>



1.Outline

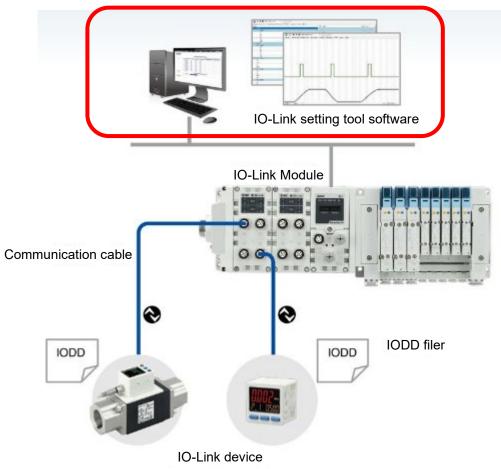
The IO-Link Device Tool is an application software for IO-Link developed by Technologie Management Gruppe (TMG hereafter) in Germany, that makes the following operations possible for the IO-Link Module in the EX600 and 245 series.

- Monitoring various parameters of IO-Link Module
- Monitoring and setting various parameters of IO-Link devices

Note: Applicable SI units and IO-Link Modules are as following.

SI unit	IO-Link Module
EX600-SPN3	
EX600-SPN4	EX600-LAB1、EX600-LBB1
EX600-SEN3-X80	
EX245-SPN1A	
EX245-SPN2A	EX245-LA1、EX245-LB1
EX245-SPN3A	

IO-Link Device Tool





2.System Requirements and How to Obtain the Software

- How to Obtain the Software
 - IO-Link Device Tool

After click "Request for 30 days free version and quotation" at the website below and register user iformation, IO-Link Device Tool file can be downloaded.

- URL : https://www.tmgte.de/en/products/io-link/io-link-device-tool-professional-edition.html
- IOLM file

IOLM file can be downloaded from the website below.

- URL : <u>https://www.smcworld.com</u> Documents/Download >> Instruction Manuals >> Fieldbus System Serial Transmission System >> IO-Link Module
- License Key

- The IO-Link Device Tool can be used free of charge for 30 days after the first installation, but a license key is required after that period. A license key can be obtained in one of two ways:

- 1) Purchase one from TMG. Either CmActLicense (limited to a single PC) or a USB dongle (valid when connected to any PC)
 - => Contact TMG for details.
- 2) Purchase a USB dongle from SMC. Model No. EX9-ZSW-LDT1
- Minimum System Requirements

Components	Requirements
Operating system	Windows10 (32-and 64-bit)
Memory	2GB
Free hard disk space	150MB
Processor	1GHz or higher,32-bit(x86) or 64-bit(x64)
Screen resolution	800 × 600 pixels

Recommended System Requirements

Components	Requirements
Operating system	Windows10 (32-and 64-bit)
Memory	8GB
Free hard disk space	250MB
Processor	1GHz or higher,64-bit(x64)
Screen resolution	1920 × 1080 pixels



3.Connection between an EX series and a PC

Connect the EX series to a PC via a switching hub.

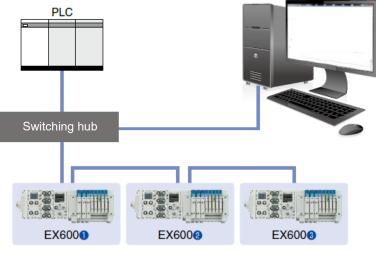


Fig. Example of a connection using a switching hub and EX600

Using the EX9-AC***EN-PSRJ cable, you can connect directly to either the BUS IN or the BUS OUT connector on the SI unit.



EX9-AC020EN -PSRJ 4.8 Cable length (L) Metal part Metal part 4 ø6. 010 1m 020 2m 030 3m 47.3 44 I 050 5m M12 RJ45 100 10m

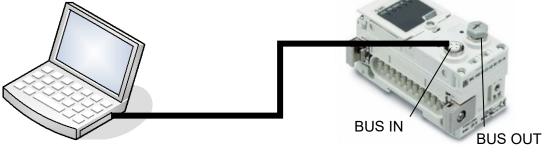
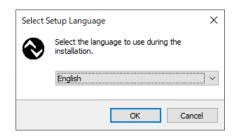


Fig. Example of a direct connection between a PC and SI unit(EX600)



4.Software Installation

- Install the software according to the following procedure:
 - If an old version of IO-Link Device Tool has been installed on the PC, be sure to uninstall it before installing the new version of IO-Link Device Tool.
 - Double-click Setup.exe. The following screen will appear.



- Select a language and then press [OK].

Setup - IO-	Link Device Tool V5.1 - PE version 5.1.1 -	×
License Ag	reement	
Please rea	ad the following important information before continuing.	Ċ
	ad the following License Agreement. You must accept the terms of this t before continuing with the installation.	
		^
	e License Conditions	
Copyrigh	t © 2020 TMG Technologie und Engineering GmbH	
Rights o	of Use	
1.	We grant you the non-exclusive right of intended use of the Software.	
	The intended use is limited to one workplace and only in conjunction	
	with the delivered Hardware. The right of use shall be unlimited in time.	
2.		
	technical data sheet or in the instruction manual, in the absence of such	¥
I acce	pt the agreement	
🛛 🔿 I <u>d</u> o n	ot accept the agreement	
	Nevelo	ancel
	Next > 0	ance

- Check the license terms, and if you agree, check "I accept the agreement" and then press [Next].



Setup - IO-Link Device Tool V5.1 - PE version 5.1.1 - X
Select Destination Location Where should IO-Link Device Tool V5.1 - PE be installed?
Setup will install IO-Link Device Tool V5. 1 - PE into the following folder.
To continue, click Next. If you would like to select a different folder, click Browse.
D:¥Program Files (x86)¥TMG TE GmbH¥IO-Link Device Tool V5.1 - PE
At least 34.4 MB of free disk space is required.
< <u>B</u> ack <u>N</u> ext > Cancel

- Select a folder to save the software and then press [Next].

Setup - IO-Link Device Tool V5.1 - PE versio	n 5.1.1		_		\times
Select Additional Tasks Which additional tasks should be performed?					
Select the additional tasks you would like Set Device Tool V5.1 - PE, then click Next.	up to perform (while insta	alling IO-	Link	
Additional shortcuts:					
Create a desktop shortcut					
[< <u>B</u> ack	<u>N</u> ext	>	Cano	:el

- If you want to add a shortcut, check "Create a desktop shortcut" and then press [Next].



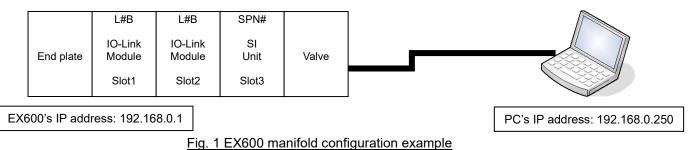
Setup - IO-Link Device Tool V5.1 - PE v	ersion 5.1.1	_	
Ready to Install Setup is now ready to begin installing IG computer.)-Link Device Tool V5	.1 - PE on your	<u>P</u>
Click Install to continue with the installa change any settings.	tion, or click Back if y	ou want to revie	w or
Destination location: C:¥Program Files (x86)¥TMG TE Gr	nbH¥IO-Link Device	Fool V5.1 - PE	^
Additional tasks: Additional shortcuts: Create a desktop shortcut			

- Check the installation conditions and if everything looks correct, press [Install].

Setup - IO-Link Device Too	V5.1 - PE version 5.1.1	-		\times
	Completing the IO Tool V5.1 - PE Setu Setup has finished installing IO-Lir your computer. The application mu- the installed shortcuts. Click Finish to exit Setup.	up Wizan	rd V5.1-PE	
	C	<u>F</u> inish		

- The above screen appears when the installation is successful. Then press [Finish].

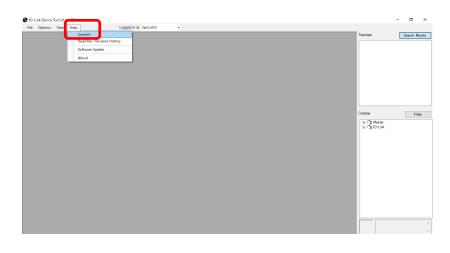
The following description uses the manifold configuration example shown in Fig. 1.





5.Starting the Software

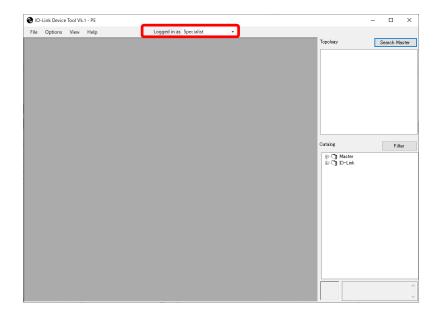
- When the IO-Link Device Tool V#.# is started, the following screen appears.
- Select the Help > Content, to refer to the User Manual prepared by TMG (read the manual for a detailed description of the operations).



- Select a user role depending on the user authorization.

User roles	Password setting	Initial password		
Specialist	Allowed	special		
Maintenance	Not allowed	maintain		
Operator	Not allowed	None		
* For details of the user roles, refer to the User Manual				

For details of the user roles, refer to the User Manual.





6.Importing an IOLM File

To use the IO-Link Module in the EX600 and EX245 series for IO-Link Device Tool, an IOLM file must be imported which is dedicated to this purpose.

For an EX600-SPN3/4 SI unit: SMC-EX600-SPN-LxB1-202*****-IOLM1.5zip For an EX600-SEN3-X80 SI unit: SMC-EX600-LxB1-202*****-IOLM.zip For an EX245-SPN1A SI unit: SMC-EX245-SPN_FX-Lx1-202*****-IOLM1.5zip For an EX245-SPN2A/3A SI unit: SMC-EX245-SPN_Cu-Lx1-202*****-IOLM1.5zip

- The following shows how to import an IOLM file.

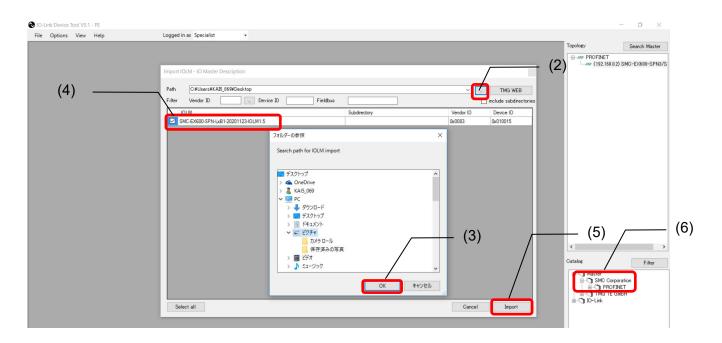
(1) Select Options > Import IOLM (IO-Link Module Description).

NO-Link Device Tool V5.1 - PE		– a ×
File Options View Help Logged in as Specialist	•	
Change Language		pology Search Master
Show Log Update Windows Registry for TCI Update Vendor ID Table	(1)	
Import IODD (IO Device Description) Import IOLM (IO-LINK Master Description)	· · ·	
Import IOLFW (IO-Link Device Firmware Package) Delete IOLFW (IO-Link Device Firmware Package)		
		talog Filter
		⊕-C)) Master ⊕-C)) 10-Link
	Ē	



(2) Select a folder where the IOLM file in zip format is saved.

- (3) Press [OK].
- (4) Check the IOLM file to be imported.
- (5) Press [Import].
- (6) SMC-EX600 is added to the Module folder in the Catalog.





7.Importing an IODD File

- To set an IO-Link Device by using IO-Link Device Tool, an IODD file must be imported which is dedicated to this purpose.
 - For how to obtain an IODD file, contact the manufacturer of your device.
 - How to import the IODD file of the SMC EX260-SIL1 is shown below.
 - The IODD file can be downloaded from the URL below.
 - URL: <u>https://www.smcworld.com</u>
 Documents/Download >> Instruction Manuals >> Fieldbus System Serial Transmission System >> IO-Link Device>> EX260-SIL1 >> Configuration File
 - (1) Select the Option > Import IODD (IO Device Description).

🚷 10-L	nk Device Tool V5.1 - PE				– o ×
File	Options View Help	Logged in as Specialist •			
	Change Language	•		Topology	Search Master
	User Management				
	Show Log				
	Update Windows Registry for TCI	(1)			
	Update Vendor ID Table	(1)			
[Import IODD (IO Device Description)				
	Import IOLM (IO-Link Master Description)				
	Import IOLFW (IO-Link Device Firmware Packa				
	Delete IOLFW (IO-Link Device Firmware Packa	ge)			
				Catalog	Filter
				⊕-C∎ Master ⊕-C∎ IO-Link	
				⊡-~~]] SMC_Cor ⊡-~]] EX26 ⊡-~]] E	30 EX260-SIL1_in/out_0/4 byte B EX260-SIL1_in/out_0/4
				<	> ^ v



- (2) Select the folder where the IODD file is saved.
- (3) Press [OK].(4) Check the IODD file to be imported.
- (5) Press [Import].
- (6) EX260-SIL is added to the IO-Link folder in the Catalog.

) IO-L	nk Device	Tool V5.1	- PE							- 0 ×	
_	File	Options	View	Help	Logged in as Specialist	•						
- 1				Import I						(2) ^{Topology}	Search Master	
- 1				import is	000					(-)		
(4)				Path	G:#SMC-EX260-SIL1#SMC-EX260-SIL1#			2-20181213-IODD1.1	IODDFinder			
(-)				Filter	Vendor ID Device II	D Revision all			include subdirectories			
_					ODD MC-EX260-SIL1_04_2-20181213-IODD1.1.xml		Additional path	Vendo 0x0083				
_					MC-EX260-SIL1_04_2-20181213-10DD1.13th			0x0083	0x000155			
- 1						フォルダーの参照		×				
- 1						Search path for IODD impor	t					(6)
- 1										Catalog		. ,
- 1						> 📙 motデータ		^			Filter	
- 1						> sample				🗄 🕥 10-Link	C_Corporation	
- 1						SMC-EX260-SIL1				é- _ _	EX260	
- 1						SMC-EX260-SIL	1 -SIL1_04_2-20181213-IODD1				EX260-SIL1_in/out_0/4 byt EX260-SIL1_in/out_0/4 EX260-SIL1_in/out_0/4	
- 1							260-SIL1_04_2-20181213-IODD1	.1			G TE GmbH	
- 1						SMC-EX600-LxB1-2 画面データ	0200403-IOLM	(-)				
- 1								<u> </u>				
- 1						٢		<u>`</u>				
- 1							OK ++>>t	IL		(5)	
_										, v	-)	
_				Sol	lect all				Cancel Import			
_				38	So Su				Import	<	>	
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											~	



8. How to Use the Software

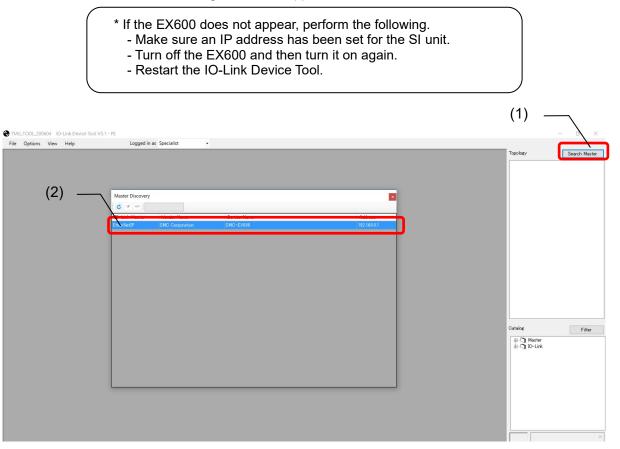
8.1. The IO-Link Module setting screen

8.1.1. Search Master

- After connecting the SI unit to a PC, supply power to the EX600 and conduct the operation as follows.

Note: EX245 does not support the function of Search Master.

- (1) Press [Search Master].
- (2) When the scanned EX600 is shown on the Master Discovery screen, double-click it with the left mouse button. The IO-Link Module setting screen will appear.





8.1.2. Individual selection

- After connecting the SI unit to a PC, supply power to the EX600 or EX245 and conduct the operation as follows.
- (1) Select the IOLM file that matches the SI unit to be used.
- (2) Drag and move to Topology. The IO-Link Module setting screen will appear.
- (3) Press [Enter IP address] to display the input screen.
- (4) Input the IP address of the using SI unit.
- (5) Press [OK].

IO-Link Device Tool V5.1 - PE - [(1) SM	//C-EX245-SPN#A Cu]		- 0 ×
File Options View Help	Logged	n as Specialist •	(2)
(1) SMC-EX245-SPN#A Cu			Topology Search Master
	PD		B-## PROFINET
Common Port Config			
Vendor			
	Vendor	SMC Corporation	
SMC.	IO-Link Vendor ID	0×0083	
		(4	.)
Product		· · · ·	
	Product name	SMC-EX245-SPN#A Cu	
1989	Description	Centralised multipoint F Enter IP Address	^ ·
1		IP Address 192:168.02	
1.0.		Cancel Ok	v.
	IOLM	SMC-EX245-SPN_Cu-Lx	
1-	IOLM Revision	5.1 (5)	Catalog Filter
	FW Revision	IOLM Device ID 0x110011	- C Master
Main Communication Interface			□-□] SMC Corporation ⊡-□] EtherNet/IP
	PROFINET Vendor ID	0x0083 PROFINET Device ID 0x0011	B-C PROFINET
PROFI ®		additional ID 0x00000002	-### SMC-EX245-SPN#A Cu -### SMC-EX245-SPN#A FX
TNTETTT	Fieldbus DD	GSDML-V2.35-SMC-EX245-SPN-20210713×ml	
	Name of Station		⊕-C] IO-Link
	IP Address	MAC Address	(1)
		(3)	
Tool Communication Interface	Tool Communication Type	TMG.SMITCP (3)	
	Connection Reference	Unique Identifier	
	Connection Reference	Unique identifier	



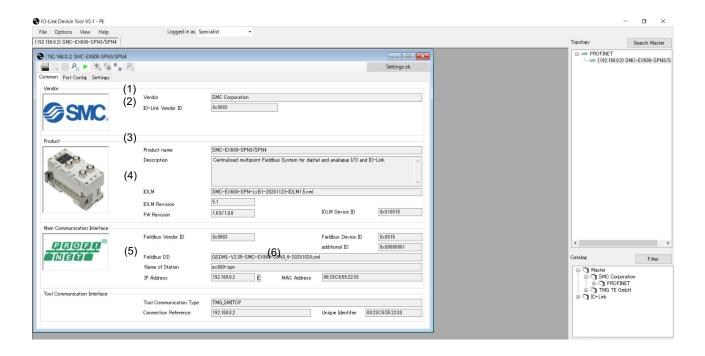
8.2. IO-Link Module Setting Screen

- 7	The IO	-Link Module S	Setting Screen has the three tabs shown below. Selecting a tab changes the scre	een.
	Nº	Tab name	Outline	
	1	Common	Shows information such as the vendor ID of the EX600/245 which cannot change.	
	2	Port Config	Shows information on devices connected to the ports of the EX600-L*B1 or EX245-L*1.	
	3	Settings	Shows parameter setting information for the EX600-L*B1.	

Note: EX245 does not support the Settings tab.

8.3. Common Screen

- The Common Screen of the SMC-EX600/245 shows data that does not change such as the Vendor ID. (The image is an example of EX600.)



Nº	Item	Outline
1	Vendor	SMC Corporation, fixed value
2	IO-Link Vendor ID	0x0083, fixed value
3	Product name	SMC-EX600-SPN3/SPN4, fixed value
4	IOLM	Shows the name of the IOLM file being used.
5	IP Address	Shows the IP address of the EX600-SPN3/4 being monitored.
6	MAC Address	Shows the MAC address of the EX600-SPN3/4 being monitored.



8.4. Port Config Screen

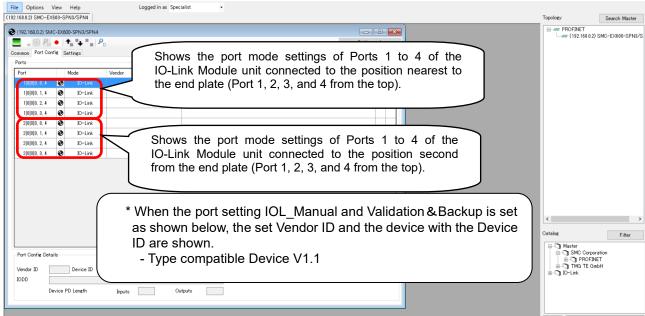
8.4.1. Reading the IO-Link Port Settings

- The following shows how to read the port settings of the EX600-L*B1 and EX245-L*1.

- (1) Set the status to [Go Online].
- (2) Press [read from master] to read the port settings of the EX600-L*B1 or EX245-L*1.

A 1011110		4 95	/ (1) 🕨	: Offline	🔴 : Online		_	
NO-Link Dev		/		6			-	o ×
File Optic		• /	Logged in	as Specialist •				
(192.168.0.2) SI	WC-EX600-	SPN3/SPN4					Topology	Search Master
 (192.168.0 (192.168.0	18, 1	Settings	2 D			Settings ok	PROFINET	MC-EX600-SPN3/S
Port		Mode	Vendor	Device		0 1		
	0, 4 💽		vendor	Device		0 1		
1 0 0 0, 1 0 0 0,		1						
1 0 0 0		IO-Link IO-Link						
1 0 0 0,	. –	IO-Link IO-Link						
2 0 0 0		IO-Link			Synchronize Port Configuration			
2 0 0 0,	. –	IO-Link						
2 0 0 0,		IO-Link			Configured by PLC	Module Configuration Changed		
2 0 0 0					PLC connected	Port Configuration Changed		
						Master Variables Changed		
				(2)	tool to the master.	variables have been changed You can ster the contiguration from the master to transfer the contiguration from the variable to master Cancel	¢	>
					1		Catalog	Filter
Port Conf	ig Details						B-C] SMC Corpora B-C] PROFINE B-C] TMG TE Gmb	т
Vendor ID		Device ID	Product ID		IO-	ink Mode no check		
IODD								
	Device	PD Length	Inputs	Outputs				

O-Link Device Tool V5.1 - PE



Note: In the case of EX245, show from the IO-Link Module unit connected to the position nearest to the SI unit.



o ×

8.4.2. Changing the Settings of the IO-Link Ports (for EX600-SEN3-X80 only)

- The following shows how to change the port settings of the EX600-LAB1 and EX600-LBB1.
- (1) Set the status to [Go Offline].
- (2) Place the cursor on [Mode] of the Port whose setting you want to change and right-click the mouse. The settings for the port will be shown.
- (3) Place the cursor on the desired Port settingand left-click the mouse. [Mode] will be set to that setting.
- (4) When you press [Go Online], the "Synchronize Port Configuration" screen will appear.
- (5) Press [write to master] to apply the setting to the EX600-LAB1 or EX600-LBB1.

IO-Link Device 1	Tool V5.1 -						
File Options	View H	Help (1)(4)	Logge	ed in as Specia	ist 🔹		
(192.168.0.1) SMC-I	EX600						
🛞 (192.168.0.1) S							
		+ P.	(2)				
	onfig Set		(2)	(3)			
Ports		/					
Port	м	ode Ver	ndor		Device		
1 0 0 0, 0, 4	۲	IO-Link					
1 0 0 0, 1, 4	۲	IO-Lin	k				
1 0 0 0, 2, 4	۲	IO-					
1 0 0 0, 3, 4	0	IO- DO, P					
2 0 0 0, 0, 4	۲	IO-Law					
2 0 0 0, 1, 4	0	IO-Link					
2 0 0 0, 2, 4		IO-Link					
2 0 0 0, 3, 4	۲	IO-Link					
		Synchronize P	ort Configura	ation			
		Configured	d by PLC] Module Confie	guration Chang	ted
		PLC conne	ected] Port Configura	ation Changed	(5)
] Master Variab	les Changed	
		choose whet	her you want r whether you	t to transfer	ables have beer the configuration the configurationsfer the confi	on from the ma	aster
		read from	master	write	to master	Cancel	

* When the SI unit is EX600-SPN* or EX245-SPN*A, use the configuration software of the PLC to change the parameters of EX600-L*B1 and EX245-L*1.



8.4.3. Scanning IO-Link Devices

- The following shows the procedures for scanning IO-Link devices when communication with IO-Link devices connected to an EX600-L*B1 or EX245-L*1 is established.

- (1) Set the status to [Go Online].
- (2) Press [Check Devices]. The connected IO-Link devices will be shown.
- (3) Press [Takeover devices into engineering].
- (4) Models, etc. of the connected IO-Link devices are shown.

an Port Config Setting				Settings ok	
s t Mode	e Vendor		D.:-	0 1	
	e vendor IO-Link		Device	0 1	
	IO-Link				
	IO-Link	<u>19</u>			
	IO-Link	Check De	evices		
2 0 0 0, 0, 4 📀	IO-Link	Port	IL Engineering	Rev IO-Link Master	Re
2 0 0 0, 1, 4 🛛 🛞	IO-Link	0	n	ISE20B-L	1.1
2 0 0 0, 2, 4 🛛 🕙	IO-Link	1	n		
2 0 0 0, 3, 4 🕑	IO-Link	2	n		
		3	n	(3)	
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		2	n		
		3	n		
		Ľ			Exit
				Takeover devices into engineering	Exit
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8.4.4. IO-Link Device Checking / Data Storage Function Setting (for EX600-SEN3-X80 only)

- In the "Port Config Details" on the Port Config Screen of the SMC-EX600, the settings for the IO-Link device checking / Data storage function can be set for each port.
- (1) Set the status to [Go Offline].
- (2) Place the cursor on a port whose [Mode] is set to IO-Link.
- (3) In the device checking / data storage function setting in [IO-Link Mode], place the cursor on the desired setting, and left-click the mouse.

* For details on each setting, refer to the Operation Manual of the EX600-SEN3-X80.

- (4) When the status is set to [Go Online], the Synchronize Port Configuration screen appears.
- Press the [write to master] button, to apply the setting to the EX600-LAB1 or EX600-LBB1.

k	See	page	<u>18</u> .
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1 0 0 0, 2, 4	0	IO-Link IO-Link				
1 0 0 0, 3, 4	0	IO-Link				
2 0 0 0, 0, 4	0	IO-Link				
2 0 0 0, 1, 4	0	IO-Link				
2 0 0 0, 2, 4	0	IO-Link				
2 0 0 0, 3, 4	0	IO-Link				

* When the SI unit is EX600-SPN* or EX245-SPN*A, use the configuration software of the PLC to change the parameters of EX600-L*B1 and EX245-L*1.



8.4.5. Port Config Details - In "Port Config Details" on the Port Config screen of the SMC-EX600/245, information on connected IO-Link devices is shown.

- (1) Place the cursor on a port to which an IO-Link device is connected.
- (2) The information on the selected IO-Link device is shown in "Port Config Details" as shown below.

Nº	Item	Outline
1	Vendor ID	Vendor ID
2	Device ID	Device ID
3	Product ID	Product ID
4	IODD	IODD file name
5	Device PD Length Inputs	Input size of the process data
6	Device PD Length Outputs	Output size of the process data

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2101010, 2, 4 🐼 10-Link	2101010, 2, 4 🕑 IO-Link						
2101010, 3, 4 🐼 10-Link	20000. 3. 4 🚱 IO-Link						
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(2)	(2)					(2)	
(2)	(2)					(2)	
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8.5. Settings Screen

8.5.1. Reading IO-Link Module Parameters

- Reading the parameters of the EX600-LAB1 and EX600-LBB1 can be performed using the following procedure.
- For details of the parameters, refer to the Operation Manual of the EX600-SPN3/4 or EX600-SEN3-X80.
- (1) Set the status to [Go Online].
- (2) Select the Settings tab. The parameters of the unit selected in "List of Masters" will be shown.
- (3) The units can be selected in the List of Masters area.
- (4) "Maximum" of "Total Input/Output Size" shows the maximum acceptable configuration size that can be occupied, and "Configured" shows the actually occupied configuration size (for the EX600-SEN3-X80 only).

mon Port Config Settings	P _D (2)					Settings ok	
of Masters	Master Parameter						
00) EX600-LAB1 00) EX600-LBB1	Monitor Short Circuit	enable	~				
\	Port specific Parameter	Port 1		Port 2	Port 3	Port 4	
\backslash	InOut Byte Swap	direct (no swap)		direct (no swap)	direct (no swap)	direct (no swap)	
\backslash	Fault Output (10-Link)	clear, PD OUT valid		clear, PD OUT valid	clear, PD OUT valid	clear, PD OUT valid	
\backslash	Fault Output (DO_C/Q)	clear		clear	clear	clear	
(3)	Process Input Data Mapping	32 byte		32 byte	82 byte	32 byte	
(0)	Process Output Data Mapping	32 byte		32 byte	32 byte	32 byte	
Contraction in the							

Fig. Screen for the EX600-SPN3/4

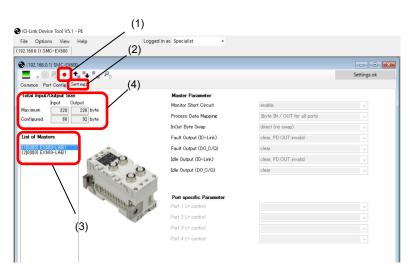


Fig. Screen for the EX600-SEN3-X80



8.5.2. Setting the IO-Link Module Parameters (for the EX600-SEN3-X80 only)

- Setting the parameters of the EX600-LAB1 and EX600-LBB1 can be performed with the following procedure.

- For details of the parameters, refer to the Operation Manual of the EX600-SEN3-X80.

- (1) Set the status to [Go Offline].
- (2) Select the Settings tab. The parameters of the unit selected in "List of Masters" will be shown.
- (3) The units can be selected in the List of Masters area.
- (4) When the status is set to [Go Online] after changing the "Module Parameter," the "Synchronize Port Configuration" screen appears.
- (5) Press [write to master] to apply the parameters to the unit.

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	Port specific Parameter The port configuration or master variables have been changed. Yoy can choose whether you want to transfer the configuration from the instart tool to whether you want to transfer the configuration from the instart tool to the master. Port 2 Le control Port 3 Le control Port 3 Le control read from master	Ommon Port Config Settines fotal Input/Okput Size input (Okput Size) faximum 220 220 byte configured 88 92 byte sist of Masters	Monitor Short Circuit Process Data Mapping InOut Byte Swep Fault Output (IO-Link) Fault Output (DO_C/Q) Idle Output (IO-Link)	disable ~ Zbyte IN / OUT for all ports ~ idirect (no swap) ~ (clear, PD OUT invalid ~ Synchronize Port Configuration _ Configured by PLC _

* When the SI unit is EX600-SPN* or EX245-SPN*A, use the configuration software of the PLC to change the parameters of EX600-L*B1 and EX245-L*1.



8.6. Setting the IO-Link Devices

8.6.1. Reading Information on IO-Link Devices

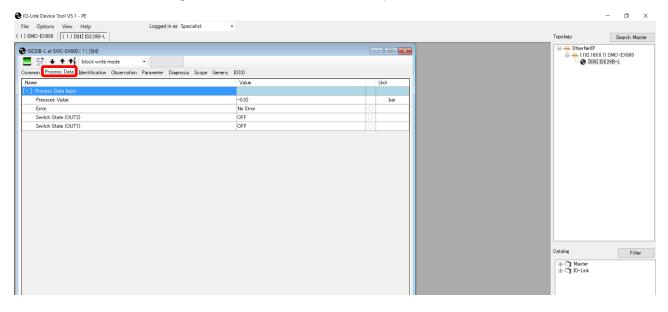
- Reading information on an IO-Link device can be performed using the following procedure.
- The SMC ISE20B-L is used for the screen examples below (a special IODD file has been installed).
- * Screens differ depending on the IO-Link device.
- (1) Select an IO-Link device to read information, after setting the status to [Go Online], and double-click the mouse.
- (2) The Common tab screen for the IO-Link device appears.
- (3) When the [Upload from device] button is pressed, the information on the connected device will be read.

	NO-Link Device Tool V5.1 - PE	
	File Options View Help Logged in as Specialist	
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	€ (192.168.0.1) SMC-EX600	
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	2[0]0]0.0.4 🐼 IO-Link	
	2101010, 1, 4 🕑 IO-Link	
	2[0]0[0, 2, 4 🕑 IO-Link	
	2]0]0]0. 3, 4 😵 IO-Link	
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8.6.2. IO-Link Device Process Data (Example using the ISE20B-L)

- When the "Process Data" tab of the ISE20B-L is selected, the following screen appears.
- Pressure information, diagnostic information, and switch output status are shown.



8.6.3. IO-Link Device Identification (Example using the ISE20B-L)

- When the "Identification" tab of the ISE20B-L is selected, the following screen appears.
- Only the "Application-Specific Tag" allows writing.
- (1) When the [Upload from device] button is pressed, the information on the connected device will be read.
- (2) Select either the "block write mode" or "direct write mode" for the device writing mode.
- * For details of the difference between the writing modes, see the User Manual.
- (3) Any value within 32 characters can be set for the value of "Application-Specific Tag." To change this value, press the [Enter] button after directly entering the characters.
- (4) When the [Download to device] button is pressed, the device is written to.

0	(4) (2)				-	- 0 ×
F	ile Options View Help Logged in as Specialist	•			Topology	Court Martin
<u> </u>	ISE208-L syMC-EX00 (1) (0/4)	_		- • •	Ether NetIP	
	Common Process Data Identification Observation Parameter Diagnosis Scope Gene					
	name	R/₩	Value State	Unit		
	/endor Name	ro	SMC Corporation d			
	/endor Text	ro	www.smcworld.com d			
F	roduct Name	ro	ISE20B-L d			
F	roduct ID	ro	ISE20B-L d			
F	roduct Text	ro	Pressure Sensor d			
s	ierial Number	ro	02A04069 d			
I F	lardware Version	ro	HW-V2.00 d			
F	irmware Version	ro	EW 14100 d			
Į į	Application Specific Tag	rvi	**************************************			
				`(3)		



8.6.4. IO-Link Device Observation (Example using the ISE20B-L)

- When the Observation tab of the ISE20B-L is selected, the following screen appears.
- Pressure information, diagnostic information, and switch output status are shown.

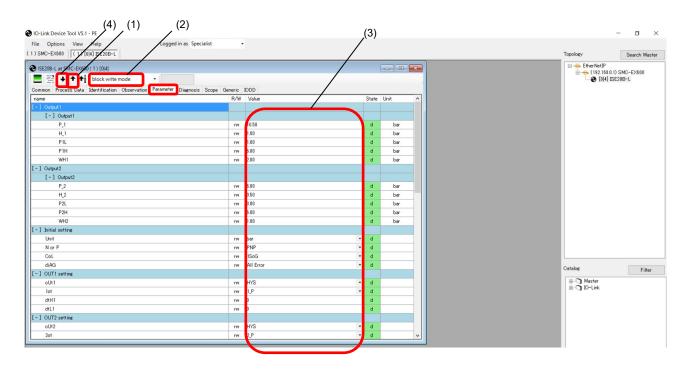
(1) When the [Upload from device] button is pressed, the information on the connected device will be read.

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Common Process Data Identification Observation Parameter Diagnosis Scope C	Beneric II	ססנ				
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Process Data Input Error	ro	No Error	d			
Process Data Input Switch State (OUT2)		OFF	d			
Process Data Input Switch State (OUT1)		OFF	d			
					Catalog	Filter
					🖲-🗂 Master	
					i - 🗂 IO-Link	
			_			



8.6.5. IO-Link Device Parameter (Example using the ISE20B-L)

- When the Parameter tab of the ISE20B-L is selected, the following screen appears.
- The set parameters can be checked.
- For details of the parameters, refer to the Operation Manual of the relevant IO-Link device.
- (1) When the [Upload from device] button is pressed, the information on the connected device will be read.
- (2) Select either the "block write mode" or "direct write mode" for the device writing mode.
- * For details of the difference between the writing modes, refer to the User Manual.
- (3) Change "Value." ("State" will change to "c.")
- (4) When the [Download to device] button is pressed, the device is written to.





8.6.6. IO-Link Device Diagnosis (Example using the ISE20B-L)

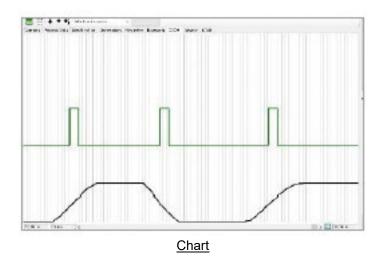
- When the Diagnosis tab of the ISE20B-L is selected, the following screen appears.
- For details of the Diagnosis data, refer to the Operation Manual of the relevant IO-Link device.

(1) When the [Upload from device] button is pressed, the information on the connected device will be read.

ISE20B-L @ SMC-5X600 (192.168.0.1)[1 0 0 0, 0, 4]				
Common Process Data Identification Observation Parameter Diagnosis Scope Ge	norio I	000		
Name	R/W	Value	State	Unit
Device Status	ro	Out of specification	d	onix
Detailed Device Status [1]	ro		d	
Detailed Device Status [2]	ro		d	
Detailed Device Status [3]	ro		d	
Detailed Device Status [4]	ro		d	
Detailed Device Status [5]	ro		d	
Detailed Device Status [6]	ro		d	
Detailed Device Status [7]	ro		d	
Detailed Device Status [8]	ro		d	
Detailed Device Status [9]	ro		d	
Detailed Device Status [10]	ro	Process variable range overrun	d	
Detailed Device Status [11]	ro		d	
Detailed Device Status [12]	ro		d	
Detailed Device Status [13]	ro		d	
Detailed Device Status [14]	ro	65425	d	

8.6.7. IO-Link Device Scope (Example using the ISE20B-L)

- Process data of devices that support the Scope function can be shown in a chart format. (the scope of the ISE20B-L does not support this Scope function).
- For details on Scope, refer to the User Manual.





8.6.8. IO-Link Device Generic (Example using the ISE20B-L)

- When the Generic tab of the ISE20B-L is selected, the following screen appears.

- For details of the Generic data, refer to the Operation Manual of the relevant IO-Link device.

- (1) When the [Upload from device] button is pressed, the information on the connected device will be read.
- (2) The information on Direct Parameter Page 1 is shown.
- (3) It allows users to view Process Data Inputs and to Read/Write Process Data Outputs.
- (4) It allows users to Read/Write parameters of IO-Link devices by specifying Index and SubIndex.

NO-Link Device Tool V5.1	- PE					
File Options View	Help (1)	Logged in as Specialist	•			
(192.168.0.1) SMC-EX600	(192.168.0.1)[1 0 0 0	0, 0, 4] ISE20B-L				
SISE20B-L @ SMC-56	600 (192.168.0.1)[1]0	DIOIO. 0. 41				
-	block write mode					
		ervation Parameter Diagnosis Scope	Generic IODD			(2)
Direct Parameter Page 1						Y
Bytes	00 1E 17 :	21 11 50 00 00 83 00 01 4E 00	00 00 00		Y	
Device ID [9, 10, 11]	0x00014E	Process Data Input Length [5]	16 Bits	Min Cycle Time [2]	2300 µs	
Vendor ID [7, 8]	0x0083	Process Data Output Length [6]	0 Bits	Master Cycle Time [1]	3000 µs	
Revision ID [4]	1.1	M-sequence Capability [3]	0x21	SIO Mode	⊡ ISDU	(3)
Process Data						
Inputs	1F 90					
Read Outputs						
Write Outputs					Write	(4)
Parameter						$\boldsymbol{\mathcal{I}}$
	SubIndex (dec) Da	ata 💿 hex 🔿 dec	🔿 char			
0	0				Read	
0	0				Write	
Message Box						
					^	
					~	
<					>	
						2



- **8.6.9. IO-Link Device IODD (Example using the ISE20B-L)** When the IODD tab of the ISE20B-L is selected, the following screen appears.
- Detailed information on the IODD file is shown.

IO-Link Device Too	ol V5.1 - PE		
File Options \	/iew Help		Logged in as Specialist
(192.168.0.1) SMC-EX	600 (192.168	.0.1)[1 0 0 0, 0, 4] ISE20	0B-L
🛞 ISE20B-L @ SN	1C-EX600 (192.	168.0.1)[1 0 0 0, 0, 4]	
-	block v		
			Parameter Diagnosis Scope Generic IODD
Data Sheet Proce	ss Data Varia	bles XML	
IODD SMC	D-ISE20B-L-20	180222-IODD1.1×ml	
Version 🛛 🔪	/1.00 Releas	e Date 2018-	-02-22 Copyright Copyright 2016. SMC Corporation Stamp 20459179
0.00		Vendor Name	SMC Corporation
🛛 IO-	LINK	Vendor Text	www.smcworld.com
		Vendor URL	www.smcworld.com
		Vendor ID	131 0×0083
		Device Family	ISE20B-L
		Device Name	ISE20B-L
		Device ID	334 0x00014E Product ID ISE20B-L
10-Link Revision		1.1	Data Storage X Profile Characteristics
compatible with \	/1.0		Block Parameterization
Bitrate		COM2	Device Access Locks
MinCycleTime		2.3 ms	Local User Interface X
SIO mode		X	Local Parameterization
Process Data In/	Öut	2/0 Bytes	
ISE20B-L ISE20	B-L-M		
Name []	SE20B-L		Connection Type OtherConnectionT
Description	Pressure Range	e,01MPa	Description Lead wire with connector
			show more
	_		



Revision history

A : Addition of IO-Link modules EX245-L*1. [April 2022]

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