

## Instructions for IO-Link device parameter configuration software

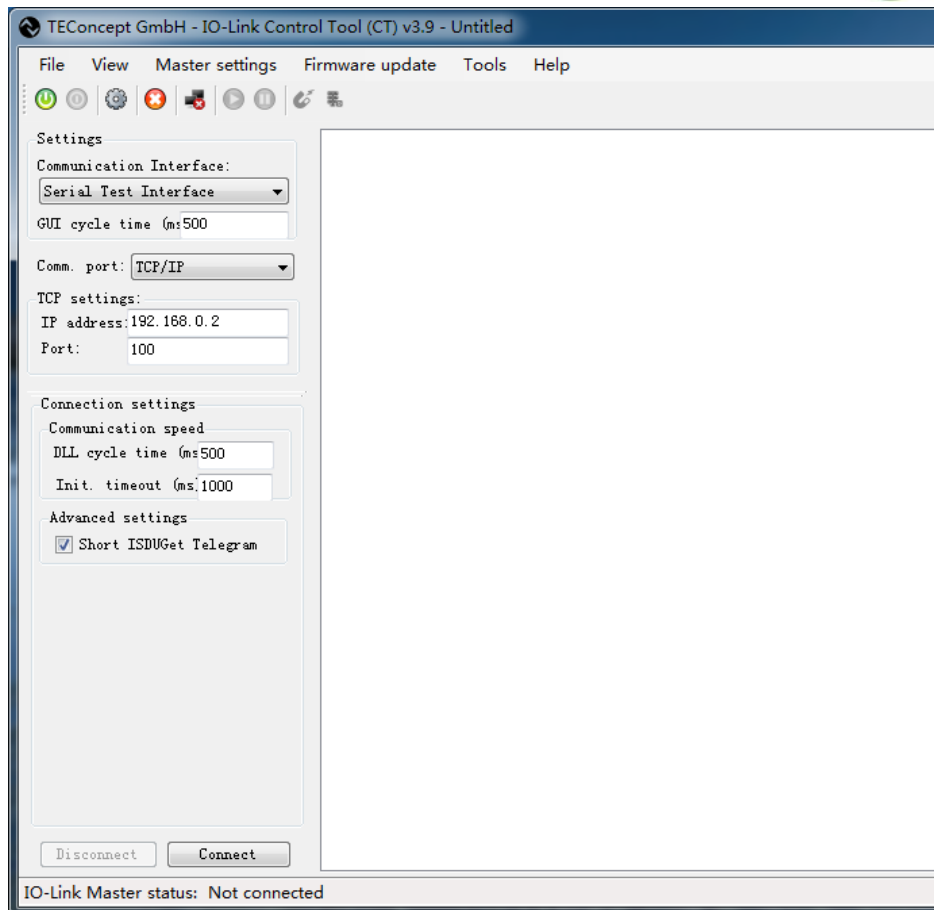
Through a practical operation process of configuration, this file introduces how to configure the acyclic data of the third-party IO-Link device through the ELCO IO-link master (the IODD file needs to be imported).

In this example, the Compact67 series IO-Link module (FCPN-8LKM-8A) of ELCO company is used as the IO-Link master station to connect the ultrasonic ranging sensor USQ12M200IU-T4 of Di-Soric company. TEConcept company's Control Tool software and the IODD file of the corresponding IO-Link sensor are required.

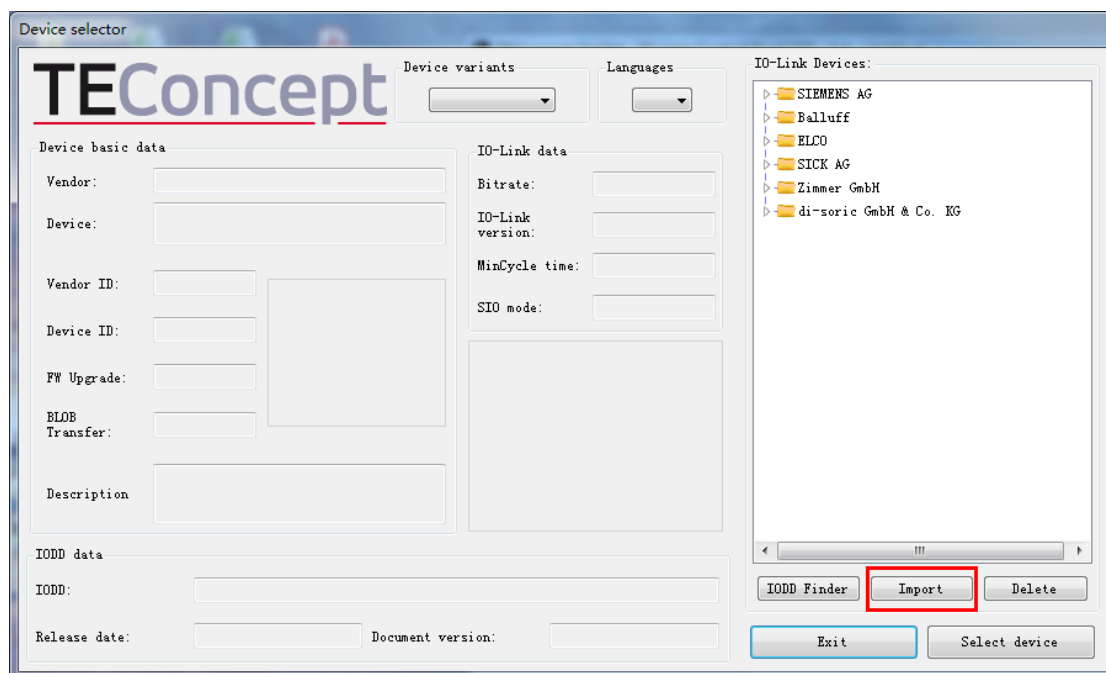
Power on the IO-Link master in advance and connect it to the computer equipped with Control Tool software through network cable direct connection or switch. **It is necessary to disconnect the connection between IO-Link master and PLC.**

We show the specific software setting and debugging process in the form of pictures.

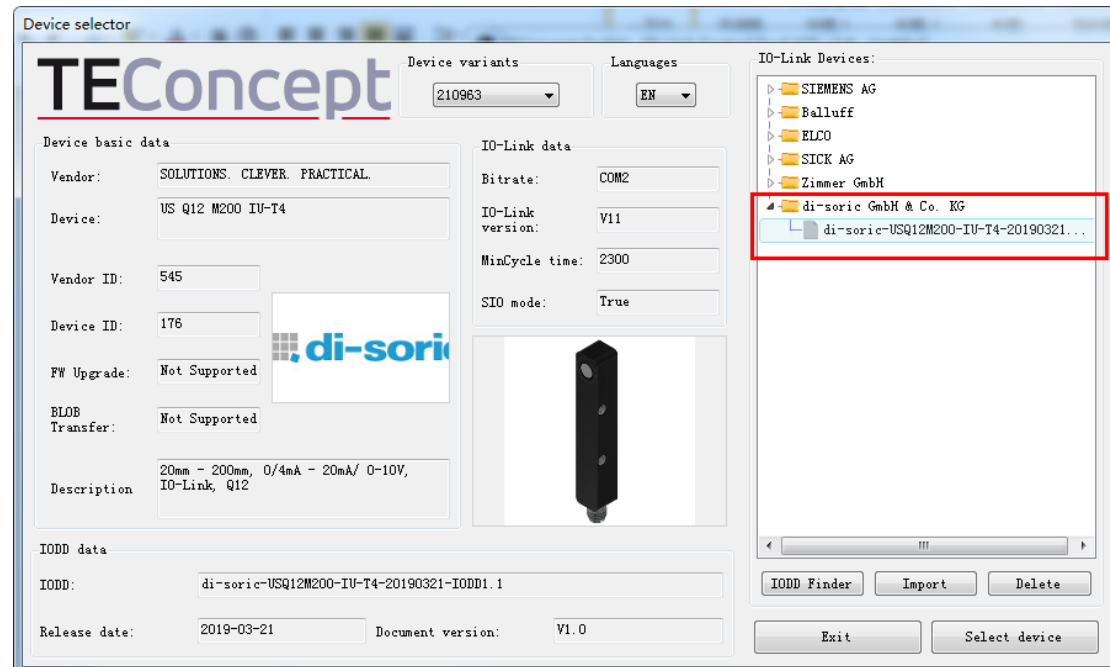
1) Open the installed Control Tool software and set connection related parameters on the left. "GUI cycle time" is set to 500ms, "comm. port" selects TCP / IP, "IP address" is the IP address of IO link module (the computer IP needs to be in the same network segment as the module), "port" parameter is set according to the port of IO-Link sensor connected to IO-Link module, port1 ~ 4 selects 100, and port5 ~ 8 selects 200. "DLL cycle time" is set to 500ms (the setting range is 100ms ~ 500ms. The smaller the value, the faster the reading and writing speed and the worse the stability), and "init. Timeout" is set to 1000ms.



2) Select "Tools > iodd catalog" in the menu bar to open the iodd manager and install the iodd file corresponding to the IO link sensor (provided by the sensor manufacturer).



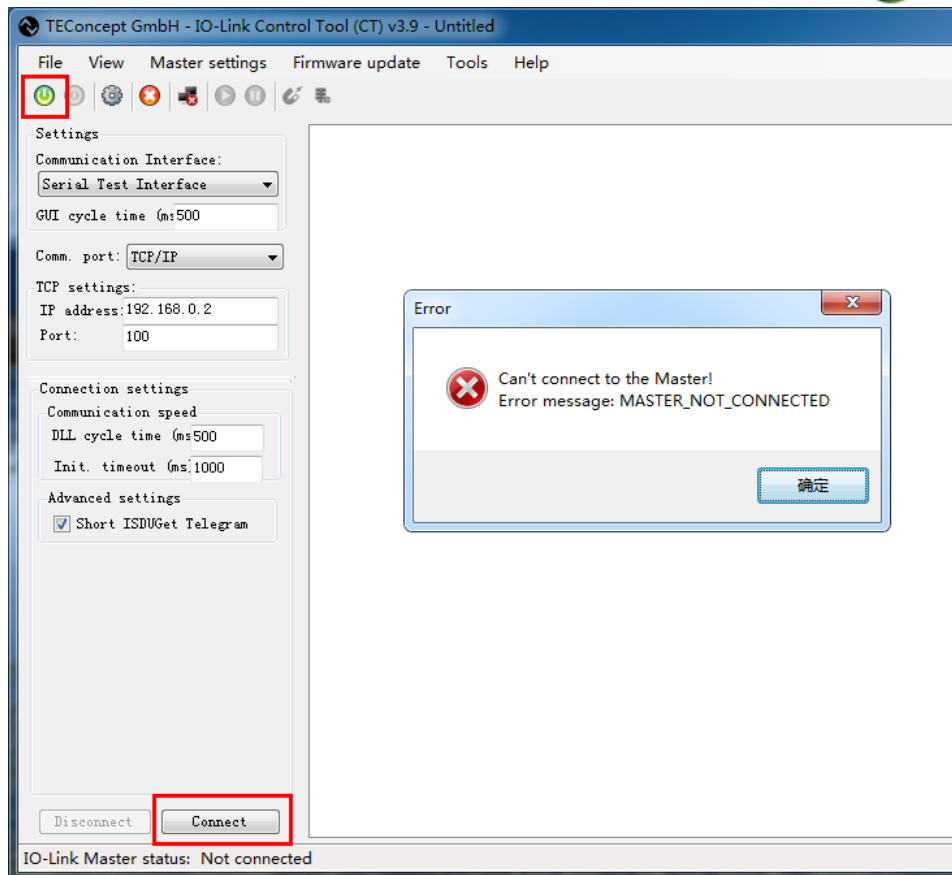
In the newly opened IODD Manager window, click the "import" button, select the path where the IODD folder is located, and select the corresponding .xml file for installation. After successful installation, you can see the corresponding manufacturer and product information in this window.



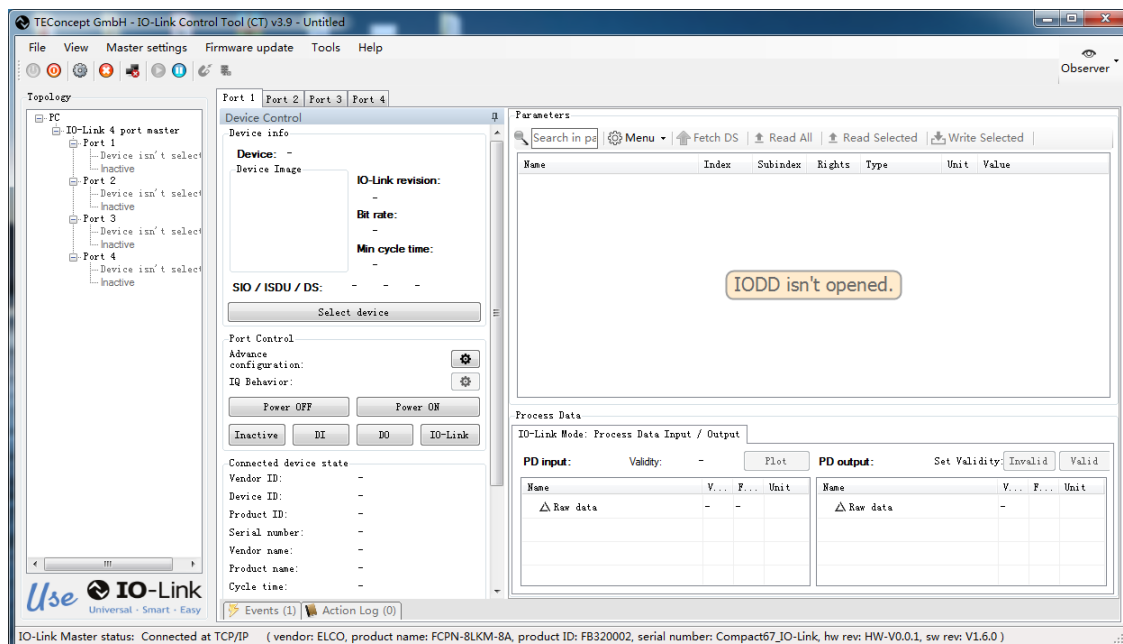
After installation, click "Exit" to close this interface.

3) Ensure that the connection between the module and the computer network is OK, click the green button in the upper left corner to try to connect the IO-Link master. If the connection is wrong, the following prompt will appear.

At this time, confirm that the IP address of the module is set correctly, in the same network segment as the computer, the PLC has been disconnected, etc., and try again.

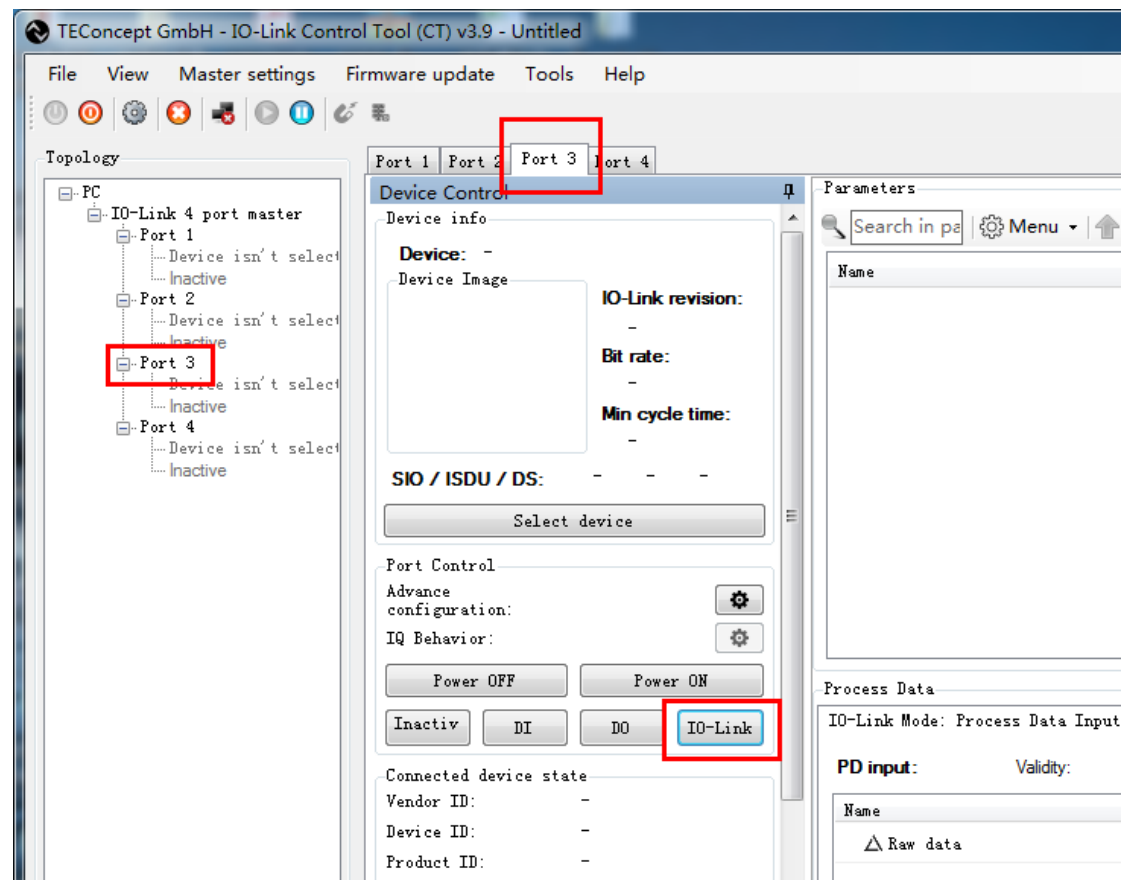


If the connection is successful, the following operation screen will appear.

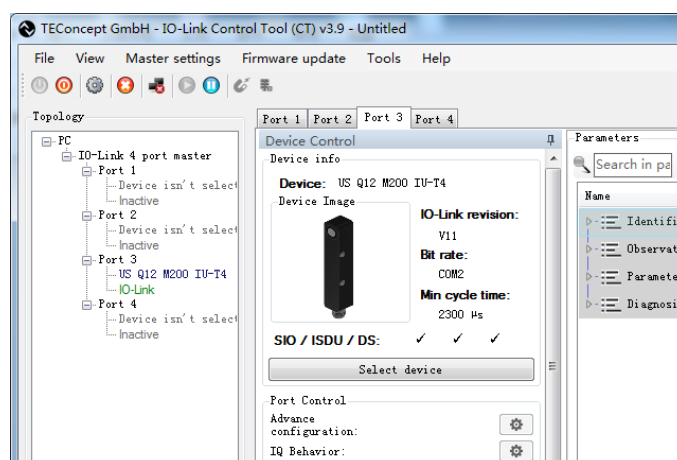


**4) Due to the limitation of the chip, the software can only operate four IO-Link interfaces at a time. When using Ports 1 ~ 4, select 100 for TCP port, and when using ports 5 ~ 8, select 200 for TCP port. (when you select 200 to use port5 ~ 8, the interface will still display port1 ~ 4, but the actual operation is port5 ~ 8)**

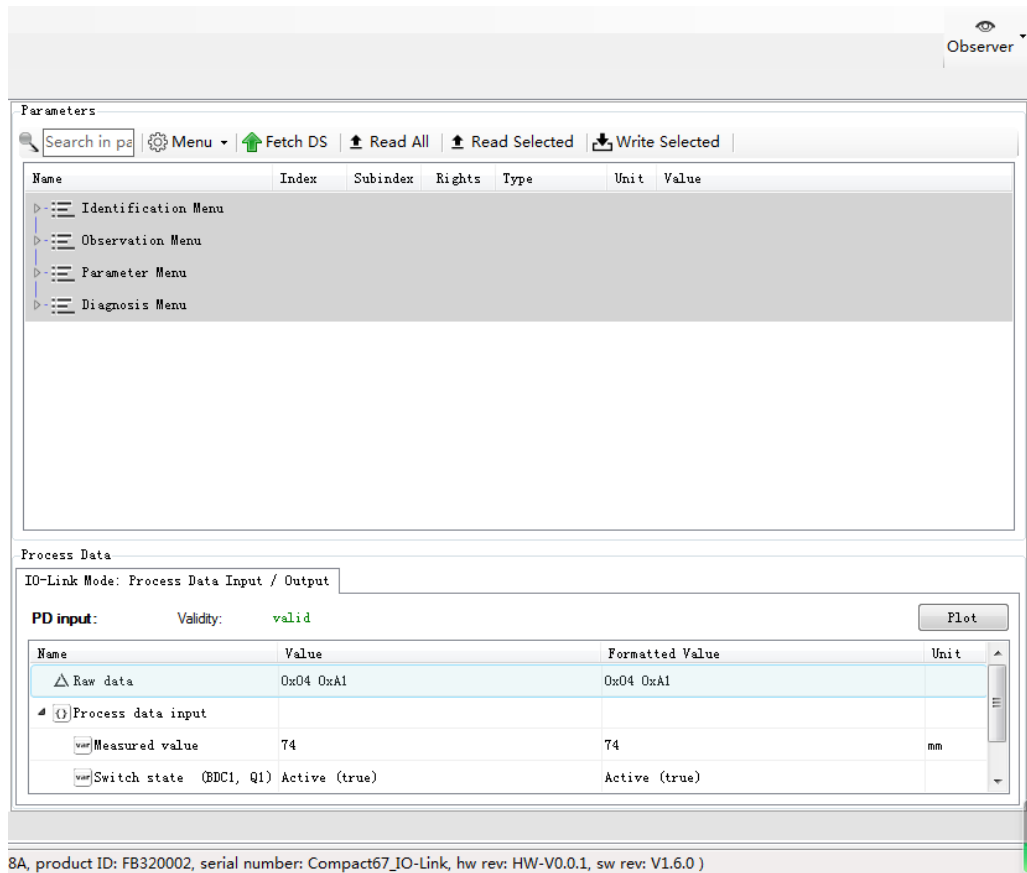
5) Connect the IO-Link sensor to the Port3 interface of the IO-Link module through the connector, click from the left side of the software or select the "Port3" tab, and click the "IO-Link" button in the tab to activate the IO-Link function of this port.



After the IO-Link function is activated and the connection is normal, the software can automatically scan the IO-Link device connected to the corresponding port. If the IODD file is correctly installed, the detailed information can be displayed.



6) The corresponding data of this IO-Link sensor is displayed on the right side of the window, including non-periodic setting data "Parameters" and periodic process data "Process Data".



The screenshot shows the ELCO Observer software interface. The top right corner has an "Observer" button with an eye icon. The main window is divided into two sections: "Parameters" and "Process Data".

**Parameters Section:**

- Search in parameters:
- Menu: Menu
- Fetch DS:
- Read All: Read All
- Read Selected: Read Selected
- Write Selected: Write Selected

Name	Index	Subindex	Rights	Type	Unit	Value
Identification Menu						
Observation Menu						
Parameter Menu						
Diagnosis Menu						

**Process Data Section:**

IO-Link Mode: Process Data Input / Output

PD input: Validity: valid Plot

Name	Value	Formatted Value	Unit
Raw data	0x04 0xA1	0x04 0xA1	
Process data input			
Measured value	74	74	mm
Switch state (BDC1, Q1)	Active (true)	Active (true)	

8A, product ID: FB320002, serial number: Compact67\_IO-Link, hw rev: HW-V0.0.1, sw rev: V1.6.0 )

7) Since the parameters in "Parameters" are aperiodic data, the IO-Link sensor needs to send a command to return or set the corresponding data. Select the item you want to adjust or read, and click "Read Selected" and "Write Selected" to read and write this item. "Index" and "Subindex" indicate the index number of the entry, "Rights" column indicates the read or write permission of the entry, "Type" indicates the data type of the entry.

Parameters

Search in pa Menu Fetch DS Read All Read Selected Write Selected

Name	Index	Subindex	Rights	Type	Unit	Value
<b>Identification Menu</b>						
var Vendor Name	16	0	RO	String		di-soric GmbH & Co. KG
var Vendor Text	17	0	RO	String		SOLUTIONS. CLEVER. PRACTICAL.
var Product Name	18	0	RO	String		US Q12 M200 IU-T4
var Product ID	19	0	RO	String		210963
var Product Text	20	0	RO	String		20mm - 200mm, 0/4mA - 20mA/ 0-10V, IO-Lin...
var Lot	64	0	RO	String		(Unknown)
var Firmware Version	23	0	RO	String		(Unknown)
var Application Specific Tag	24	0	RW	String		(Unknown)
<b>Observation Menu</b>						

8) The "Value" column is the specific value or content of the entry. Please note that the gray font is the offline default value, the green font is the online reading value, and the blue font is the value to be set just after modification. The "Read All" button can read all the parameters of the IO-Link sensor. Since the non-periodic parameter reading and writing operation is very slow, each index needs nearly one second, so please wait patiently. **(This function is not recommended for IO-Link sensors with many parameters, please select read / write as required.)**

Parameters

Search in pa Menu Fetch DS Read All Read Selected Write Selected

Name	Index	Subindex	Rights	Type	Unit	Value
var Vendor Name	16	0	RO	String		di-soric GmbH & Co. KG
var Vendor Text	17	0	RO	String		SOLUTIONS. CLEVER. PRACTICAL.
var Product ID	19	0	RO	String		210963
var Product Name	18	0	RO	String		US Q12 M200 IU-T4
var Product Text	20	0	RO	String		20mm - 200mm, 0/4mA - 20mA/ 0-10V, IO-Lin...
var Firmware Version	23	0	RO	String		29.11.2018
var Application Specific Tag	24	0	RW	String		0
var Error Count	32	0	RO	Unsigned In...		(Unknown)
var Device Status	36	0	RO	Unsigned In...		(Unknown)
[ ] Process Data Input	40	0	RO	Record		

9) Please operate the parameters according to the operating instructions provided by the IO-Link equipment manufacturer. After setting, close the Control Tool software and power on the module again, and then connect the PLC normally.