

FNI MPL-506-105-M

IO Link Master Module User Manual





Content

1	Notes	
	1.1. Manual structure	3
	1.2. Typography	3
	1.3. Symbol	3
	1.4. Abbreviation	3
	1.5. Deviating views	4
2	Safety	4
	2.1. Intended use	4
	2.2. Installation and startup	4
	2.3. General Security Notes	4
	2.4. Resistance to aggressive substances	4
3	Getting Started Guide	
	3.1. Module overview	5
	3.2. Mechanical connection	6
	3.3. Electrical connections	6
4	Technical data	
	4.1. Size	8
	4.2. Mechanical data	8
	4.3. Operating conditions	8
	4.4. Electrical data	8
	4.5. Network port	9
	4.6. Function indicator	9
5	Integrated	
	5.1 Module configuration	12
	5.2 Data mapping	13
	5.3 PLC Integration Tutorial	19
6	Appendix	23



1 Notes			
1.1. Manual structure	1.1. This manual is organized by organization, so the chapters are interconnected.Section 2: Basic Security Information.Chapter 3: Getting Started GuideChapter 4: Technical Data		
1.2. Typography	The following typographic conventions are used in this manual.		
Enumerate	The enumeration is displayed as a list with bullets. • Headword 1 • Headword 2		
Action	Action descriptions are represented by a front triangle. The result of the action is represented by an arrow. Action description 1 Action result Action description 2 Step programs can also be displayed numerically in parent heses. (1) Step1 (2) Step2		
Grammar Number:	Decimal numbers are displayed without additional indica ors (eg 123) Hexadecimal numbers are displayed with an additional in icator hex (eg: 00hex) or with the prefix "0X" (eg: 0x0 0)		
Cross reference	Cross-references indicate where to find additional infor mation on this topic.		
1.3.Symbol	Notes <u>This symbol indicates a general comment.</u> Notice! <u>This symbol indicates the most important safety notic</u>		



	<u>e.</u>	
1.3. Acronym	FNI	FAS network interface
	Ι	standard input port
	PN	Profinet
	ECT	EtherCAT
	CCIEBS	CC-Link IE Field Basic Slave
	EIP	Ethernet/IP
	EMC	Electromagnetic Compatibility
	FE	Functional ground
	0	Standard output port
1.4. Viewing angle	e deviation	Product views and explanations in this manual m
		ay deviate from the actual product. They are onl
		y used left and right to explain the material.

2 Safety

2.1.	Expected usage	This manual describes as a decentralized input and output modul e for connection to an industrial network.
2.2.	Install and start	Precautions! Installation and start-up should only be carried out by trained nd specialized personnel. A qualified individual is one who is fa miliar with the installation and operation of the product and ha s the necessary qualifications to do so. Any damage caused by unauthorized operation or illegal and improper use is not covere d by the manufacturer's warranty. Equipment operators are resp onsible for ensuring compliance with appropriate safety and acci dent prevention regulations.
2.3.	General security Notes	 Debug and check Before debugging, you should read the contents of the user mainual carefully. The system cannot be used in applications where the safety of personnel depends on the functionality of the equipment. intended use The manufacturer's warranty coverage and limited liability stat ment do not cover damage caused by: Unauthorized tampering Improper use Handling, installation and operation that do not conform to the instructions provided in the user manual Owner/Operator Obligations This device is an EMC Class A compliant product. This device g



ene The his Use ct o Fau If t rati pro Inte	rates RF noise. e owner/operator must take proper precautions when using t equipment. This device can only use a power supply compatible with this equipment, and conne hly approved cables. It he defect or equipment failure cannot be corrected, the ope on of the equipment must be stopped in order to tected from possible damage caused by unauthorized use. ended use can only be ensured when the enclosure is fully i alled.
2.4.Corrosion resistance	Precautions! FNI modules generally have good chemical and oil resi stance characteristics. When used in aggressive media (e.g. high concentrations of chemicals, oils, lubric ants and coolants (i.e. very low water content)), the se media must be checked before the corresponding app lication material compatibility confirm. If the modul e fails or is damaged due to this corrosive medium, n o claim for defects can be claimed.
Dangerous voltage	Precautions! Disconnect all power sources before using the equipment!

3 Getting Started Guide

3.1. Module overview





1 Mounting holes	8Port 5	15 Port Identification Board
2 Network port 2 status indicator	9 Port 7	16 Power input port
3 Network port 2	10 Port 6	17 Module indicator
4 Power outlet	11 Port 4	18Network port 1
5 DIP switch	12 Port 2	19Network port 1status indicator
6 Port 1	13 Port Status Indicators	20 Ground connection
7 Port 3	14 Port 0	

- 3 Getting Started Guide
- 3.2. Mechanical connection

The modules are attached using 2 M6 bolts and 2 washers.



Isolation pads are available as accessories.

3.3. Electrical connections

3.3. 1 Power interface(L-code)

Definition of power input port



Definition of power outlet



pin	Features	Describe
1	Us+	+24V(Brown)
2	Ua-*	0V(White)
3	Us-	0V(Blue)
4	Ua+*	+24V(Black)
FE	Functional ground*	FE(Yellow-green)

Notes:

- 1. If possible, supply sensor/module power and actuator power separately. Total current < 9A, even if the actuator power supply is daisy-chained, the total current of all modules is < 9A.
- 2. The FE connection from the housing to the machine must be low impedance and kept as short as possible.

3.3.2 Network Interface(D-code)



Pin	Features	
1	Tx+	Send data+
2	Rx+	Receive data+
3	Tx-	Send data-
4	Rx-	Receive data-

Notes:

Unused connections must be covered with end caps to meet IP67 degree of protection.



3.3.3 I/O- port(A-code)

Port0~Port3 definition:

1 2	
$\left(\bigcirc 5 \bigcirc \right)$	
$\left(0^{\circ} \right)$	
4 3	

Pin	Features	
1	+24V (Brown)	
2	Input Output (White)	
3	OV (Blue)	
4	Input Output /IOLINK	
	(Black)	
5	FE	

Port4~Port7definition:



pin	Features	
1	+24V (Brown)	
2	enter (White)	
3	OV (Blue)	
4	enter/IOLINK (Black)	
5	FE	

Notes:

1. For digital sensor input, please follow the input guidelines of EN61131-2, Type

2.

2. The maximum output current of pins 2 and 4 is 2A. The total current of the module is <9A.

3. Unused I/O port sockets must be covered with end caps to meet IP67 protection level.



4 Technical data

4.1. Size



4.2 Mechanical data

Shell material	Die-cast aluminum case, pearl nickel plated
Enclosure rating according to IEC 60529	IP67(Only in plug-in or plug-in style)
Power interface	L-Code(male and female)
Input port/output port	M12, A-Code(8* female)
Size(W*H*D)	65mm*222mm*25.8mm
Installation type	2-Through hole mounting
Ground Bus Accessories	M4
Weight	Make an appointment670g

4.3. Operating conditions

Operating temperature	-5° C ~ 70° C
Storage temperature	-25° C ~ 70° C

4.4. Electrical data

Voltage	18~30V DC, symbol EN61131-2
Voltage fluctuation	<1%
Input current when supply voltage is 24V	<130mA



4.5 Network port

Port	2 x 10Base-/100Base-Tx				
Port connection	M12, D-Code				
IEEE 802.3 Compliant Cable Types	Shielded twisted pair, minimum STP CAT 5/				
	STP CAT 5e				
Data transfer rate	10/100 M bit/s				
Maximum cable length	100m				
Flow control	Half condition/full condition (IEEE 802.3-PAU				
	SE)				

4.6 function indicator



PT	Green	EtherNet/IP letter of agreement		
	Yellow	ProfiNet letter of agreement		
	Blue	EtherCat letter of agreement (reserv		
		ed)		
	White	CC-Link IE Field basic letter of agree		
		ment		

EIP Communication Protocol Module Status

LED	Show	Features				
	Green light is always	Working status: The device is running norm				
	on	ally				
	Green light flashes 1H Z	Standby: Device not configured				
SF/MS/RU	Green, red and green f	Self-test: The device is undergoing a				
Ν	lashing alternately	power-on test.				
	Red flashing 1HZ	Recoverable failures:				
	Steady red light	Unrecoverable failure				
Closure		US no input voltage				
	Green light is always on	Connected				
BF/NS/ERR	Green light flashing 1 HZ	Not connected:				



	Green and red off flas	Self-test: The device is undergoing a					
	hing alternately	power-on test.					
	Red light flashing1HZ	Connection timed out					
	Steady red light IP repeat:						
	Closure	US No input voltage or no IP address					
US Green Flashing red		Input voltage is normal					
		low input voltage (< 18 V)					
	Green	The output voltage is normal					
UA	Flashing red	low output voltage (<18 V)					
	Red always on	No output voltage(<11V)					

PN Communication Protocol Module Status

LED	Show	Features			
	Closure	Works fine			
SF/MS/R	Flashing red 3s1HZ	Bus start			
	Red always on	System error			
	Closure	Works fine			
BF/NS/ER R	Flashing red 2HZ	No data exchange			
	Red always on	No configuration; or slow physical link; or no physical link			
	Green	Input voltage is normal			
US	Flashing red	low input voltage (< 18 V)			
	Green	The output voltage is normal			
UA	Flashing red	low output voltage (< 18 V)			
	Red always on	No output voltage(<11 V)			

CCIEBS Communication Protocol Module Status

LED	Show	Features
	Green light off	Module not connected
SF/MS/RU N	Green light flashing 2.5HZ	Module not communicating
		Module is not configured



	Green light					
	flashing1HZ					
	Green light is always	Durning, The device is running				
	on	Rumning. The device is rumning				
	Closure	Module works fine				
BF/NS/ERR	Red always on	Communication error				
UC	Green	Input voltage is normal				
05	Flashing red	low input voltage (<18 V)				
	Green	The output voltage is normal				
UA	Flashing red	low output voltage (< 18 V)				
	Red always on	No output voltage(<11 V)				



I/O	State	Features
port		
statu		
sLED		
LED1	Closure	The status of Pin4 input or output is0
LED1	Yellow	The status of Pin4 input or output is1
LED1	Red	Port is configured as input: Pin1 overcurrent
		Port configured as output: Pin4 overcurrent
LED1	Flashing red	Port configured as output: Pin1 overcurrent
LED1	Green	IO Link connected
LED1	Flashing	IO Link not connected
	green	
LED2	Closure	The status of Pin2 input or output is0
LED2	Yellow	The status of Pin2 input or output is1
LED2	Red	Port is configured as input: Pin1 overcurrent
		Port configured as output: Pin2 overcurrent
LED2	Flashing red	Port configured as output: Pin1 overcurrent



www.fas-elec.com



Network port status

LED	State	Features		
ACT	Closure	Bus speed: 10Mbit/s		
	Yellow	Bus speed: 100Mbit/s		
LK1 IN (ECT IN)	Flashing green	Data transmission		
LK2 IN (ECT OUT)	Flashing green	Data transmission		

5 Integrated

5.1 Module configuration

5.1.1Factory reset and communication protocol switching



5.1.2Network segment modification





5.2 Data mapping





	Function Description	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
0	Standard IO output	_	_	_	_	Port3 Pin4	Port2 Pin4	Port1 Pin4	PortO Pin4
1	0=off 1=on	-	_		_	Port3 Pin2	Port2 Pin2	Port1 Pin2	Port0 Pin2
$2 \sim 5$		Reserve							
6 ~ 37		Port O process output data							
38 ~ 69		Port 1 process output data							
70 ~ 101		Port 2 process output data							
102 ~ 133		Port 3 process output data							
134 ~ 165	Port 4 process output data								
166 ~ 197	Port 5 process output data								
198 ~ 229	Port 6 process output data								
230 ~ 261	Port 7 process output data								

EIP Protocol Process input data									
		Function description							
byte	Function Descriptin	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
0	Standard IO input O=no signal 1=Signal	Port7 Pin4	Port6 Pin4	Port5 Pin4	Port4 Pin4	Port3 Pin4	Port2 Pin4	Port1 Pin4	PortO Pin4
1	Standard IO input O=no signal 1=Signal	Port7 Pin2	Port6 Pin2	Port5 Pin2	Port4 Pin2	Port3 Pin2	Port2 Pin2	Port1 Pin2	PortO Pin2
2	Short circuit detection (Pin4 overcurrent) 0=No overcurrent 1=Overcurrent	_	_	_	_	Port3 Pin4	Port2 Pin4	Port1 Pin4	Port0 Pin4
3	Short circuit detection (Pin2 overcurrent) O=no signal 1=Signal	_	_	_	_	Port3 Pin2	Port2 Pin2	Port1 Pin2	PortO Pin2



4	Short circuit detection (Pin1 overcurrent) 0=no signal 1=Signal	Port7 Pin1	Port6 Pin1	Port5 Pin1	Port4 Pin1	Port3 Pin1	Port2 Pin1	Port1 Pin1	Port0 Pin1
5	IO Link communication status O=Not connected 1=Connected	Port7	Port6	Port5	Port4	Port3	Port2	Port1	Port0
6	IO Link PD active O=disabled 1=enable	Port7	Port6	Port5	Port4	Port3	Port2	Port1	Port0
7	module status	-	-	-	Us overvolt age	Ua overvolt age	overhea t	Us undervol tage	Ua undervo ltage
8 ~ 9				Re	serve				
10 ~ 41			Port	0 proc	ess inp	ut data			
42 ~ 73			Port	1 proc	ess inp	ut data			
74~~105			Port	2 proc	ess inp	ut data			
$106 \ ^{\sim} \ 137$			Port	3 proc	ess inp	ut data			
138~~169			Port	4 proc	ess inp	ut data			
170~~201		Port 5 process input data							
202 \sim 233		Port 6 process input data							
$234 \sim 265$			Port	7 proc	ess inp	ut data			

EIP Pr	EIP Protocol Configuration Data											
Function description												
byte	Function Description	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0			
O Default (decimal): 255	Pin4 function settings 00=Normally open input	Рот	rt3	Рот	rt2	Рот	rt1	Рот	rt0			
1 Default (decimal): 255	01=normally closed input 10=output 11=I0Link	Pol (inv configu 10=ou	ct7 alid uration tput)	Pon (inv configu 10=ou	ct6 alid uration tput)	Pol (inv configu 10=ou	rt5 alid uration tput)	Pol (inv configu 10=ou	ct4 alid uration tput)			
2 Default (decimal): 10	Pin2 function settings 00=Normally open input	n2 function settings Normally open input Port3 Port2 Port1 Port0										
3	01=normally closed input	Poi	rt7	Poi	ct6	Poi	rt5	Poi	rt4			



Default (decimal) : 0	10=output	(invalid	(invalid	(invalid	(invalid
		configuration	configuration	configuration	configuration
		10=output)	10=output)	10=output)	10=output)
4	Pin4 Security Status Settings	Port3	Port2	Port1	Port0
Default (decimal): O	00 = keep at 0				
5	01 = keep at 1	Port7	Port6	Port5	Port4
berault (decimal) : 0	10 = keep last value				
6	Pin2 Security Status	$D_{2} \rightarrow 0$	$D_{2} = 0$	D = r + 1	DeretO
Default (decimal): 0	Settings 00 = keep at 0	Ports	Portz	Porti	Portu
7	01 = keep at 1	Port7	Port6	Port5	Port4
Default (decimal): 0	10 = keep last value	10117	10100	10115	10114
8 ~ 31	Port0 configuration	(1byte) IOLi (1byte) Vali (2bytes) Ver (3bytes) Dev (16bytes) Se (1byte) Para	ink CycleTime dation Type ndor ID1~ID2 vice ID1~ID3 erial Number1~ ameter Server	16	
$32 \sim 55$	Portl configure	(Ditto)			
$56 \ ^{\sim} 79$	Port2 configure	(Ditto)			
80 ~ 103	Port3 configure	(Ditto)			
104 ~ 127	Port4 configure	(Ditto)			
$128 \ ^{\sim} 151$	Port5 configure	(Ditto)			
$152 \ ^{\sim} 175$	Port6 configure	(Ditto)			
$176 \ ^{\sim} 199$	Port7 configure	(Ditto)			

Port configuration parameter description:

A. (1byte) IOLink CycleTime cycle time setting:

IO-Link communication speed is available for this parameter. Using mu ltipliers and time base calculations, the IO-Link cycle time can be i ncreased.

The time base is described in the table below. The multiplier is entered in decimal form from $0\cdots 63$.

Bit								Description
7	6	5	4	3	2	1	0	
Tir ba	ne Ise			Mult	iplier			Bit 0 to 5: Multiplier These bits contain a 6-bit multiplier for the calculation of MasterCycle Time or MinCycle Time. Permissible values for the multiplier are 0 to 63. Bit 6 to 7: Time Base These bits specify the time base for the calculation of MasterCycleTime or MinCycleTime.

Possible values for MasterCycleTime and MiniCycleTime



Time base encoding	Time base value	Calculation	Cycle time
00	0.1 ms	Multiplier x time base	0.4 ms to 6.3 ms
01	0.4 ms	6.4 ms + multiplier x time base	6.4 ms to 31.6 ms
10	1.6 ms	32.0 ms + multiplier x time base	32.0 ms to 132.8 ms
11	Reserved	Reserved	Reserved
NOTE: The v	alue 0.4 results fr	om the minimum possible transmiss	ion time according to
A 3 7			

B. (1byte) Validation Type validation type setting:

(value=0) No Verification: Verification is disabled, every device will be accepted.

(value=1) Compatibility: Compare manufacturer ID/device ID with IO-Link device data.

(value=2) Identity: Compare manufacturer ID/device ID/column number with IO-Link device data. IO-Link communication is only started when there is a match.

- C. (2bytes) Vendor ID1[~]ID2 Manufacturer ID
- D. (3bytes) Device $ID1^{\sim}ID3$ Device ID
- E. (16bytes) Serial Number1~16 serial number
- F. (1byte) Parameter Server parameter server (reserved)

CCIEBS Proto	ocol Prod	cess	outp	out c	lata					
	Function description									
byte	Function Description	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0	
	Standard IO output	Port7 Pin4	Port6 Pin4	Port5 Pin4	Port4 Pin4	Port3 Pin4	Port2 Pin4	Port1 Pin4	PortO Pin4	
RY (maximum 256Bit)	0=off 1=on	Port7 Pin2	Port6 Pin2	Port5 Pin2	Port4 Pin2	Port3 Pin2	Port2 Pin2	Port1 Pin2	PortO Pin2	
	(The rest of the points are reserved)									
			Port C) proces	ss outp	ut data				
RWW			Port 1	proces	ss outp	ut data				
(maximum			Port 2	2 proces	ss outpu	ut data				
256Byte)	Port 3 process output data									
			Port 4	proces	ss outpu	ut data				



Port 5 process output data

Port 6 process output data

Port 7 process output data

CCIEBS	Proto	col]	Proce	ess i	nput	data			
1				Fui	nction des	scription			
byte	Function Description	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
	Standard IO input O=no signal 1=Signal	Port7 Pin4	Port6 Pin4	Port5 Pin4	Port4 Pin4	Port3 Pin4	Port2 Pin4	Port1 Pin4	PortO Pin4
	Standard IO input O=no signal 1=Signal	Port7 Pin2	Port6 Pin2	Port5 Pin2	Port4 Pin2	Port3 Pin2	Port2 Pin2	Port1 Pin2	PortO Pin2
RX	Short circuit detection (Pin2/4 overcurrent) 0=No overcurrent 1=0vercurrent	Port7 Pin4	Port6 Pin4	Port5 Pin4	Port4 Pin4	Port3 Pin4	Port2 Pin4	Portl Pin4	PortO Pin4
(max1mum 256Bit)	Short circuit detection (Pin2/4 overcurrent) 0=no signal 1=Signal	Port7 Pin2	Port6 Pin2	Port5 Pin2	Port4 Pin2	Port3 Pin2	Port2 Pin2	Port1 Pin2	PortO Pin2
	Short circuit detection (Pin1 overcurrent) 0=no signal 1=Signal	Port7 Pin1	Port6 Pin1	Port5 Pin1	Port4 Pin1	Port3 Pin1	Port2 Pin1	Port1 Pin1	PortO Pin1
	IOLink communication status	Port7	Port6	Port5	Port4	Port3	Port2	Port1	Port0



	0=Not								
	connected								
	1=Connected								
	IOLink PD								
	active	Port7	Porth	Port5	Porta	Dort?	Port?	Port1	PortO
	O=disabled	10117	10110	10113	10114	10113	10112	10111	10110
	1=enable								
	module status	_	_	_	Us	Ua	overheat	Us	Ua
	module status				overvoltage	overvoltage	overneat	undervoltage	undervoltage
			(The	rest c	of the poi	nts are re	eserved)		
				Port	0 process	input dat	ta		
				Port	1 process	input dat	ta		
				Port	2 process	input dat	ca		
RWR				Port	3 process	input dat	ta		
(11ax111u) 256Bvte)				Port	4 process	input dat	ta		
				Port	5 process	input dat	ta		
				Port	6process	input dat	a		
				Port	7 process	input dat	ta		

Note:

1. Please set the CCIEBS master port function in the FAS IOLink Tool software.

2. The number of points 64 occupies 1 station, and the number of points used by the slave station connected to each port is 4 words

3. The number of points 128 occupies 2 stations, and the number of points used by the slave station connected to each port is 8 words

4. The number of points 192 occupies 3 stations, and the number of points used by the slave station connected to each port is 12 words

5. The number of points 256 occupies 4 stations, and the number of points used by the slave station connected to each port is 16 words

6. Refer to chapter 5.1.3 for the setting of points

5.3 PLC Integration Tutorial (The module communication protocol should be set before configuring the module, see 5.1.1 for details)

5.3.1 Siemens S7-1200 Portal Integration (PN)

1. Install the GSD file



7% Siemens - D:\fas工作资料\fas工作资料\PLC程序\老化架程序	新项目1项目1	导入路径的内容				
项目(P) 编辑(E) 视图(V) 插入(I) 在线(O) 法项(N) 工具(T) 富	(口(W) 莽動(H)	☑ 文件 ▾	版本	语言	状态	信息
	法 🖉 物型的法 🔐 🛄	GSDML-V2.34-FAS-FNI-MPL-302-1	V2.34	英语,德语	尚未安装	
设备 定则通用选择正式 定款 Automation L	E(GSD) (D) cense Nanager(A)					
 ■ 登示部考入本(w) ■ 全局解(G) 	,					
☆						
 ▶ 100 安全设置 ▶ 100 跨设备功能 						
 ・ ・ ・ ・ ・ <th></th><td><</td><td></td><td>11</td><td></td><td>></td>		<		11		>
					HB涂 安装	取消

2. In PLC---Device Configuration---Network View---Hardware Catalog, select the module and drag it in, click "Unassigned", and select the PLC to be connected;

項目例		项目1 > 设备和网络	_0=×	(健作目录) 🖬 🖬 🗎
设备			🧬 拓扑视图 🍰 网络视图 📑 设备视图	选项
10	III) 🛣	17 月線 🗄 進機 HAA 注册 🔹 📰 🐨 🐨 🐨 🐨 🐨 🐨 🐨	G1	
			非 IO 系统: PLC_1.PROFINET IO-System (100) ヘ	✓ 目录
▼ 🛄 项目1				-10th-
💕 漆加新设备				
📥 设备和网络		PLC_1 FNIMPL302105M		
PLC_1 [CPU 1211C AC/DC/Ry]		CPU 1211C PNI MPL-302-10		・ (通 控制器)
■ 没备继恋		RC1		 Ни
😼 在线和印刷				▶ [imple pc 系統
# 程序块				▶ 3
・ 12 工艺対象		PL_LINOTINE TO Syste		
▶ 3 分部重文件				▶ 1 检测和监视
PLC 安全				・ (通 分布式 ii)
PLC 数据类型				・ (注) 対电与数电
・ 二 出控与援制表				▶ 🌆 現场设备
在 統备份				▼ 🛄 其它现场设备
> 24 公会代理教部				▶ 🧊 其它以太网读量
24 程序体現			•	PROFINET IO
PLC 按關文本列表				🕆 🕨 🕅 Drives
> () 本地構築				Encoders
) 3 分布式 IO				Gateway
> 🕞 未分组的设备				- 📜 IO
> 5% 安全設置				Balluff GmbH
▶ → 第设备功能				 FAS Electronics(Fujian)Co.,Ltd.
▶ → 公共数据				- 🥘 ms
> 20 文档设置				FNI IO Link
▶ 🧰 酒倉和涼原				FNI MPL-302-105-M
				FNI PNT-206-105-M

2. Double-click the module to enter the configuration,

(1) Slot function configuration: select the required data in the hardware cat alog--module and drag it into the slot in the device overview window;

(2) Module port function configuration: click the module icon, select "Gener al", and then click slot 1 to configure the port function



(1) Module function configuration: Click the module icon, select "General", and then click slot 0 to configure the module function



(1) After the configuration is complete, in the configuration view, click Download.

2. Assign module PN name: PLC switches to online state, select "ungrouped device"---click on the module name---select online and diagnosis---function---assign PROFINET device name---- Select



the module to be assigned in the list (should be selected according to the physical MAC)---click "Assign Name" to complete the configuration! .

庾目樹 □・	↓ 项目1 → 未分组的设备 → F	NIMPL302105M [FNI M	PL-302-105-M]				_ • •
设备							
11 II I	★ 诊断 常規	分配 PROFINET 设备	名称				
顶目 「頭目 」 「読加時後 一 彼者相句給 【使者相句給 【日日1211CACPORMy] 【日日211CACPORMy] 【日日211CACPORMy] 【日日211CACPORMy] 【日日121CACPORMy] 【日121CACPORMy] [] [] [] []] []]]]]	 ● 時代応 通過的新 ● 内容の時に指加(x1) ● 功能 分配 PF-地址 分配 PF-地址 分配 PF-地址 予定 Pが北口PG置 		组态的 PRO PROFINE 在线访问 设备过滤器 《短示 《短示 《短示	FINET 设备 ET设备名称: 设备类型: 这一次型的设置 设备类型的设置 建筑			
) 分布式 I/O		网络中的可讨	词节点:				
▼ 🧮 未分组的设备		IP 地址	MAC 地址	设备	PROFINET 设备名称	状态	
FNIMPL302105M [FNI MPL-302-105							
₩ 设备组态							
 存线和诊断 							
FNIMPL302105M [FNI MPL-302-105							
FNI MPL-302-105-M 1							
Actuator Shutdown Pin 2 1							
Actuator Shutdown Pin 4 1		6			11		>
Device Status 1					0.17745		*
Input Pin 2 1						思新列表 201	1045AV
Input Pin 4 1							
Output Pin 2 1							
Output Pin 4 1							
Sensor Supply Short Circuit 1							
. Pro at a real of the second							

5.3.2 OMRON NX1P2 Sysmac Studio Integration (EIP)

1. Install the EDS file: Tools---ETHERNET/IP Connection Settings---Double-click PLC in the window---right-click in the blank of the toolbox on the right and select "Show EDS Library", click "Install" in the pop-up window, and select EDS file installation

			EDS#	
工程(P) 控制器(C) 模拟(S)	1月(7) 個口(W) 新設(H)	1	OMRON Corporation Omron Microscan Systems, Inc. Omron Microscan Systems, Inc. RAS Electronics(Figure/Co.Ltd.	
। এৎ শ শ শ শ	故除日新门上 事件目志查看職_(V) EtherCAT诊断/统计信息查看器_(V)		Install EDS File + → − ↑	11+QB602299 > 001
	發 份(B)	- 7 15/00	间风 • 新建文件用	
	导出金用变量(F) 安曇紀取描述的注释(用于初始)(C) 等入ST程序(I) IEC 61131-10 XML(X) 等入电机因型工具给果(M)		toLinkTeol限型 ^ 主站 电전화理 WPS构象	A NI
	更新配置和设置传送数据(U)	11 形成地址 1 设备 1 折0	11日本語	MPL-302-105- M.eds
	EtherNet/IP连接设置(N)	192.168.250.1 内置EtherNet/IP第日说量 NJ101	重要片	
	启动外都应用程序(L) ·		○ 文档	
	目足义快捷健_(5) 透现(0)		◆ 下数 → 〒5 ■ 単型	
		· 这是父 () 大小(字形) (and a summer of	

3. Create a module: Click "+" in the toolbox window, fill in the module IP address, model name, version, and click "Add" below to complete the module creation;



2. Configuration module: right-click the module - select "Edit" - configure the corresponding values in the parameters according to actual needs and click OK after completion





2. Create a variable association:

(1)Programming--Data--Global variables create two arrays, output 262 bytes, input 266 bytes, the corresponding input and output should be configured in the network disclosure;



(1)In the built-in ETHERNET/IP port setting window - select the first icon (label) on the left - click "register all"

EtherNet/IPi段	首列表 内置EtherNet/IP時口设置 连 x 图 联系类型	🗺 全局支量					
0-	□→ 标签组						
n-fill	▶ 没新信息 ▼ 标签组 - 标签组/最大: 0 / 32 - 标签/最大: 0 / 256					全部注册	· 9X 93
		1 desk offertes	1	i shikin i			·
	1 9/22/06/9 1 52/294	1 20(70)	1 29(0)		1200100-0000		

(2)In the built-in ETHERNET/IP port setting window - select the second icon on the left (connection) - click "+", the target device selects the previously configured module, the IO type selects EXCLUSIVE Owner, and the corresponding For input and output, the target variable must be filled with 101,100; then select the corresponding starting variable, and go online after completion. Select "Transfer to Controller" and the configuration is complete!

	的复数内置EtherNet/IP講口设置连	× 19 ROM									
0-	•日 连接										
	▼连接										
	连接/届大:2/32										
0°C8	目标设备	 ·	注接/0美型	語之く語出	目标变量	大小[7节]	総論党	1 大小	約1 注接美型	(RPI(電影) 超时值	
	192.168.250.5 FNI MPL-302-105-M 版	default_001	Exclusive Owner	输入	101	6	n	▼ 6	Multi-cast con	50.0 RPI x 4	
				输出	100	2	out	2	Point to Point (
	+ 0										
	设备带宽										
											全部返回到默认值
											Hold

www.fas-elec.com



5.3.4 Integrated in Mitsubishi FX5U Work2 (CCIEBS)

1.Install the CCSP file: first open GX WORKS 3-Tools-Configuration file management-Login-CSPP file (the project must be closed to import the file)

昭置文件登录					×
查找范围(I):	005B11	•	← 6	•	
-	名称	^		修改日期	1
快速访问	0x3656			2020/11/10 11:27	3
	0x3656_FN	I CIE-508-105-M_1.0.0_en.cspp		2019/12/6 11:25	(
桌面					
-					
库					
此电脑					
会 网络					
	<				>
	文件名(1):	0x3656_FNI CIE-508-105-M_1.0.	0_en	▼ 登录(8	0
	文件类型(I):	支持的所有的格式		▼ 取消	

1.Click on the left project-parameters-FX5UCPU-module parameters-Ethernet port, basic settingsself-node settings. Set the self-node IP

导航	φ×	🎥 ProgPou (PRG) (局部后签设置)	e ProgPou (PRG) (LD) 1步 🛛 🤱枝	快参数 以太同跳口 ×	41	•
11 · · · · · · · · · · · · · · · · · ·		设置项目一方	设置项目			
	Â	ビンス・単名学校に立てい 「ない、単名学校に立てい 「ない 」 「ない 」 「ない 」	田田	 · (23)	置的口地划利于环境的。	< > <
 (1) 参数 (1) 参数 (1) 系统参数 (1) FXSUCPU 		项目一提 预新现果			应用(a)	ľ
🔮 CPU 😹		交叉身間1				
■ 創 植決身数	-1	(全部欲元件/标签)	/ (全工程)	• 🚱 桐園(V) • 造項(O).。 👳		
武法(15,110) 「 「 ・ ・		秋元件/祥益 秋元件 様形器	图符号 位置	程序文件名	1984 	ΞĤ

2. Click CC-Link IEF Basic Settings - select whether to use CC-Link IEF Basic - click Use

口 🕞 甘太祝军	1	于网境屿	255 . 255 . 255 . U
● ● 白节占设署		默认网关	192 . 168 . 3 . 1
		通信数据代码	二进制
MODBUS/TCP设置		□ CC-Link IEF Basic设置	
□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □		CC-Link IBP Basic 使用有无	不使用
		网络配置设置	不使用
		刷新设置	使用
		╒ IODBUS/TCP设置	

2.Click CC-Link IEF Basic settings - select network configuration settings - detailed settings;

	1	通信数据代码	二进制
WODBUIS/TCF设置	B	CC-Link IEF Basie设置	
		CC-Link I&P Besie使用有无	•
世-1月 世用改五		网络配置设置	《洋细设置》
	1	制制设置	〈洋類設置〉
	B	TOUBILS/TCP设置	
	1	— MODBUS/TCP使用有无	未使用

1. Automatic detection of connected devices - occupy 4 stations, IP address is set with DIP switch - reflect the setting and close



Å (。 CC-Link IEF Basid提置															
CC-Link IEF Basic配置() 编辑(E) 视图(V) 取消设置并关闭(A) 反映设置并关闭(R)																
	连接设备的自动检测 链接扫描设置 总连接台载 1						1							ł	拨码设置	
		台称	刑문	計문	값무 <u>→↓</u> ★刑		RX/RF设置	设置			RWw/RWr设置		źθ No.	保留社	трнен	子网境码
w.		131	±7	247	**		点数	起始	结束	点数	起始	结束	Mare.	体用相	*** 7071	11,116,0
		0	本站	0	主站										192.168.3.39	5.255.255.
		1	FNI CIE-508-105-M	1	从站		256(占用4站) 🗸	0000	OOFF	128	0000	007F	1	无设置	192. 168. 3. 3	5.255.255.
						_										

1.Select the specified soft element for refresh target - soft element name M - assign soft element address - application, the configuration is complete!

	链接侧	1					CPU	el 🛛		
软元件名	点数	起始	结束		刷新目标	- 歌う	计名	点数	起始	结束
RX	256	00000	OOOFF		指定软元(~	M	~	256	256	511
RY	256	00000	OOOFF		指定软元(~	M	~	256	0	255
RWr	128	00000	0007F		指定软元(~	D	~	128	128	255
RWw	128	00000	0007F	+	指定软元(~	D	\sim	128	0	127
说明										
, 说明 屠示剧新范围	的结束的	IU W N 元 ()	地較減		+#040-0+5					
说明 显示剧新范围 根据网络配置	的结束的 设置中设	20次元作 西的站款	1491软元(反占用站	+号。 渤决定	吉束的软元件 ⁴	号。				
说明 显示剧新范围 根据网络配置	的结束的 设置中设	170校元作 置的站路	1401软元(反占用站	牛号。 激决定	请柬的软元件等	号。				
说明 显示剧新范围 根据网络截置	的结束的	190软元f 置的站款	钳软元 及占用站	牛号。 激决定	清束的软元件 🕯	号。				
说明 显示刷新范围 根据网络截盖	的结束的设置中设	IPU软元付 置的站翻	书的软元(反占用弱	*号。 讃决定:	清束的软元件。	₿.				
说明 显示图新范围 根据网络酸法	的结束的设置中设	IPU软元f 西的站翻	牯1款元(反占用站	半号。 激决定	请柬的软元件	号。				
说明 显示耻新范围 根据网络配置 检查。	酸结束酸 酸素中酸	アリ次元(1411較元1 (及占用第 世	+号。 激决定 : : 夏为默	诸束的软元件 ⁴ 认(1 <u>0</u>)	弓 ∘				

6 Appendix

- 6.1. Materials included FNI MPL includes the following components
 - I/O-block
 - 4 blind plugs M12
 - Ground bus
 - Thread M4x6
 - 20 tags

6.2. Order code

	FNI MI	PL-50	x-10	5-M
FAS Network Interface				
Various industrial communication protocols				
Features				
506= IP 67 IO-Link master module, 8 IO-Link ports Port4~7 no 10 outputs				
508 = IP 67 IO-Link master module, 8 IO-Link ports				



105 = show version

Version —

Mechanical parameters —

M = die-cast zinc housing

Data transmission: 2xM12xl female thread

Power Connection: Male/Female (L-Code)

Sensor connection: 8 x M12xl female thread

6.3 Order information

Product order code	Order code
FNI MPL-506-105-M	007B31