The EtherNet / IPseries
LC1105 user manual

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1 Product overview

➤ The distributed remote IO system consists of a network adapter module and an extended IO module.

➤ The network adapter module is responsible for the field bus communication and realizing the communication connection with the main station controller. Network suitable

The distributor can select the corresponding bus module according to the communication interface of the controller system. The mainstream industrial communication protocols include EtherCAT, EtherNet / IP, Profibus-DP, Modbus / TCP, EtherNet / IP, etc.

➤ The extended IO module is responsible for connecting the input and output sensors in the field and input the IO module acquisition field

Various signals are sent to the adapter through the internal bus. The controller reads the data from the adapter through the fieldbus and processes it, and then writes the output data to the network adapter. The network adapter then writes the output data to the output IO module through the internal bus, so as to realize the control of the device. The extended IO module is divided into 9 categories: digital input module, digital output module, digital input and output hybrid module, analog input module, analog output module, temperature input module, pressure sensor input module, pulse counting module, auxiliary module, etc.

➤ Network adapter and extended IO module can be freely combined according to the field requirements, with more points

In this case, the distributed IO module can achieve lower cost requirements.

➤ This manual mainly describes the use of distributed IO for the EtherNet / IP series.

1.1 Product characteristics

➢ Less occupied nodes, a node has a EtherNet / IP adapter, 1~32 IO modules, and a terminal

Made of an end baffle, one adapter can support up to 512 IO points.

➢ The configuration is flexible and multi-type IO modules can be arbitrarily combined.

➢ Easy to use, each IO has independent functional modules, loaded directly into the configuration according to the actual topology

In the system, the configuration is convenient and easy to use.

➢ The extended IO module has rich functions. The IO module includes digital quantity, analog quantity, temperature, pressure, pulse and so on

Class, flexible combinatorial extension, can be applied to different occasions.

Strong compatibility, adapter communication interface in line with EtherNet / IP communication standards, support keenz, Omron, Schneider and other mainstream EtherNet / IP master station PLC.

➢ Support for the module parameter configuration.

➢ Support error diagnosis, the adapter is marked with error indicator light, each module also supports fault alarm function, check

Measurement and maintenance is simple and convenient.

1.2 Product installation and disassembly

➢ The DIN guide rail lock at the bottom of the module can be safely and reliably installed on the 35 mm DIN guide rail

In addition, there is a manual buckle on the left side of the adapter to lock the guide rail. When the module is installed, it should be aimed at the gap, push the module to the DIN pin in the direction of the arrow, and place the module on the DIN guide rail.
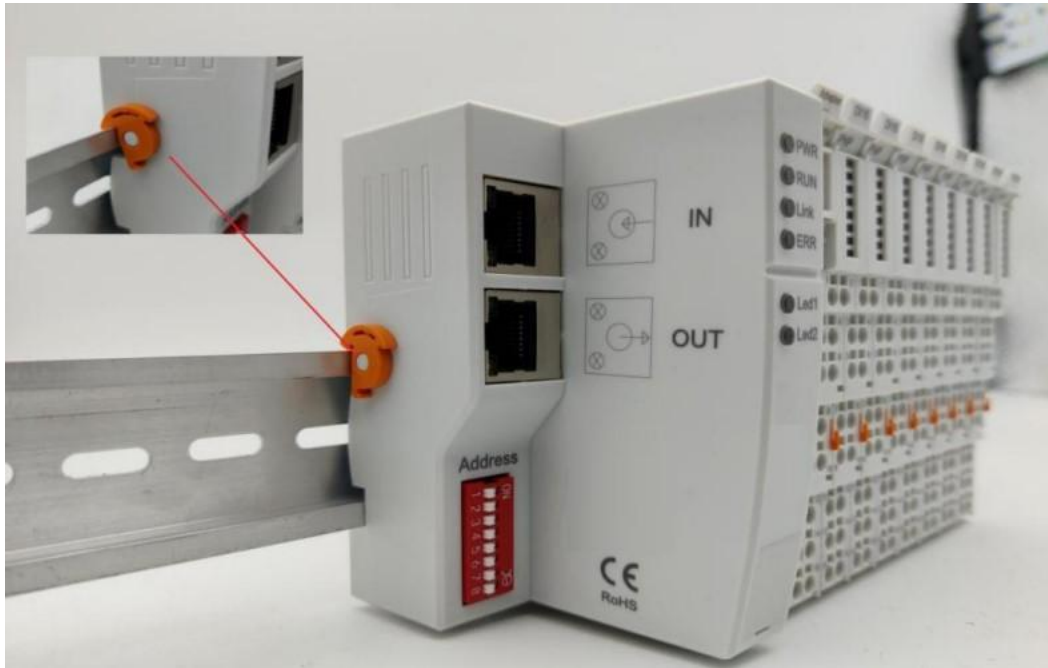
graph 1-1

➢ When the module is removed, first remove all the signal cables or power cables of the module, and then follow in the direction of the arrow

Pull the pin (yellow part below) and open the rail lock counterclockwise when removing the adapter module.

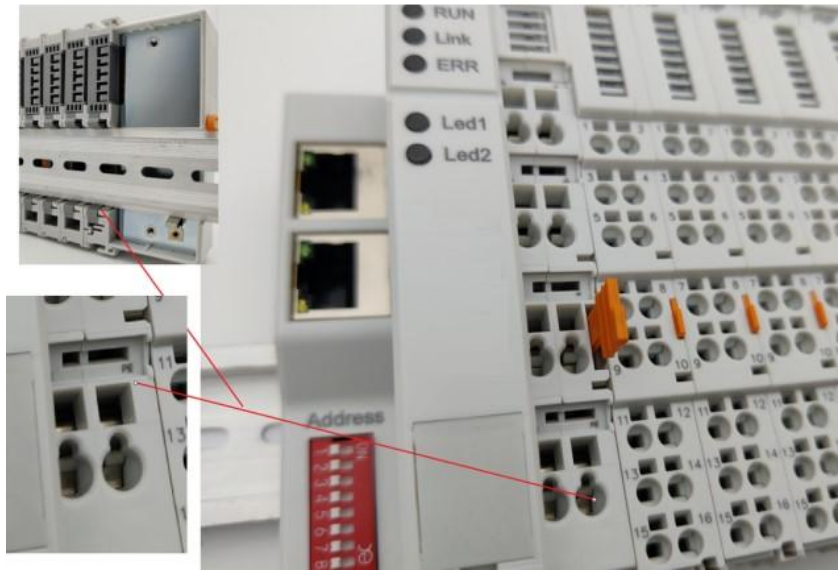

graph 1-2

1.3 Installation dimensions of the products

➢ Adapter module installation size: 100mm 48mm 69mm

➤ Installation size of IO module: 100mm 12mm 67mm

1.4 Earthing protection

➤   On the back of the module there is a metal shrapnel for effective grounding with the guide rail, metal shrapnel and adapter module

The ground PE is connected inside.

graph 1-3

2 Network adapters

➤   LC1105 The network adapter supports the standard EtherNet / IP IO Device device communication.adaptation

The device has two EtherNet / IP bus interfaces. It can be adapted to most EtherNet / IP main stations. Occupying small space, fast speed, convenient wiring, simple configuration.

2.1 Technical parameters of the adapter

Technical parameters of the adapter		
product model	LC1105	
bus protocol	EtherNet/IP	
Number of stations	Set according to main station	
Data transmission	Five types of twisted pair	
transmission distance	100m (station distance)	
Bus rate	100Mbps	
BI	2*RJ45	
system power supply	power input	24V DC(18~36V)
	power output	5V DC/0.6A

Public end power	24V DC(±20 %)/5A
Adapter to IO, the	32
Error diagnosis from	support
Isolation and	500V
Vibration test	Meet the EN 60068-2-6 criteria
Impact test	Meet the EN 60068-2-27 criteria
Electromagnetic	Compliance with the EN 61000-4 criteria
levels of protection	IP20
working temperature	-25°C~+60 °C
Storage temperature	-40°C~+85 °C
relative humidity	95%, with no condensation
dimensions	100mm × 48mm × 69mm

2.2 Adapter wiring diagram

➢ The adapter wiring diagram is shown for the user to separate two sets of 24V as specified in the wiring drawing

Power access system power input port (SYS _ 24 V port and SYS _ 0 V port) and public power input port (Blind _ 24 V port and Blind _ 0 V port) have two groups of public power input port, it is recommended to access all users. In addition, a set of secure earth lines and network communication lines are required.
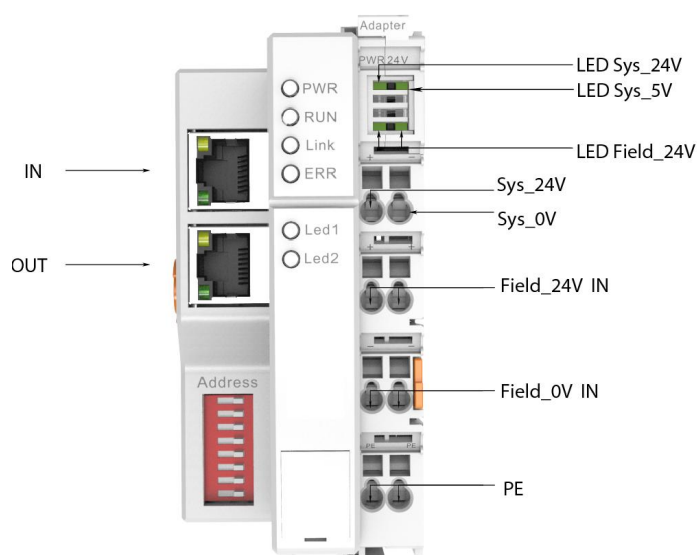
graph 2-1

2.3 Adapter LED indicator lamp

number	pilot lamp	explain	pigment	state	meaning
1	PWR	control source	green	bright	The control power supply is normal
				go out	Control power supply is not connected or faulty
2	RUN	Bus status	green	bright	The bus configuration was successful
				go out	The bus was not configured successfully
3	Link	Module communication	green	twinkle	Module communication is normal
				Out / often bright	The module has no communication
4	ERR	Module failure	red	bright	Module fault (specific fault information PLC)
				go out	The module is working properly
5	Led1	Web 1 link and status	green	bright	The network link is normal
				twinkle	Network communication work
				go out	Network link exception
6	Led2	Web port	green	bright	The network link is normal

		2 link and status		twinkle	Network communication work
				go out	Network link exception

3 Extend the IO module

➢ The extended IO module is divided into 9 categories: digital input module, digital output module and digital input input

The hybrid module, analog input module, analog output module, temperature input module, pressure sensor input module, encoder / pulse counting module, etc., multi-type IO module can be arbitrarily combined.

model	product description
LC1488	The 8-channel digital quantity input module, NPN
LC1408	The 8-channel digital quantity input module, PNP
LC1486	The 16-channel digital quantity input module, NPN
LC1406	The 16-channel digital quantity input module, PNP
LC2488	The 8-channel digital quantity output module, the NPN
LC2408	The 8-channel digital quantity output module, the PNP
LC2486	The 16-channel digital quantity output module, the NPN
LC2406	The 16-channel digital quantity output module, PNP
LC3004	4-channel analog quantity input module, -10V~ + 10V
LC3014	4-channel analog quantity input module, 0 to + 10V
LC3024	4-channel analog quantity input module, 0 to 20 mA
LC3034	4-channel analog quantity input module, 4 to 20 mA
LC3062	The 2-channel pressure sensor input module
LC3172	2-channel thermal resistance sensor input module
LC3184	The 4-channel thermocouple sensor input module
LC4134	4-channel analog quantity output module, -10V~ + 10V
LC4144	4-channel analog output module, 0~ + 10V
LC4114	4-channel analog volume output module, 0 to 20 mA
LC4124	4-channel analog volume output module, 4 to 20 mA
LC5011	Single-channel encoder counting module, 24V
LC5002	2-channel pulse counting module, 5V
LC5012	2-channel pulse counting module, 24V