

ECATDIO-I16N-O16R

EtherCAT 接口

数字量 16 路 NPN 输入 16 路继电器输出模块



一、技术指标

数字量输入	
通道数	16
输入类型	NPN
滤波时间	0.5ms
额定电平	24VDC (-15%/+20%)
“1”信号电平	0~5VDC
“0”信号电平	15~30VDC (7mA)
端口防护	过压保护
隔离耐压	3750Vrms (MIN)
数字量输出	
通道数	16
输出类型	继电器
额定电平	30VDC/250VAC
“1”信号电平	继电器干接点闭合
“0”信号电平	继电器干接点断开
最大输出电流 (单通道)	1A
最大冲击电流 (单通道)	2A
最大总输出电流	16A
触点接触电阻	≦50mΩ
物理特性	
供电电压	24VDC (-15%/+20%)
通信协议	EtherCAT
通讯速率	100Mbps
地址配置	自动扫描
安装方式	固定孔安装/DIN 导轨安装

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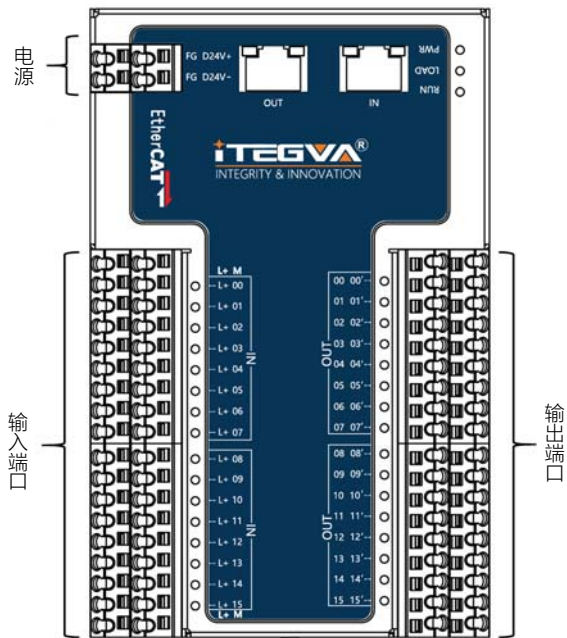


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二、接口说明

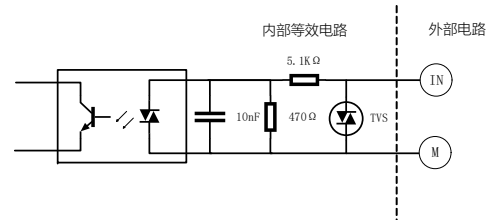


功能	信号	名称	说明
电 源		D24V+	电源输入, 接直流电源 24V。
		D24V-	电源输入, 接直流电源地。
		FG	外壳地, 接地
输 入 端 口		00 - 15	输入信号, 低电平有效。信号有效, 对应输入指示灯亮。
		M	输入信号公共端, 接外部直流电源 24V。
		L+[1]	接外部电源接地或者不接。
输 出 端 口		00 - 15	输出信号, 继电器干接点。00 和 00` 是一个继电器的输出接点, 以此类推。继电器干节点闭合, 输出有效, 对应的输出指示灯点亮。
		00` - 15`	

注释[1]: 所有的 L+信号在设备内部是连接在一起的。

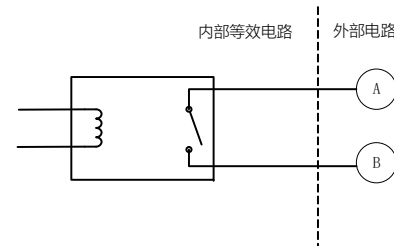
三、原理说明

1. 数字量输入等效原理图

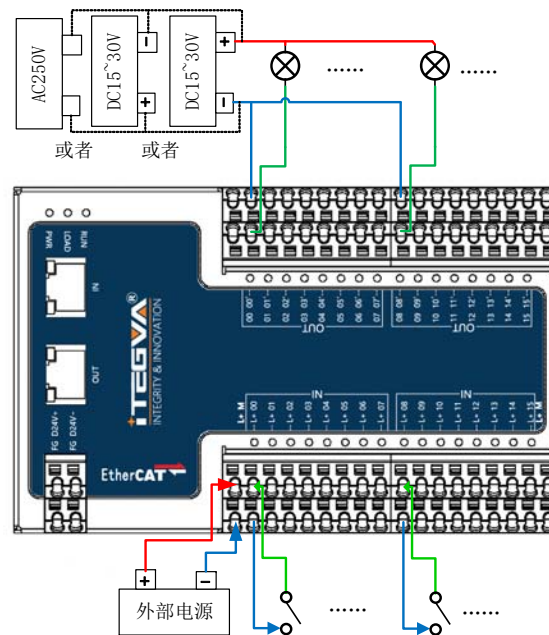


上图中 M 为外部输入信号的公共端, IN 为外部输入信号。

2. 数字量输出等效原理图



3. 接线示意图



注意: 输出信号的最大驱动电流为 1A, 使用前请查看外部负载额定功率、内阻等情况, 如果负载所需电流超过 1A, 请酌情增加限流措施。



ECATDIO-I16N-O16R

EtherCAT Interface

Digital 16.CH NPN input 16.CH Relay output Modules



一. Technical indicators

Digital Input	
Number of channels	16
Input type	NPN
Filter time	0.5ms
Rated level	24VDC (-15%/+20%)
"1" Signal level	0~5VDC
"0" Signal level	15~30VDC (7mA)
Port protection	Over voltage protection
Isolated voltage	3750Vrms (MIN)
Digital Output	
Number of channels	16
Output type	Relay
Rated level	24VDC (-15%/+20%)
"1" Signal level	Relay dry contact closure
"0" Signal level	Relay dry contact disconnected
MAX output current (Single CH.)	1A
MAX transient current	2A
MAX total output current	16A
Contact resistance	≅ 50mΩ
Physical properties	
Supply voltage	24VDC (-15%/+20%)
Protocol	EtherCAT
Communication speed	100Mbps
Address configuration	Automatic scanning
Mounting type	Fixed hole/DIN rail mounting

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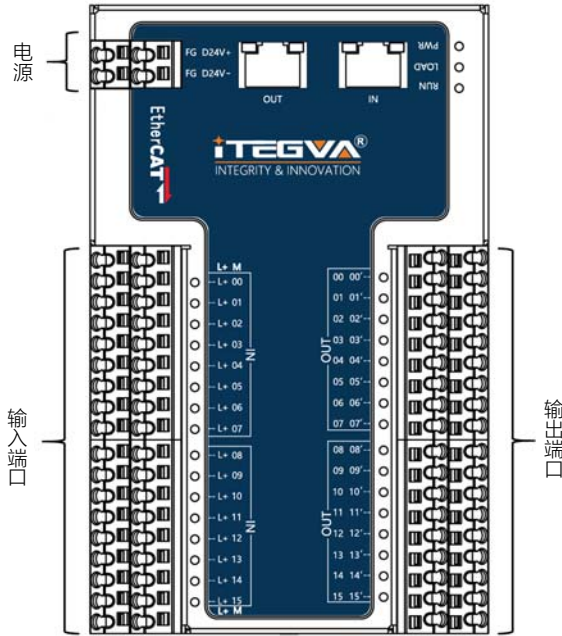


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二. Interface Description

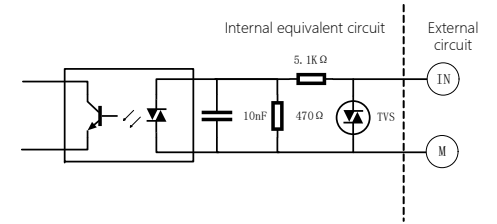


Signal Function.	Name	Description
Power	D24V+	Power input, connect 24V DC power supply
	D24V-	Power input, Connect GND DC power supply
	FG	Shell ground, connected to earth
Input Port	00 - 15	Input signal, active low. The signal is valid and the input indicator lights ON
	M	Input common terminal, connect external DC power supply 24V.
	L+ ^[1]	Connect external power ground.
Output Port	00 - 15 00` - 15`	Output signal, relay dry contact. 00 and 00` are the output contacts of a relay, and so on. The relay dry node is closed, the output is valid, and the corresponding output indicator lights up.

注释[1]: All L+ signals are connected inside the device.

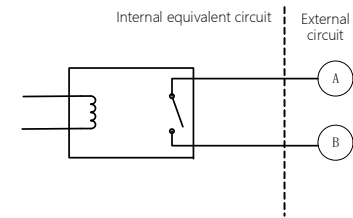
三. User Description

①. Digital input equivalent schematic

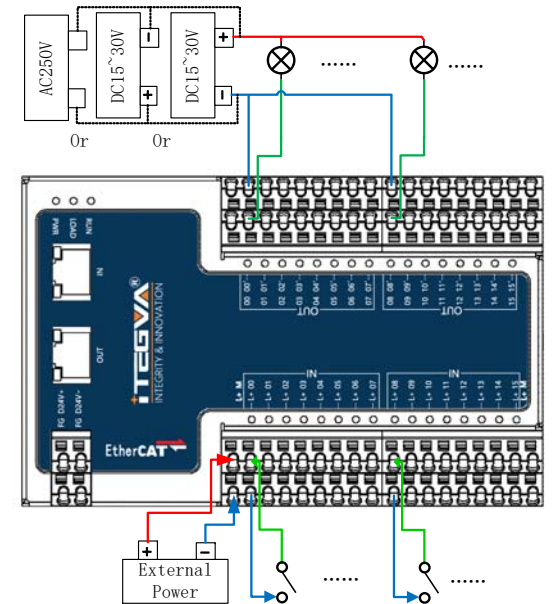


In the figure above, **M** is the common terminal of the external input signal, and **IN** is the external input signal.

②. Digital output equivalent schematic



③. Wiring diagram



Note: The maximum drive current of the output signal is 1A. Please check the external load rated power and internal resistance before use. If the load required current exceeds 1A, increase the current limiting measure.

