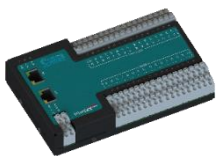


ECATDIO-I16N-O16N

EtherCAT 接口

数字量 16 路 NPN 输入 16 路 NPN 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	NPN (晶体管)
额定电平	24VDC (-15%/+20%)
“1”信号电平	Max: 1.5VDC, 20kΩ
“0”信号电平	漏型输出
最大输出电流 (单通道)	0.5A
最大冲击电流 (单通道)	1A
最大总输出电流	8A
端口防护	过压、过流、过温保护
隔离耐压	3750Vrms (MIN)
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

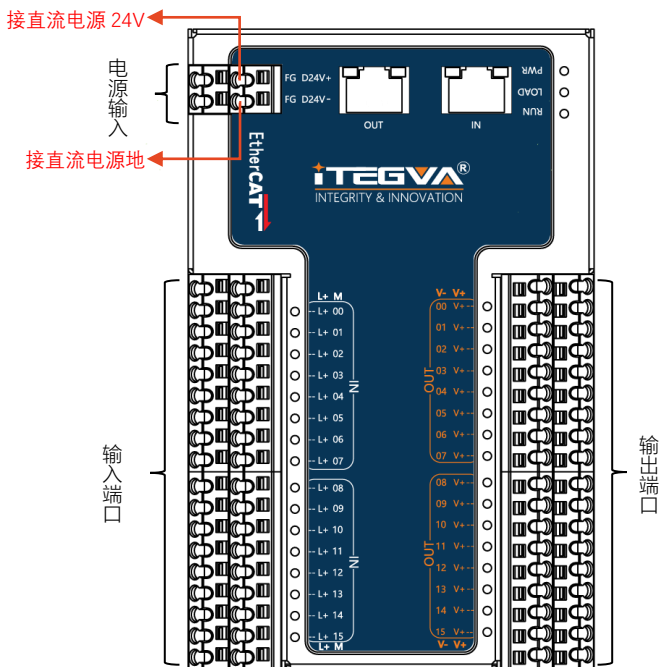
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二、接口说明



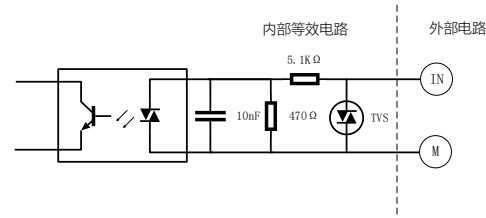
信号功能	名称	说明
电源	D24V+	电源输入, 接直流电源 24V。
	D24V-	电源输入, 接直流电源地。
	FG	外壳地, 接地
输入端口	00 - 15	输入信号, 低电平有效。信号有效, 对应输入指示灯亮。
	M	输入信号公共端, 接外部直流电源 24V。
	L+[1]	接外部电源接地。
输出端口	00 - 15	输出信号, 开漏输出, 低电平有效。信号有效, 对应的输出指示灯亮。
	V-	接外部电源地。
	V+[2]	接外部电源 24V。

注释[1]: 所有的 L+信号在设备内部是连接在一起的。

注释[2]: 所有的 V+信号在设备内部是连接在一起的。

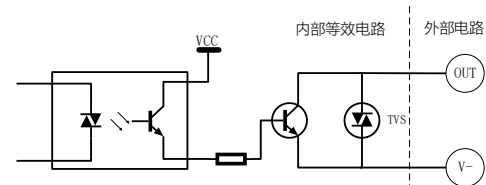
三、原理说明

1. 数字量输入等效原理图



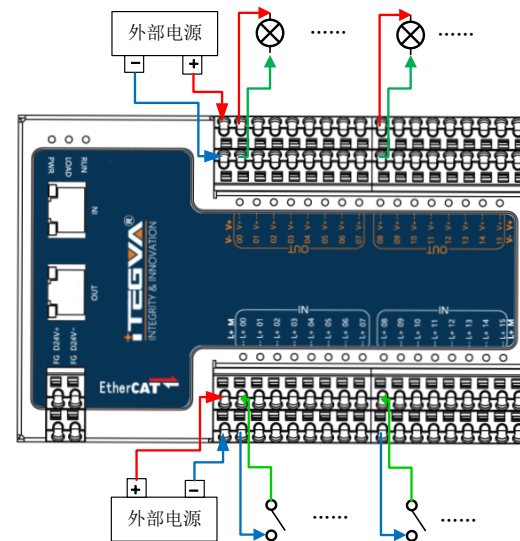
上图中 M 为外部输入信号的公共端, IN 为外部输入信号。

2. 数字量输出等效原理图



上图中 V- 为输出信号的公共端, OUT 为输出信号。

3. 接线示意图



注意: 输出信号的最大驱动电流为 500mA, 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 500mA, 请酌情增加限流措施。



ECATDIO-I16N-O16N

EtherCAT Interface

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

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	NPN
Rated level	24VDC (-15%/+20%)
"1" Signal level	Max: 1.5VDC, 20kΩ
"0" Signal level	Sink output
MAX output current (Single CH.)	0.5A
MAX transient current	1A
MAX total output current	8A
Port protection	Over VOL/TEMP/CURR Protection
Isolated voltage	3750Vrms (MIN)
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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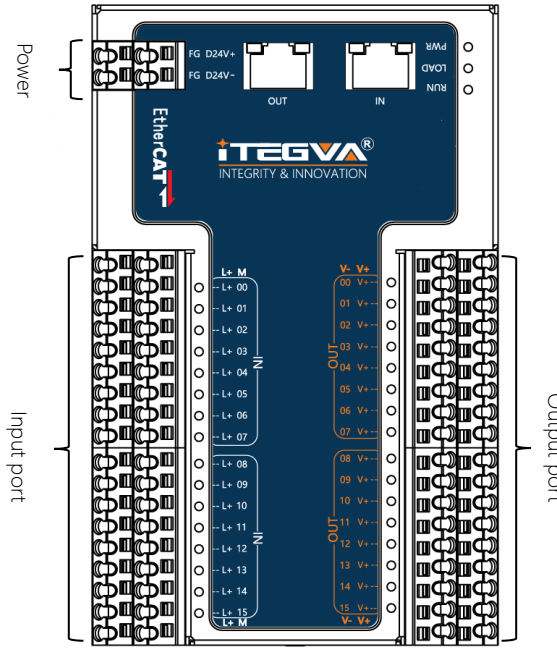


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Interface Description



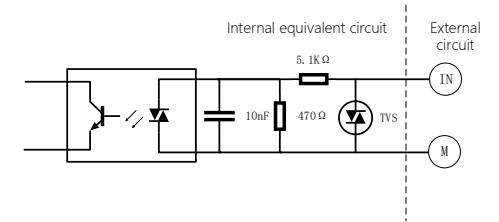
Signal Func.	Name	Description
Power	D24V+	Power input, connect 24V DC power supply
	D24V-	Power input, Connect GND DC power supply
	FG	Shell ground, connected to earth
Input Port	00 - 15	Input signal, active low. The signal is valid and the input indicator lights ON
	M	Input common terminal, connect external DC power supply 24V.
	L+[1]	Connect external power ground.
Output Port	00 - 15	Output signal, Sink Output, active low. The signal is valid and the output indicator lights ON
	V-	Connect external power ground.
	V+[2]	connect external DC power supply 24V.

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

注释[2]: All V+ signals are connected inside the device.

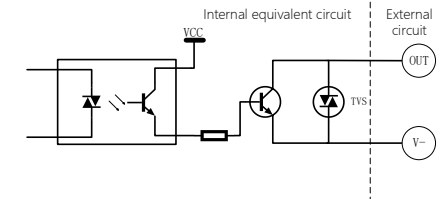
User Description

①. Digital input equivalent schematic



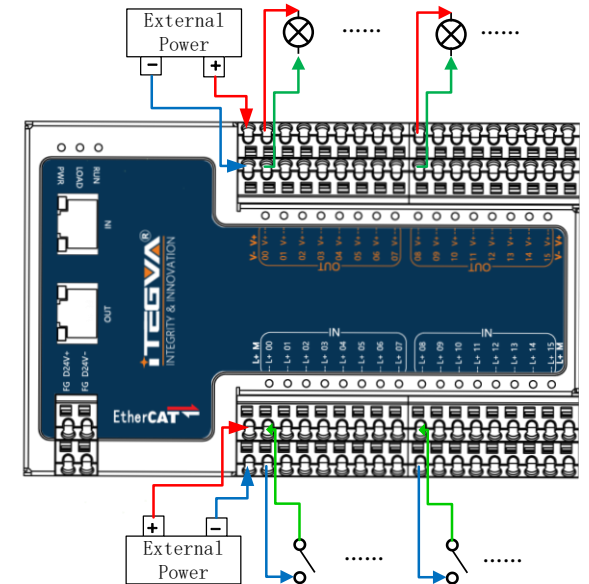
In the figure above, M is the common terminal of the external input signal, and IN is the external input signal.

②. Digital output equivalent schematic



In the figure above, V- is the common terminal of external output signal and OUT is the output signal.

③. Wiring diagram



Note: The maximum drive current of the output signal is 500mA. Please check the external load rated power and internal resistance before use. If the load required current exceeds 500mA, increase the current limiting measure.

