PN-DNet DI/DO TO ETHERNET Converter

■DESCRIPTION

PN-DNet uses ASIX family microprocessor for implementing Ethernet functions (DI/DO TO Ethernet)。It uses the state machine to handle TCP/IP stack with most but limited functions because of the limited resources。

PN-DNet supports TCP、UDP、IP、DHCP-Client、Modbus/TCP even HTTP protocols。You can use any browsers to set the parameters, or just use the commands in console mode。

■FEATURE

- Supports TCP/IP, UDP, DHCP, HTTP, Modbus/TCP, and 10/100 Base-T Ethernet standard
- Supports Based interface for fast configuration without special software, also command mode for parameters setting by application software。
- Supports Modbus/TCP for easy integration with HMI/SCADA or OPC server。
- 12 DI input channels and 6 DO output channels。
- Input / Output with optical isolation, pressure 3000 Volts
- Input function: support input counts or input frequency functions,and supports dry contact or wet contact (30V ，7mA)
- Built-in watchdog timer automatic reversion。
- Built-in transient voltage suppressor (TVS) and electrostatic discharge (ESD) protection。

■APPLICATIONS

It is easy to convert DI status and DO control to Ethernet in IA, Factory Automation, Security or any other low data rate data transmission by using it as the intermediate converter.。

- **Security devices**
- **Warehouse terminals**
- **Access control terminals**
- **Time recorders**
- **Shop floor automation terminals**

■ORDERING INFORMATION

PN-DNet- [I/O type & numbers] **-** [Aux. Powered]

CODE	DIGITAL IN / OUT
IC/O6	12 點 DI / 6 點 DO

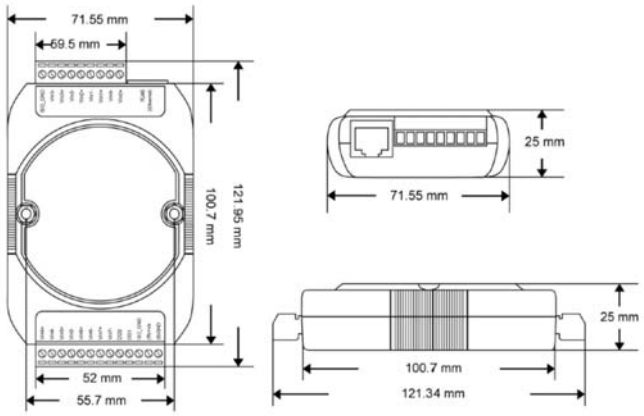
CODE	AUX.
D24	DC 10~30V

■TECHNICAL SPECIFICATION

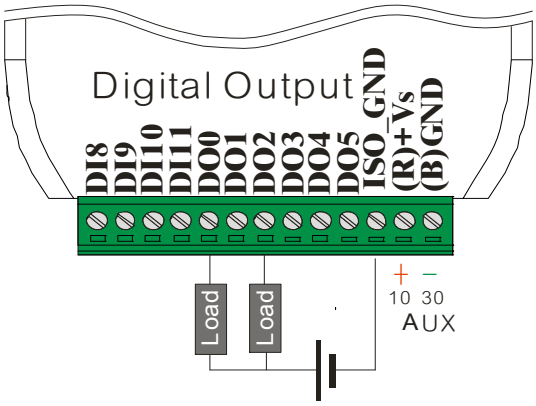
CPU:	ASIX MCU
Network interface:	10M/100M BASE-T, RJ-45 connector
Protocol:	TCP/ IP，UDP，DHCP Client， HTTP， Modbus/TCP
Automatic reset:	Built-in Watchdog Timer automatic reset
LED indication:	POWER: Red round high-brightness LED Link: Red round high-brightness LED Full: Red round high- brightness LED
Digital input	12-channel optically isolated input
Range:	dry connection： Logic level 0：Ground Logic level 1：Open
	Digital input: Logic level 0：0~2 Vdc Logic level 1：5~30 Vdc
Counter / frequency	Each channel supports 1KHz counters and frequency input
Digital output	6-channel output
Output Type:	*Open collect*, ≤50V, 500mA, Maximum load current:500mA
Pulse output	Each channel support 1KHz pulse output
Output delay:	Each channel supports Hi-to-Lo or Lo-to-the Hi output delay。
Output isolation:	3000 Vrms
Configuration:	Software settings through the PN-Series TCP the DAQ tool
Security:	Can set the system password and login password

Power	
Power Supply:	DC 10~30 伏
Power consumption:	2.0W
Electrical	
Isolation:	Isolated between DI, DO and Ethernet (RJ45)
Dielectric Strength:	3 KV, 1 minute; between Serial ports / RJ45 / Power
Environmental	
Operating temp.:	-10~70 ℃(14~158℉)
Operating humidity:	5~95 %RH, non-condensing
Storage temperature:	-25~85 ℃(-13~185℉)
Mechanical	
Case Material:	ABS fire-protection (UL 94V-0)
Mounting:	Surface mounting
Terminal block:	Plastic NYLON 66 (UL 94V-0)
Weight:	150 g

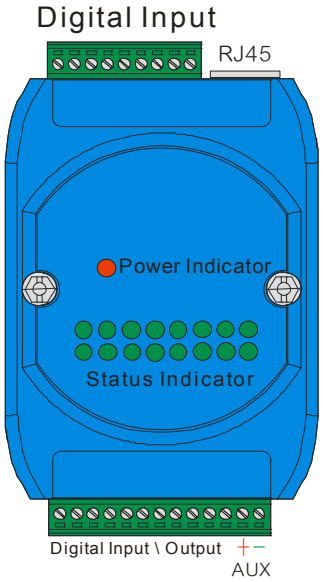
■ DIMENSIONS



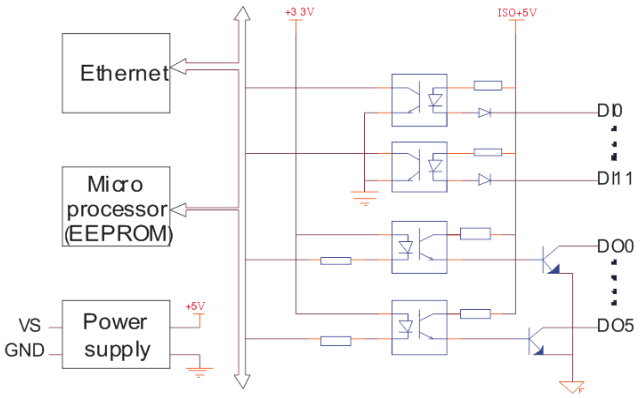
Digital Output



■ FRONT PANEL & CONNECTION

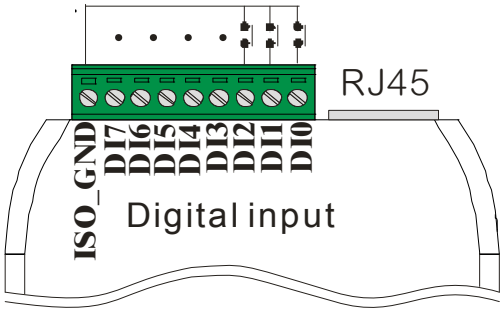


■ EQUIVALENT CIRCUIT

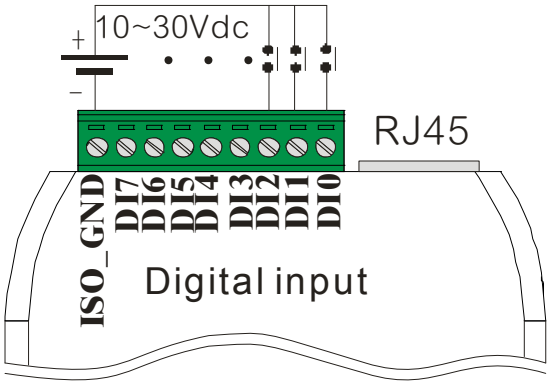


■ CONNECTION

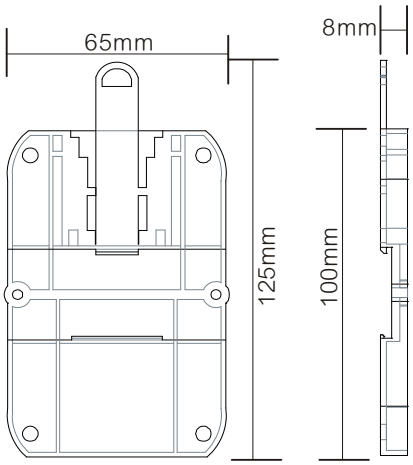
Dry contact



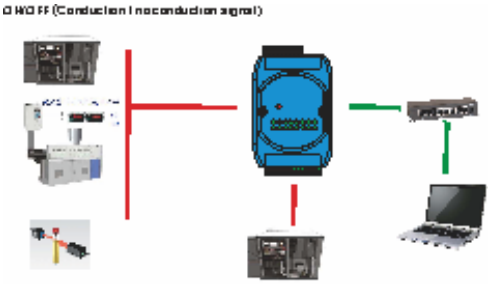
Wet contact (charged contacts)



■ RAIL CLIP



■ Example



PN-DNet

■I/O MODBUS communication position

X=40000 Comply with the directive function 03、06、16 ;
X=30000 Comply with the directive function 04

Address	Channel	Explain
X+0001~X+0024	For counter	12 Channel, 32 Bits
X+0025~X+0036	Low-level pulse output , Unit time:0.1ms	6 Channel, 32 Bits
X+0037~X+0048	High-level pulse output , Unit time:0.1ms	6 Channel, 32 Bits
X+0049~X+0060	Set absolute pulse (Setting 0 = continuous mode)	6 Channel, 32 Bits
X+0061~X+0073	Set the value of the DO pulse	C Channel, 32 Bit

X=00000 Comply with the directive function 01、05
; X=10000 Comply with the directive function 02

Address	Channel	Explain
X+0001~X+0012	For DI	12 Channel, 1 Bit
X+0013~X+0018	For DO	6 Channel, 1 Bit
X+0032	Ch0 (Counter Mode)	Start (1)/Stop(0)
X+0033	Ch0 (Counter Mode)	Clear count (1)
X+0034	Ch0 (Counter Mode)	Clear the overflow
X+0035	Ch0 (Counter Mode)	Latched status (read) / clear the state (write)
X+0036	Ch1 (Counter Mode)	Start (1)/Stop(0)
X+0037	Ch1 (Counter Mode)	Clear count (1)
X+0038	Ch1 (Counter Mode)	Clear the overflow
X+0040	Ch1 (Counter Mode)	Latched status (read) / clear the state (write)
X+0041	Ch2 (Counter Mode)	Start (1)/Stop(0)
X+0042	Ch2 (Counter Mode)	Clear count (1)
X+0043	Ch2 (Counter Mode)	Clear the overflow
X+0044	Ch2 (Counter Mode)	Latched status (read) / clear the state (write)
X+0045	Ch3 (Counter Mode)	Start (1)/Stop(0)
X+0046	Ch3 (Counter Mode)	Clear count (1)
X+0047	Ch3 (Counter Mode)	Clear the overflow
X+0048	Ch3 (Counter Mode)	Latched status (read) / clear the state (write)
X+0049	Ch4 (Counter Mode)	Start (1)/Stop(0)
X+0050	Ch4 (Counter Mode)	Clear count (1)
X+0051	Ch4 (Counter Mode)	Clear the overflow
X+0052	Ch4 (Counter Mode)	Latched status (read) / clear the state (write)
X+0053	Ch5 (Counter Mode)	Start (1)/Stop(0)
X+0054	Ch5 (Counter Mode)	Clear count (1)
X+0055	Ch5 (Counter Mode)	Clear the overflow
X+0056	Ch5 (Counter Mode)	Latched status (read) / clear the state (write)
X+0057	Ch6 (Counter Mode)	Start (1)/Stop(0)
X+0058	Ch6 (Counter Mode)	Clear count (1)
X+0059	Ch6 (Counter Mode)	Clear the overflow
X+0060	Ch6 (Counter Mode)	Latched status (read) / clear the state (write)

Address	Channel	Explain
X+0061	Ch7 (Counter Mode)	Start (1)/Stop(0)
X+0062	Ch7 (Counter Mode)	Clear count (1)
X+0063	Ch7 (Counter Mode)	Clear the overflow
X+0064	Ch7 (Counter Mode)	Latched status (read) / clear the state (write)
X+0065	Ch8 (Counter Mode)	Start (1)/Stop(0)
X+0066	Ch8 (Counter Mode)	Clear count (1)
X+0067	Ch8 (Counter Mode)	Clear the overflow
X+0068	Ch8 (Counter Mode)	Latched status (read) / clear the state (write)
X+0069	Ch9 (Counter Mode)	Start (1)/Stop(0)
X+0070	Ch9 (計Counter Mode)	Clear count (1)
X+0071	Ch9 (Counter Mode)	Clear the overflow
X+0072	Ch9 (Counter Mode)	Latched status (read) / clear the state (write)
X+0073	Ch10 (Counter Mode)	Start (1)/Stop(0)
X+0074	Ch10 (Counter Mode)	Clear count (1)
X+0075	Ch10 (Counter Mode)	Clear the overflow
X+0076	Ch10 (Counter Mode)	Latched status (read) / clear the state (write)
X+0077	Ch11 (Counter Mode)	Start (1)/Stop(0)
X+0078	Ch11 (Counter Mode)	Clear count (1)
X+0079	Ch11 (Counter Mode)	Clear the overflow
X+0080	Ch11 (Counter Mode)	Latched status (read) / clear the state (write)