

S6312

Ethernet IO Modules

12 Channels DI
12 Channels RO



SHJ

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S6312 digital input module has total 12 channels isolated wet contact or dry contact or open-collector input, input channel 1 to 12 also can work as 32-bit counter input, the maximum frequency is 500Hz for total 12 channels and 5000Hz for only one channel. And has total 12 channels normal open relay output. S6312 has RS485 and RJ45 two type interface, RS485 support standard Modbus RTU protocol and RJ45 support Modbus Tcpip protocol. It can easy integrate with PLC and labview with standard Modbus/Modbus Tcpip protocol

Highlights:

- **Isolated digital inputs can be configured as counter input, total 32 bits,5000Hz**
- **Can measure frequency from 0 to 1000Hz,the resolution is 0.1Hz**
- **Accept reed and hall sensor output from water meter or other meters**
- **Static and lightning protection for each input**
- **The input channel number is configurable, can be set up from 1 channel through 12 channels, improve frequency for small count input**
- **Surge-protected Rs485 ensure reliability**
- **Relay output support normal open**
- **Standard ModBus TCPIP protocol,easy work with PLC**
- **Standard ModBus protocol allows for up to 254 unique devices on one RS485 network**
- **A lot of spare FLASH can be used to store user's parameters**
- **Can update your firmware via ISP through RS485 network, can provide any hex file to help you finish some logic control**
- **DIN support available**

Application:

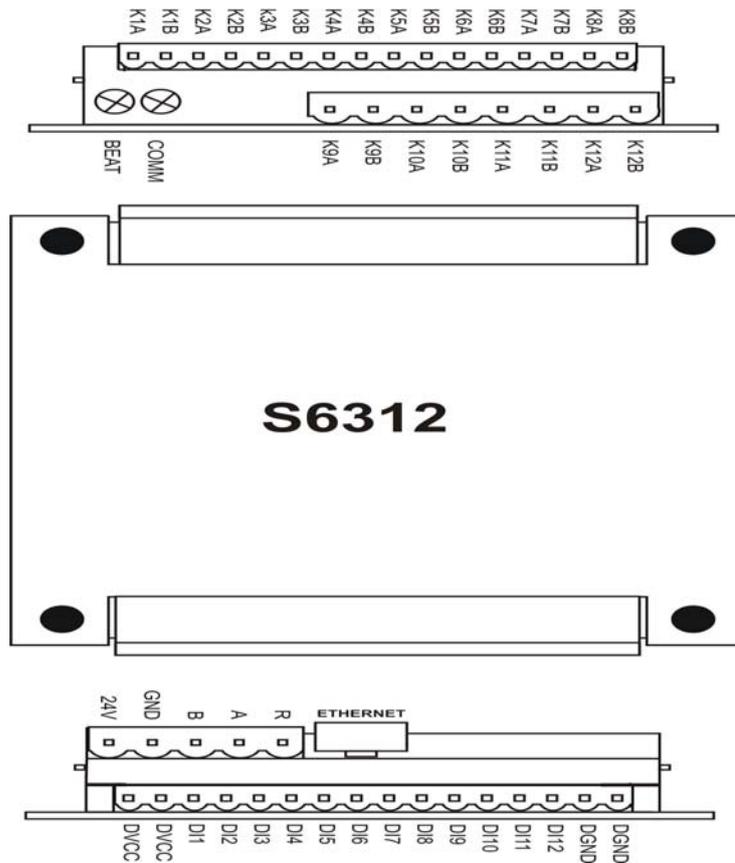
- ✓ Remote data acquisition
- ✓ Process monitoring
- ✓ Industrial process control
- ✓ Energy management
- ✓ Supervisory control
- ✓ Security systems
- ✓ Laboratory automation
- ✓ Building automation
- ✓ Product testing
- ✓ Direct digital control

Technical data:

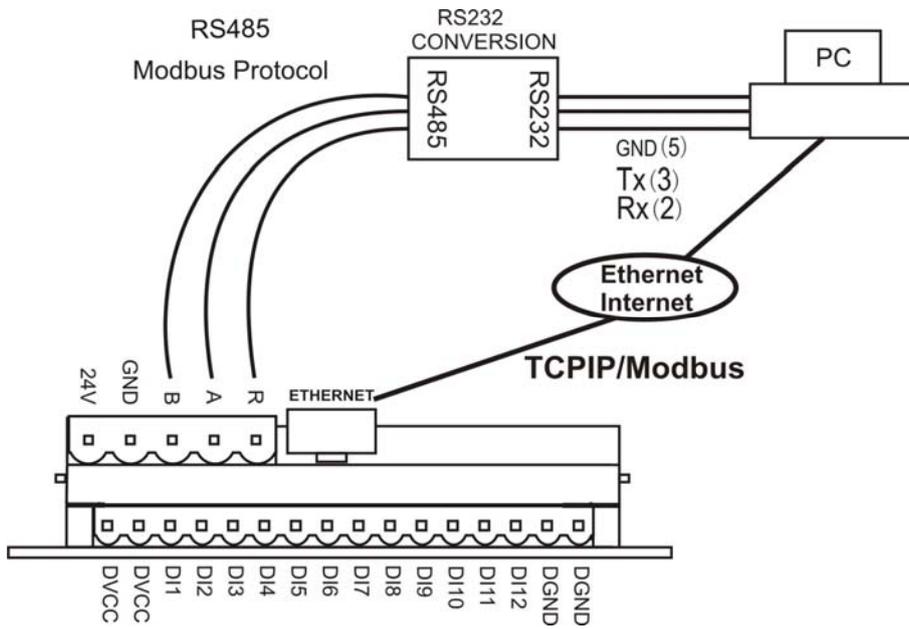
Input channel number----- 12
 Input range-----0V~+36V
 Input signal-----wet contact, dry contact, open-collector
 Counter frequency-----500Hz@ 12channels;5000Hz@ 1channel
 Counter length-----32-bit

Output channel number-----	12
Output load -----	0.5A@`125VAC
Output BUS-----	Ethernet/RS485
RS232/RS485 protocol-----	MODBUS/RTU
Ethernet protocol-----	MODBUS/TCPIP
Output Protection-----	Lightning,static
Power input-----	12~24V(AC/DC)
Power consumption-----	<0.6W
Ambient temperature:	
Operation-----	-20~85°C(-4~185°F)
Storage-----	-40~125°C(-40~257°F)
Ambient humidity-----	10%~90%RH
Material,enclosure-----	Flame proof plastic
Enclosure rating-----	IP31
Colour-----	White/Black
Size-----	115*90*43 mm

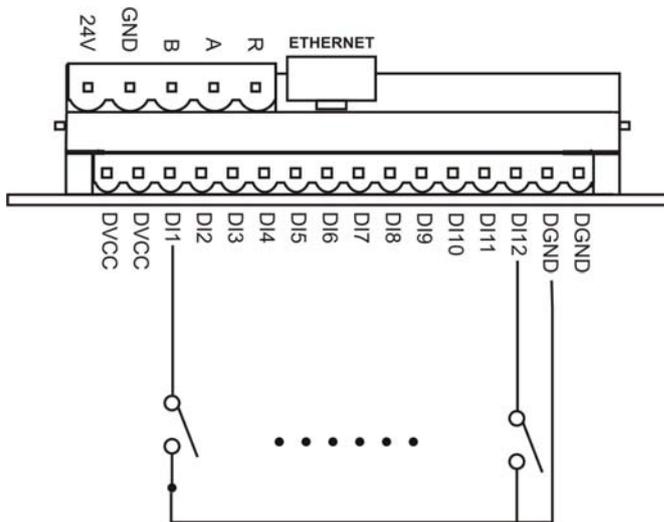
Wiring diagram and description:



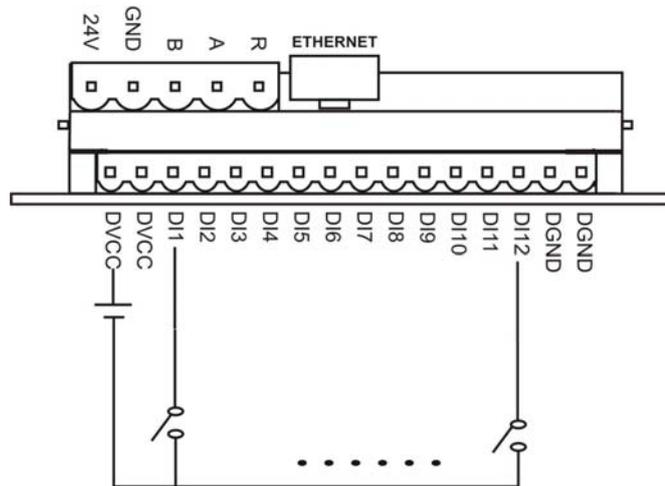
Top view figure



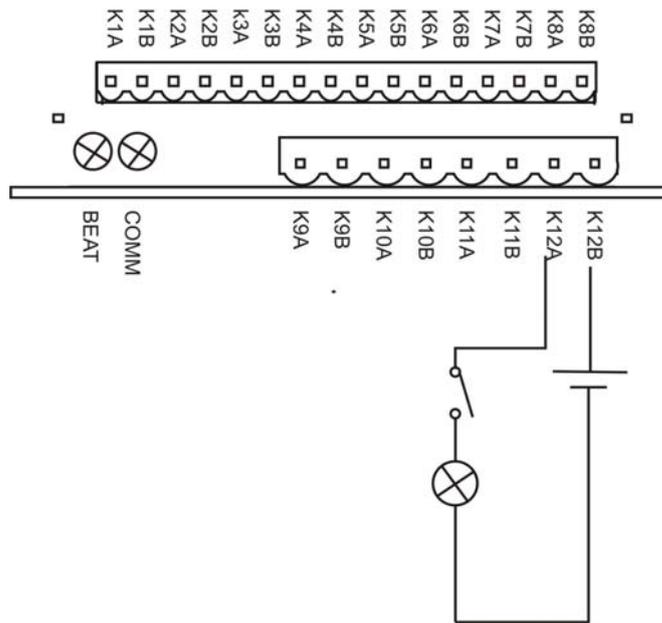
Communication wiring diagram



DRY contact inputs wiring diagram



WET contact input



Relay output,normal open

PINs and LEDs

Power supply

24VDC: power supply positive input, has reverse protection

- : Power supply negative input

RS485 Port

B: Connect to B of RS485

A: Connect to A of RS485

R: Connect to GND for RS485

Ethernet port

Connect to local Ethernet network through RJ45 cable

Inputs

DVCC: Power source input for digital input 1 through 12

DI1 ~ DI12: Digital input channel 1 through 12

DGND: common for digital input 1 through 40, available in dry input mode

Outputs

RELAY:

KA1~KA12: Normal open end for relay output channel 1 through 12

KB11~KB12: Normal open end for relay output channel 1 through 12

Leds

BEAT: Will flash when system is working

Comm: Will flash when RS485 serial port communication

Modbus register list:

Note: * means default value

Address	Bytes	Value range		Description	Property
		Min	Max		
0-3	4	1	4294967295	Serial number,unique for each product	R
4-5	2	100	65535	Firmware version number	R
6	1	1	254	Device address,default is 254*	R/W
7	2	6312	6312	Product model	R
8	1	1	255	Hardware version	R

9	2	12	1152	Baudrate setting		R/W
				Value	Baudrate	
				12	1200	
				24	2400	
				48	4800	
				96	9600	
				192*	19200*	
				384	38400	
				576	57600	
1152	115200					
For example:write 96 to register 9 to set the baudrate 9600.						
10-99	-	-	-	Reserved		-
100	2	0	4095	Relay output,0 = active,1 = inactive.Bit0 correspond to output 1,bit1 correspond to channel 2 etc.		R/W
101	2	0	4095	Status for digital input channel 1 through 12, 0 = contact active,1 = contact inactive.Bit0 correspond to channel 1,bit1 correspond to channel 2 etc.		R
102	2	0	65535	High word for counter input 1		R/W
103	2	0	65535	Low word for counter input 1,value of counter = (101) *65536 + (102)		R/W
104	2	0	65535	High word for counter input 2		R/W
105	2	0	65535	Low word for counter input 2,value of counter = (103) *65536 + (104)		R/W
106	2	0	65535	High word for counter input 3		R/W
107	2	0	65535	Low word for counter input 3,value of counter = (105) *65536 + (106)		R/W
108	2	0	65535	High word for counter input 4		R/W
109	2	0	65535	Low word for counter input 4,value of counter = (107) *65536 + (108)		R/W
110	2	0	65535	High word for counter input 5		R/W
111	2	0	65535	Low word for counter input 5,value of counter = (109) *65536 + (110)		R/W
112	2	0	65535	High word for counter input 6		R/W
113	2	0	65535	Low word for counter input 6,value of counter = (111) *65536 + (112)		R/W
114	2	0	65535	High word for counter input 7		R/W
115	2	0	65535	Low word for counter input 7,value of counter = (113) *65536 + (114)		R/W

116	2	0	65535	High word for counter input 8	R/W
117	2	0	65535	Low word for counter input 8,value of counter = (115) *65536 + (116)	R/W
118	2	0	65535	High word for counter input 9	R/W
119	2	0	65535	Low word for counter input 9,value of counter = (117) *65536 + (118)	R/W
120	2	0	65535	High word for counter input10	R/W
121	2	0	65535	Low word for counter input 10,value of counter = (119) *65536 + (120)	R/W
122	2	0	65535	High word for counter input 11	R/W
123	2	0	65535	Low word for counter input 11,value of counter = (121) *65536 + (122)	R/W
124	2	0	65535	High word for counter input 12	R/W
125	2	0	65535	Low word for counter input 12,value of counter = (123) *65536 + (124)	R/W
126	1	1	100	Respond delay for serial communication, the units is ms and default is 10ms	R/W
127	2	1	30000	Filter time for counter input, the units is 10us and the default is 200us	R/W
128	1	0	255	Disable/enable input,0 = disable and 1 = enable.Bit0 correspond to input1, Bit1 correspond to input 2 and so on.	R/W
129	1	0	255	Disable/enable input,0 = disable and 1 = enable.Bit0 correspond to input9, Bit1 correspond to input 10 and so on.	R/W
130	1	0	1	Input status selection.0 = ON/OFF,1 = OFF/ON, default is ON/OFF	R/W
131	1	0	1	Rising edge or falling edge detect the input, default is raising edge	R/W
132	1	0	1	Write 1 to this register will reset all counter to zero	R/W
134-199	-	-	-	Reserved	-
200-203	1	0	255	Device local IP address, default is 192.168.0.X	R/W
204-207	1	0	255	Gate way address, default I is 192.168.0.1	R/W
208-211	1	0	255	Subnet address, default is 255.25.255.0	R/W
212-217	1	0	255	MAC address	R/W
218	2	0	65535	Port number, default is 502.Write this register also save value of register 200 to 218.	R/W

Default Settings:

Device ID: 254, 255 is broadcast address

Data Format: 1 start bit, 8 data bit, 1 stop bit, none parity

Baudrate: 19200

There are a INIT jumper inside the board,short INIT then power on S6312,parameters will go to default settings.