

S6302
Ethernet 16 digital input Module
User's Manual



SHJ

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S6302 Ethernet digital input module has total 16 channels isolated wet contact or dry contact or open-collector input, Each input channel also can work as 32-bit counter input, the maximum frequency is 1000Hz for total 16 channels and 5000Hz for only one channel.S6302 can connect to PC through RS232 or RS485 port, default is RS485, serial port support modbus protocol, and connect to local Ethernet with modbus/tcpip protocol. All these communication port has static, over current, over voltage protect.

Highlights:

- Industry Ethernet with MODBUS/TCP/IP
- RS232 / RS485 with MODBUS protocol to configure the module
- 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 16 channels, improve frequency for small count input
- Surge-protected RS232/Rs485 ensure reliability
- A lot of spare FLASH can be used to store user's parameters
- DIN support available

Application:

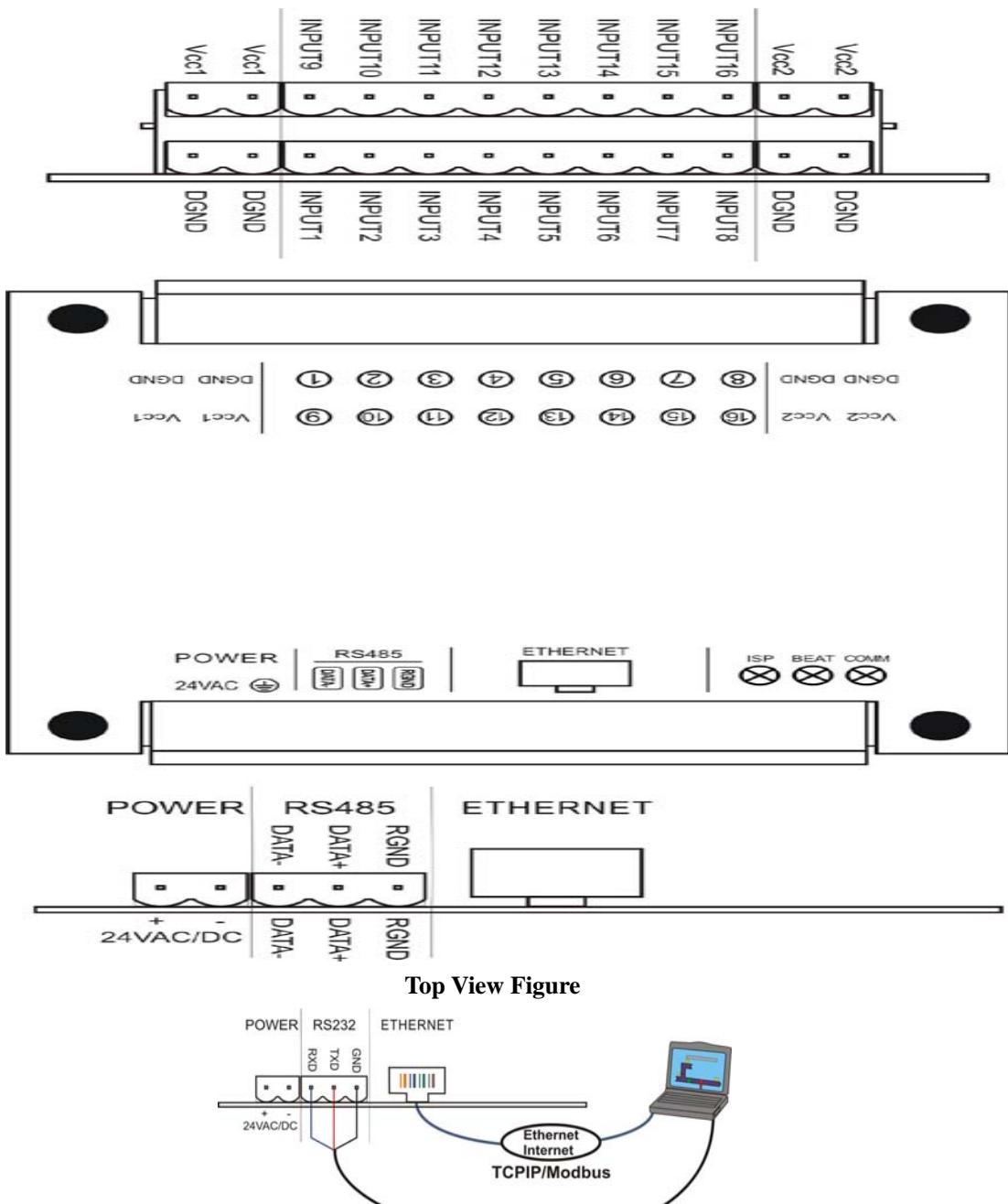
- ✓ Remote data acquisition
- ✓ Process monitoring
- ✓ Industrial process control
- ✓ Energy management
- ✓ Supervisory control
- ✓ Security systems
- ✓ Laboratory automation
- ✓ Building automation
- ✓ Product testing
- ✓ Direct digital control

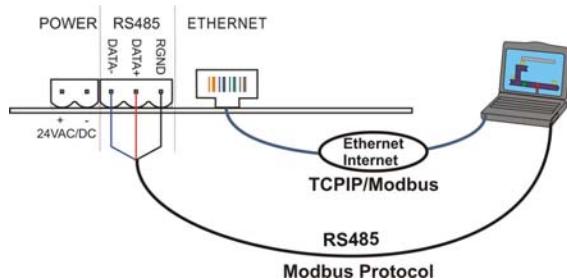
Technical data:

Input channel number-----	16
Input range-----	0V~+36V
Input signal-----	wet contact, dry contact, open-collector
Counter frequency-----	1000Hz@16channels;5000Hz@1channel

Counter length-----	32-bit
Output BUS-----	Ethernet/RS232/RS485
RS232/RS485 protocol-----	MODBUS/RTU
Ethernet protocol-----	MODBUS/TCP/IP
Output Protection-----	Lightning, static
Power input-----	12~24V(AC/DC)
Power consumption-----	70mA@24VDC
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

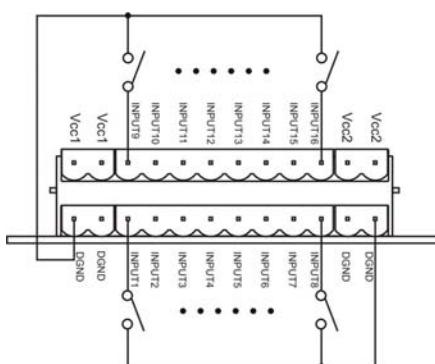
Wiring Diagram and Description:



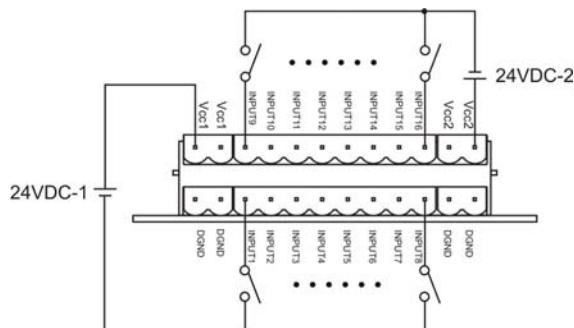


Wiring Diagram _ RS485

The serial port can use RS232 or RS485, we will provide different module to replace each other, the default is RS485 output.



Dry contact input, relay contact



Wet contact input, 0-36VDC

For wet contact input, low level input is 0-1V and high input can be 3-36VDC, there are two group common source and each group has 8 inputs.

PINs and LEDs

Power supply

24VAC: power supply positive input, has reverse protection, accept AC and DC input

- : Power supply negative input

RS232(RS485) Port

RXD(DATA-): Connect to TXD of PC

TXD(DATA+): Connect to RXD of PC

GND(RGND): Connect to GND of PC

We will provide a cable to connect to RS232 port. RS232 and RS485 use the same terminal, user can

get RS232 or RS485 by changing a serial communication module.

Ethernet port

Connect to local Ethernet network through RJ45 cable

Inputs

Vcc1: Power source input for digital input 1 through 8

DI1 ~ DI8: Digital input channel 1 through 8

Vcc2: Power source input for digital input 9 through 16

DI9~DI16: Digital input channel 9 through 16

DGND: common for digital input 1 through 16, available in dry input mode

LEDs

Heart: Will flash when system is working

Comm: Will flash when RS232 serial port communication

Jumpers

ISP: keep ON in program mode

Modbus Register List:

Note: * means default value

03 command for read and 06 command for write.

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	R/W
7	2	6302	6302	Product model	R
8	1	1	255	Hardware version	R

				<table border="1"> <thead> <tr> <th colspan="2">Baudrate setting</th></tr> <tr> <th>Value</th><th>Buadrate</th></tr> </thead> <tbody> <tr><td>12</td><td>1200</td></tr> <tr><td>24</td><td>2400</td></tr> <tr><td>48</td><td>4800</td></tr> <tr><td>96</td><td>9600</td></tr> <tr><td>192</td><td>19200</td></tr> <tr><td>384</td><td>38400</td></tr> <tr><td>576</td><td>57600</td></tr> <tr><td>1152</td><td>115200</td></tr> </tbody> </table> <p>For example: write 96 to register 9 to set the baudrate 9600.</p>	Baudrate setting		Value	Buadrate	12	1200	24	2400	48	4800	96	9600	192	19200	384	38400	576	57600	1152	115200	R/W
Baudrate setting																									
Value	Buadrate																								
12	1200																								
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96	9600																								
192	19200																								
384	38400																								
576	57600																								
1152	115200																								
10-99	-	-	-	Reserved	-																				
100	2	0	65535	Status for digital input channel 1 through 16, 0 = contact active,1 = contact inactive.Bit0 correspond to channel 1,bit1 correspond to channel 2 etc.	R																				
101	2	0	65535	High word for counter input 1	R/W																				
102	2	0	65535	Low word for counter input 1,value of counter = (101) *65536 + (102)	R/W																				
103	2	0	65535	High word for counter input 2	R/W																				
104	2	0	65535	Low word for counter input 2,value of counter = (103) *65536 + (104)	R/W																				
105	2	0	65535	High word for counter input 3	R/W																				
106	2	0	65535	Low word for counter input 3,value of counter = (105) *65536 + (106)	R/W																				
107	2	0	65535	High word for counter input 4	R/W																				
108	2	0	65535	Low word for counter input 4,value of counter = (107) *65536 + (108)	R/W																				
109	2	0	65535	High word for counter input 5	R/W																				
110	2	0	65535	Low word for counter input 5,value of counter = (109) *65536 + (110)	R/W																				
111	2	0	65535	High word for counter input 6	R/W																				
112	2	0	65535	Low word for counter input 6,value of counter = (111) *65536 + (112)	R/W																				
113	2	0	65535	High word for counter input 7	R/W																				

114	2	0	65535	Low word for counter input 7,value of counter = (113) *65536 + (114)	R/W
115	2	0	65535	High word for counter input 8	R/W
116	2	0	65535	Low word for counter input 8,value of counter = (115) *65536 + (116)	R/W
117	2	0	65535	High word for counter input 9	R/W
118	2	0	65535	Low word for counter input 9,value of counter = (117) *65536 + (118)	R/W
119	2	0	65535	High word for counter input10	R/W
120	2	0	65535	Low word for counter input 10,value of counter = (119) *65536 + (120)	R/W
121	2	0	65535	High word for counter input 11	R/W
122	2	0	65535	Low word for counter input 11,value of counter = (121) *65536 + (122)	R/W
123	2	0	65535	High word for counter input 12	R/W
124	2	0	65535	Low word for counter input 12,value of counter = (123) *65536 + (124)	R/W
125	2	0	65535	High word for counter input 13	R/W
126	2	0	65535	Low word for counter input 13,value of counter = (125) *65536 + (126)	R/W
127	2	0	65535	High word for counter input 14	R/W
128	2	0	65535	Low word for counter input 14,value of counter = (127) *65536 + (128)	R/W
129	2	0	65535	High word for counter input 15	R/W
130	2	0	65535	Low word for counter input 15,value of counter = (129) *65536 + (130)	R/W
131	2	0	65535	High word for counter input 16	R/W
132	2	0	65535	Low word for counter input 16,value of counter = (131) *65536 + (132)	R/W
133	1	1	100	Respond delay for serial communication, the units is ms and default is 10ms	R/W
134	2	1	30000	Filter time for counter input, the units is 10us and the default is 200us	R/W
135	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

136	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
137	1	0	1	Input status selection.0 = ON/OFF,1 = OFF/ON, default is ON/OFF	R/W
138-153	1	0	1	Each register show one digital input status. 138 to digital input 1, 139 to digital input 2 ...	R/W
154	1	0	1	Write 1, reset all counter	R/W
155	1	0	1	Write 1, enable store counter when power off. default is 0.	R/W
156-199	-	-	-	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

02 command for read digital input status.

Address	Bytes	Value range		Description	Property
		Min	Max		
0-99	1	0	0	Reserved	R
100-115	1	0	1	Input 1 through 16 status,1 = contact not close,0 = contact closed	R
116-65535	1	0	0	Reserved	R

Default Settings:

Device ID: 254, 255 is broadcast address

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

Baudrate: 19200

Short INIT to GND then power on S6302, parameters will go to default settings.