

S5302

Modbus 40 digital input Module

User's Manual



SHJ

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S5302 Ethernet digital input module has total 40 channels isolated wet contact or dry contact or open-collector input, input channel 1 to 24 also can work as 32-bit counter input, the maximum frequency is 500Hz for total 24 channels and 5000Hz for only one channel.S5302 can connect to PC through RS485 port, serial port support modbus protocol. All these communication port has static, over current, over voltage protect.

Highlights:

- RS485 with MODBUS protocol can connect up to 254 device
- 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 40 channels, improve frequency for small count input
- Surge-protected Rs485 ensure reliability
- A lot of spare FLASH can be used to store user's parameters
- DIN support available

Application:

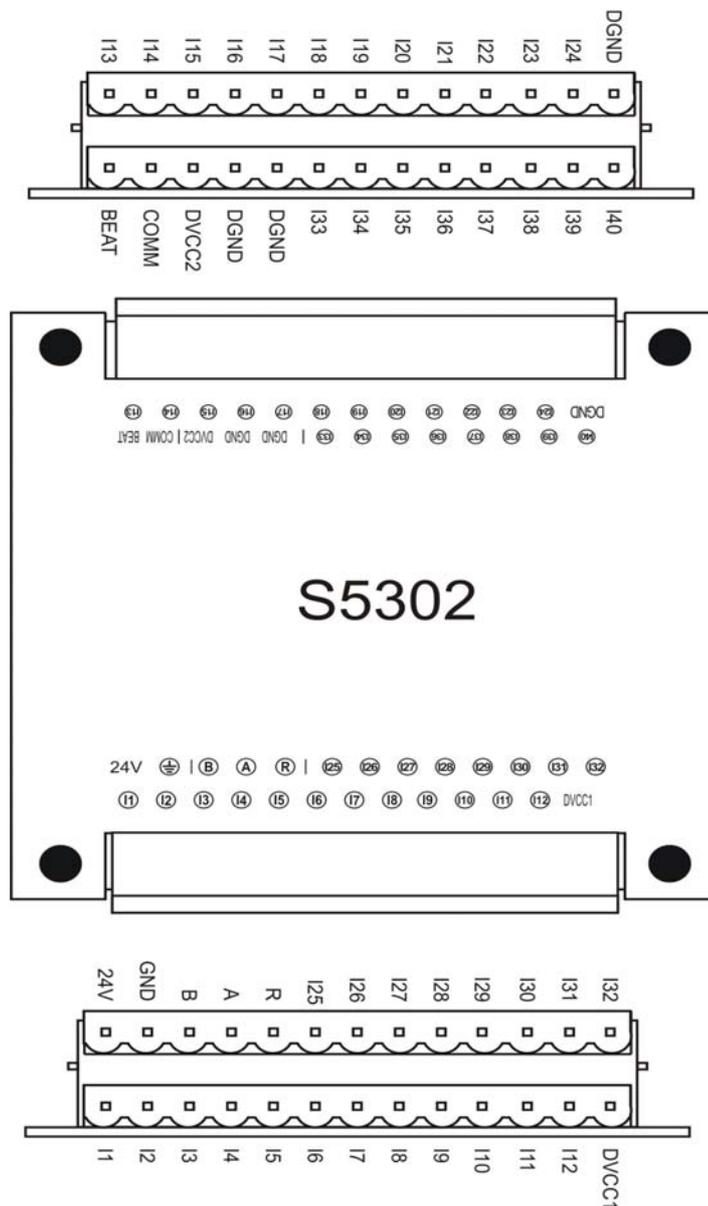
- ✓ Remote data acquisition
- ✓ Process monitoring
- ✓ Industrial process control
- ✓ Energy management
- ✓ Supervisory control
- ✓ Security systems
- ✓ Laboratory automation
- ✓ Building automation
- ✓ Product testing
- ✓ Direct digital control

Technical data:

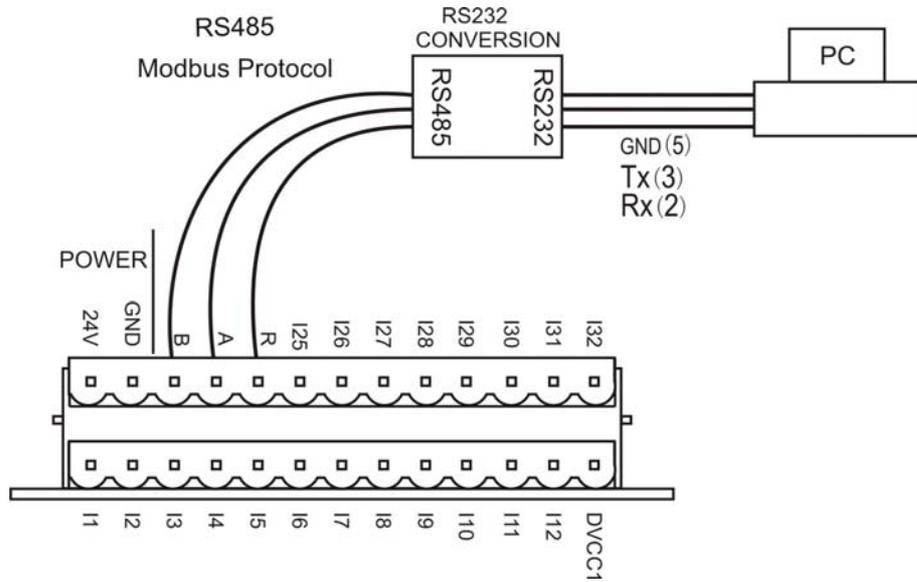
Input channel number----- 40
 Input range-----0V~+36V
 Input signal-----wet contact, dry contact, open-collector
 Counter frequency-----500Hz@24channels;5000Hz@1channel
 Counter length-----32-bit
 Output BUS----- RS485
 RS485 protocol-----MODBUS/RTU
 Output Protection-----Lightning, static
 Power input-----9~24V(AC/DC)
 Power consumption-----30mA@24VDC
 Ambient temperature:

Operation-----	-20~85℃(-4~185℉)
Storage-----	-40~125℃(-40~257℉)
Ambient humidity-----	10%~90%RH
Material,enclosure-----	Flame proof plastic
Enclosure rating-----	IP31
Colour-----	White/Black
Size-----	115*90*43 mm

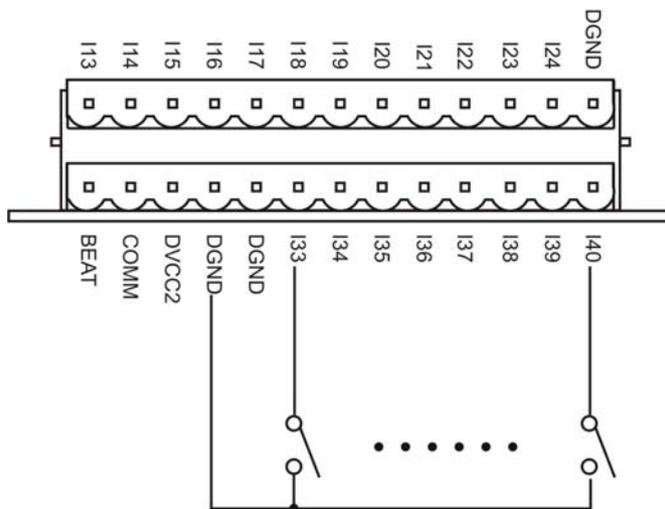
Wiring Diagram and Description:



Top View Figure

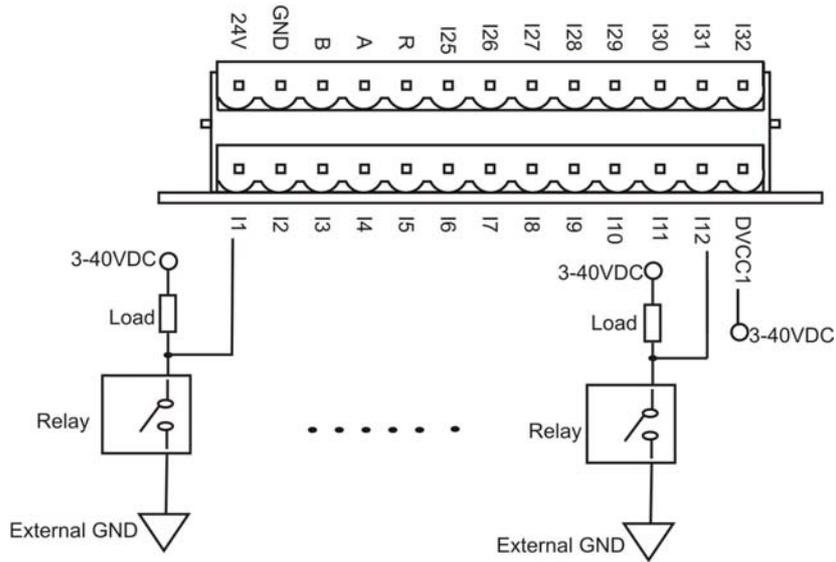


Wiring Diagram _ RS485



Dry contact input, relay contact

S5302 has 2 group input, input 1 to 24 and input 25 to 40. Each input has a jumper to config the corresponding group input work in DRY contact mode or WET contact mode. The jumper inside the case and default is WET contact. DGND is the common for dry contact input 1 to 40.



Wet contact input, 0-36VDC

S5302 has 2 group input, input 1 to 24 and input 25 to 40. Each input has a jumper to config the corresponding group input work in DRY contact mode or WET contact mode. The jumper inside the case and default is WET contact. DVCC1 is common input for input I1 to I24, DVCC2 is common input for input I25 to I40. Never connect anything to DGND in WET contact input mode.

Power supply

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

RS485 Port

- B: Connect to B of RS485
- A: Connect to A of RS485
- R: Connect to GND of RS485 if necessary

Inputs

- DVCC1: Power source input for digital input 1 through 24
- I1 ~ I24: Digital input channel 1 through 24
- DVCC2: Power source input for digital input 25 through 40
- I25~I40: Digital input channel 25 through 40
- DGND: common for digital input 1 through 40, available in dry input mode

LEDs

- BEAT: Will flash when system is working
- Comm: Will flash when RS485serial port communication

Modbus Register List:

Note: * means default value
03 command for read and 06 command for write.

Address	Bytes	Value range	Description	Property
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		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	5302	5302	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. Default is 19200		
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	Status for digital input channel 17 through 32, 0 = contact active,1 = contact inactive.Bit0 correspond to channel 17,bit1 correspond to channel 18 etc.	R	
102	1	0	255	Status for digital input channel 33 through 40, 0 = contact active,1 = contact inactive.Bit0 correspond to channel 33,bit1 correspond to channel 34 etc.	R	
103	1	1	100	Respond delay for serial communication, the units is 2.5ms and default is 2.5ms	R/W	
104	2	1	30000	Filter time for counter input, the units is 10us and the default is 200us	R/W	
105	2	0	65535	Disable/enable input 1 to 16,0 = disable and 1 = enable.Bit0 correspond to input1, Bit1 correspond to input 2 and so on.	R/W	

106	2	0	65535	Disable/enable input 17 to 32,0 = disable and 1 = enable.Bit0 correspond to input17, Bit1 correspond to input 18 and so on.	R/W
107	1	0	255	Disable/enable input 33 to 40,0 = disable and 1 = enable.Bit0 correspond to input33, Bit1 correspond to input 34 and so on.	R/W
108	1	0	1	Input status selection.0 = ON/OFF,1 = OFF/ON, default is ON/OFF	R/W
109	1	0	1	Counter will increase at rising edge or falling edge.0 = rising edge,1 = falling edge, default is rising edge	R/W
110	2	0	65535	High word for counter input 1	R/W
111	2	0	65535	Low word for counter input 1	R/W
112	2	0	65535	High word for counter input 2	R/W
113	2	0	65535	Low word for counter input 2	R/W
114	2	0	65535	High word for counter input 3	R/W
115	2	0	65535	Low word for counter input 3	R/W
116	2	0	65535	High word for counter input 4	R/W
117	2	0	65535	Low word for counter input 4	R/W
118	2	0	65535	High word for counter input 5	R/W
119	2	0	65535	Low word for counter input 5	R/W
120	2	0	65535	High word for counter input 6	R/W
121	2	0	65535	Low word for counter input 6	R/W
122	2	0	65535	High word for counter input 7	R/W
123	2	0	65535	Low word for counter input 7	R/W
124	2	0	65535	High word for counter input 8	R/W
125	2	0	65535	Low word for counter input 8	R/W
126	2	0	65535	High word for counter input 9	R/W
127	2	0	65535	Low word for counter input 9	R/W
128	2	0	65535	High word for counter input 10	R/W
129	2	0	65535	Low word for counter input 10	R/W
130	2	0	65535	High word for counter input 11	R/W
131	2	0	65535	Low word for counter input 11	R/W

132	2	0	65535	High word for counter input 12	R/W
133	2	0	65535	Low word for counter input 12	R/W
134	2	0	65535	High word for counter input 13	R/W
135	2	0	65535	Low word for counter input 13	R/W
136	2	0	65535	High word for counter input 14	R/W
137	2	0	65535	Low word for counter input 14	R/W
138	2	0	65535	High word for counter input 15	R/W
139	2	0	65535	Low word for counter input 15	R/W
140	2	0	65535	High word for counter input 16	R/W
141	2	0	65535	Low word for counter input 16	R/W
142	2	0	65535	High word for counter input 17	R/W
143	2	0	65535	Low word for counter input 17	R/W
144	2	0	65535	High word for counter input 18	R/W
145	2	0	65535	Low word for counter input 18	R/W
146	2	0	65535	High word for counter input 19	R/W
147	2	0	65535	Low word for counter input 19	R/W
148	2	0	65535	High word for counter input 20	R/W
149	2	0	65535	Low word for counter input 20	R/W
150	2	0	65535	High word for counter input 21	R/W
151	2	0	65535	Low word for counter input 21	R/W
152	2	0	65535	High word for counter input 22	R/W
153	2	0	65535	Low word for counter input 22	R/W
154	2	0	65535	High word for counter input 23	R/W
155	2	0	65535	Low word for counter input 23	R/W
156	2	0	65535	High word for counter input 24	R/W
157	2	0	65535	Low word for counter input 24	R/W

02 command for read digital input status.

Address	Bytes	Value range		Description	Property
		Min	Max		

0-99	1	0	0	Reserved	R
100-139	1	0	1	Input 1 through 40 status,1 = contact not close,0 = contact closed	R
140-65535	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

There are a INIT jumper inside the board,short INIT then power on S5302,parameters will go to default settings.