

S5132C
Analog Data Acquisition Module
User's Manual



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S5132C is a high quality and low cost analog data acquisition module with 32 analog 4-20mA inputs. Each input has lightning and surge protection. Output is RS485 BUS with surge protection, to reduce interference by serial port communication, the output isolated by high speed opto-couplers. The modules are slave devices that can be easily controlled via the RS485 serial interface using the industry standard Modbus protocol.

Highlights:

- Surge-protected analog inputs with 12-bit resolution and 100k sample speed
- Input can be 4-20 mA
- Surge-protected and isolated Rs485 ensure reliability
- The channel number is configurable, can be set up from 1 channel through 32 channels, improve sample rate for small count analog input
- 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
- Isolated RS485, non-isolated RS485, RS232 for optional
- Can update your firmware via ISP through RS485 network

Application:

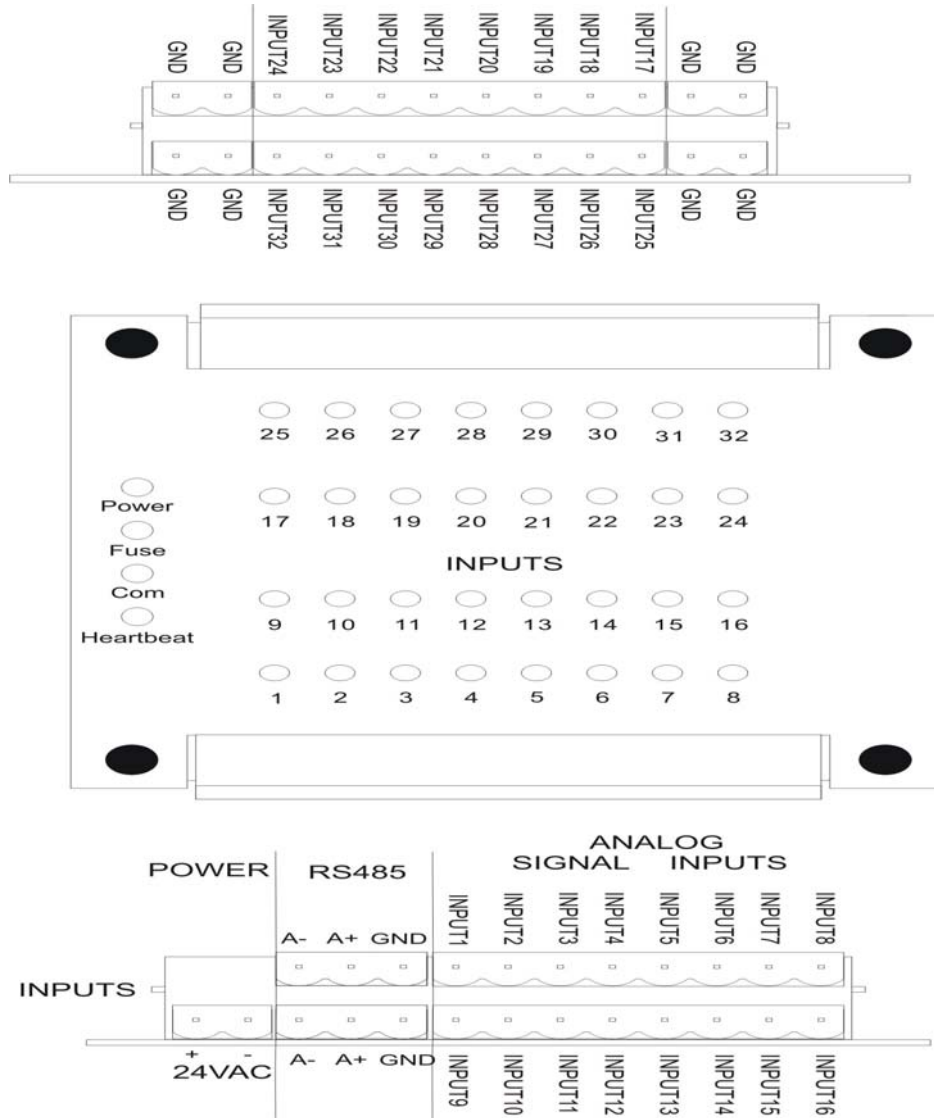
- ✓ Remote data acquisition
- ✓ Process monitoring
- ✓ Industrial process control
- ✓ Energy management
- ✓ Supervisory control
- ✓ Security systems
- ✓ Laboratory automation
- ✓ Building automation
- ✓ Product testing
- ✓ Direct digital control

Technical data:

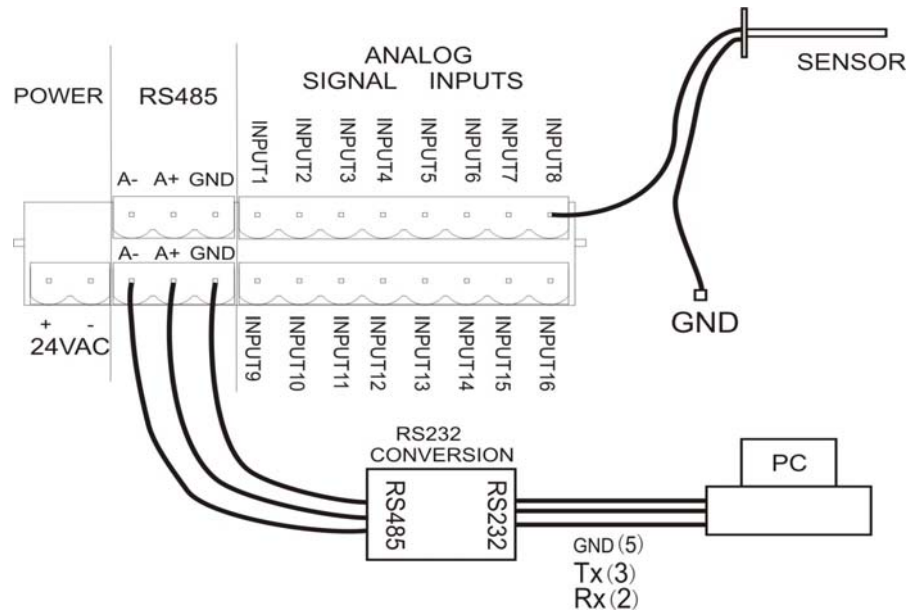
Resolution-----	12-bit
Input channel number-----	32
Input range-----	4-20mA
Input protection-----	Lightning,static
Accuracy-----	±0.1%
Zero drift-----	±3uV/°C
Sample rate-----	20 sample/second(32 channels),900 sample/second(1 channel)
Output BUS-----	RS485(opto-couplers isolated)
Output Protection-----	Lightning,static
Power input-----	12~24V(AC/DC)
Power consumption-----	<0.6W
Ambient temperature:	
Operation-----	0~70°C(32~158°F)

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

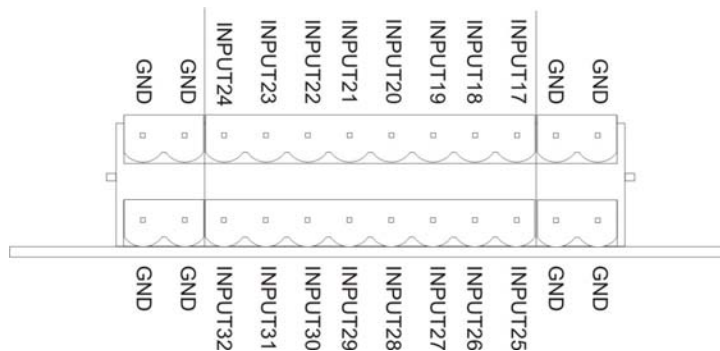
Wiring diagram and description:



Top view figure



Inputs group1 wiring diagram



Inputs group2 wiring diagram

Inputs

Each input can be jumper-configured in 1 of 4 ways

- ✧ 0-5V signal
- ✧ Dry contact, 10K thermistor

Each input has a corresponding LED which will light up if the value of input is greater than 50% full range of input.

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	R/W
7	2	5132	5132	Product model	R

8	1	1	255	Hardware version	R	
9	2	12	1152	Baudrate setting	R	
				Value		Buadrate
				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	-	
100-131	2	0	4095	Analog reading for channel input 1 through 32,the units decided by register 134 through 165	R/W	
132	2	0	65535	Enable/disable the corresponding channel,0 = disable,1* = enable.Bit0 correspond to channel 1 and Bit15 correspond to channel 16.For example,enable channel 1,2 and disable channel 3 through 16,write 0x03 to register 132.	R/W	
133	2	0	65535	Enable/disable the corresponding channel,0 = disable,1* = enable.Bit0 correspond to channel 17 and Bit15 correspond to channel 32.	R/W	
134-165	1	0	8	Channel 1 through 32 units setting.0* = raw AD sample reading,1 = 0~5V(real value = the current reading / 100,for example, the current reading is 288,the real voltage is 288/100 = 2.88V),2 = 0~10V(real value = current reading / 100),3 = 4~20mA(real value = the current reading / 100),4 = 0~100%,5 = ON/OFF,6 = OFF/ON,7 = 10K thermistor, celsius(real value = current reading / 10),8 = 10K thermistor,Fahrenheit(real value = current reading / 10).	R/W	
166-197	1	0	100	Channel 1through 32 Filter factor,0 = no filter,10* is default.	R/W	
198,200, 202 ...	2	0	4095	In calibration mode, channel 1 through 32 sample data as input 0 volts	R/W	
199,201, 203...	2	0	4095	In calibration mode, channel 1 through 32 sample data as input is full scale	R/W	