

Document Number :	
Dense level :	
Version Number :	V1.2



Shanghai Rising Digital Co.,Ltd.

## SECD-3I5A-02 USER MANUAL

# Shanghai Rising Digital Company

## Revision History

Version	Date	AMD	Reviser	Instructions	Approval
1.0	2012-09	A	Hongliang Liu, Xiang Gao	Creation	

( A-Add , M-Modify , D-Delete )

## SECD-3I5A-02(4GVersion)

### 1、 Hardware performance indicators

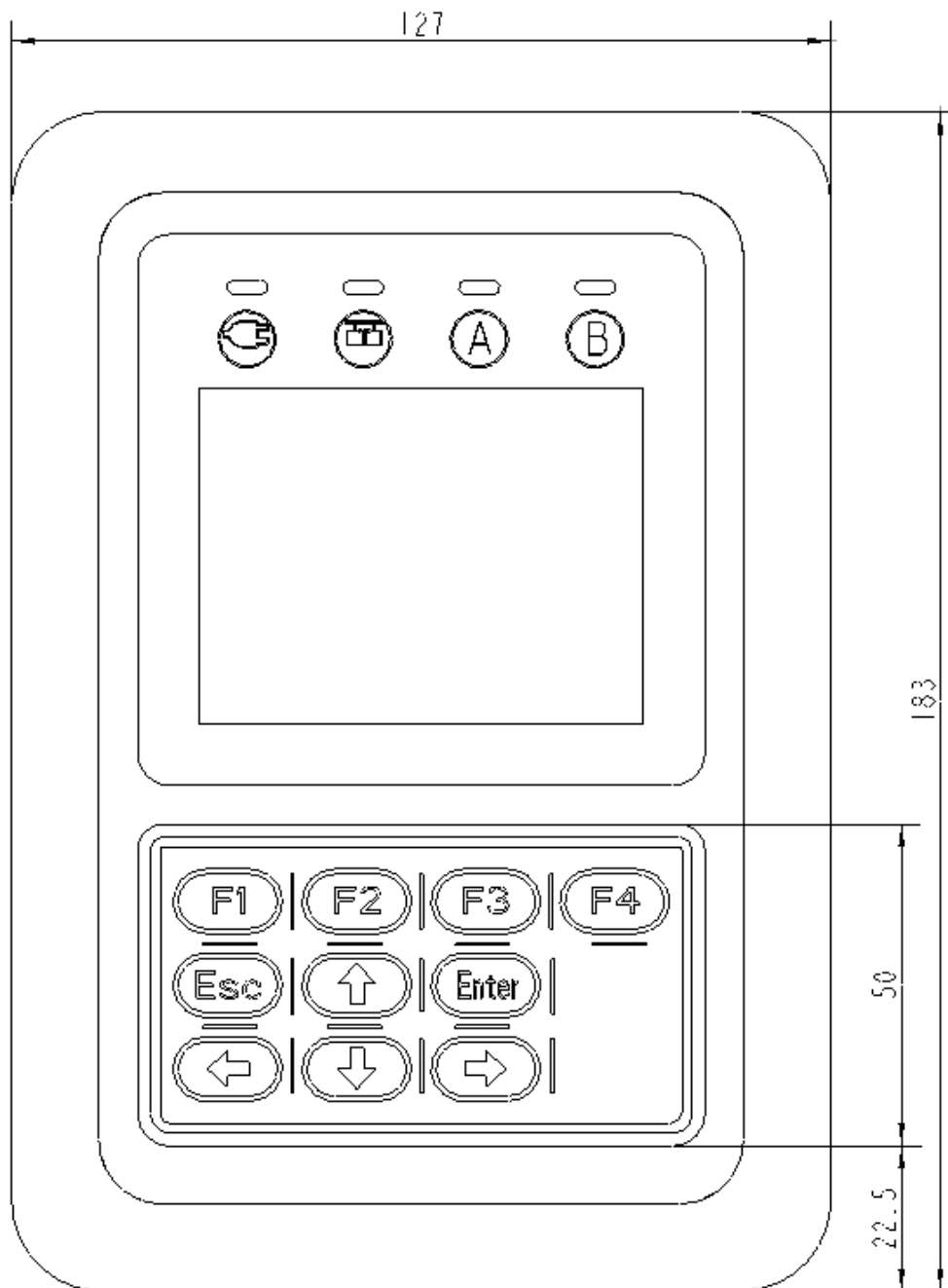
- 1) Voltage input :
  - circuits : 4
  - signal : 0 ~ 5V.DC
  - precision : 0.5%
  - resolution : 0.025%
- 2) Resistance input :
  - circuits : 2
  - precision : 0.5%
  - resolution : 0.025%
- 3) Discrete input ( low level ) :
  - circuits : 5
  - signal peak : 0 ~ 40V.DC
  - frequency : 0Hz ~ 1KHz
- 4) Discrete input ( high level ) :
  - circuits : 2
  - signal peak : 0 ~ 40V.DC
  - frequency : 0Hz ~ 1KHz
- 5) Periodic input :
  - circuits : 1
  - signal peak : 1.2 ~ 40V.DC
  - range : 10Hz ~ 70KHz
  - precision : 0.1%
- 6) PWM output :
  - circuits : 1
  - frequency : 50 ~ 2.55kHz
  - current : 0 ~ 0.75A
  - precision : 1%
  - resolution : 0.025%

- features : overpressure、 short circuit protection
- 7) Motor driver output :
- circuits : 4 ( one stepper motor )
  - contact capacity : 40V.DC 1.2A
  - frequency : 0Hz ~ 3KHz
  - features : overpressure、 short circuit protection
- 8) Digital output :
- circuits : 4
  - contact capacity : 40V.DC 1.8A
  - frequency : 0Hz ~ 1KHz
  - features : overpressure、 short circuit protection
- 9) Analog output :
- circuits : 1
  - signal peak : 0 ~ 5V.DC
  - precision : 0.5%
  - resolution : 0.025%
- 10) Communication interface :
- CAN : 1circuit , Rate of optional , ISO11898 CAN 2.0B、 J1939
  - Communications link : 1circuit , 4G/GSM
    - ✧ North American version- frequency band LTE-FDD B2/4/5/12/17 , WCDMA B2/4/5 , GSM 850/1900
    - ✧ The European version—frequency band LTE-FDD B1/3/5/7/8/20 , WCDMA B1/5/8 , GSM 850/900/1800/1900
    - ✧ The Chinese version—frequency band LTE-FDD B1/3/8 ,LTE-TDD B38/39/40/41 , WCDMA B1 , TD-SCDMA B34/39 , GSM 900/1800
  - GPS link : 1 circuit
- 11) Display parameters :
- resolution : 320×240 ( 3RGB )
- 12) Other indicators
- kernel : TMS320F28335 ( 32bit DSP )
  - proposed kernel : 112.5MHz
  - duty cycle : ≤5 ms

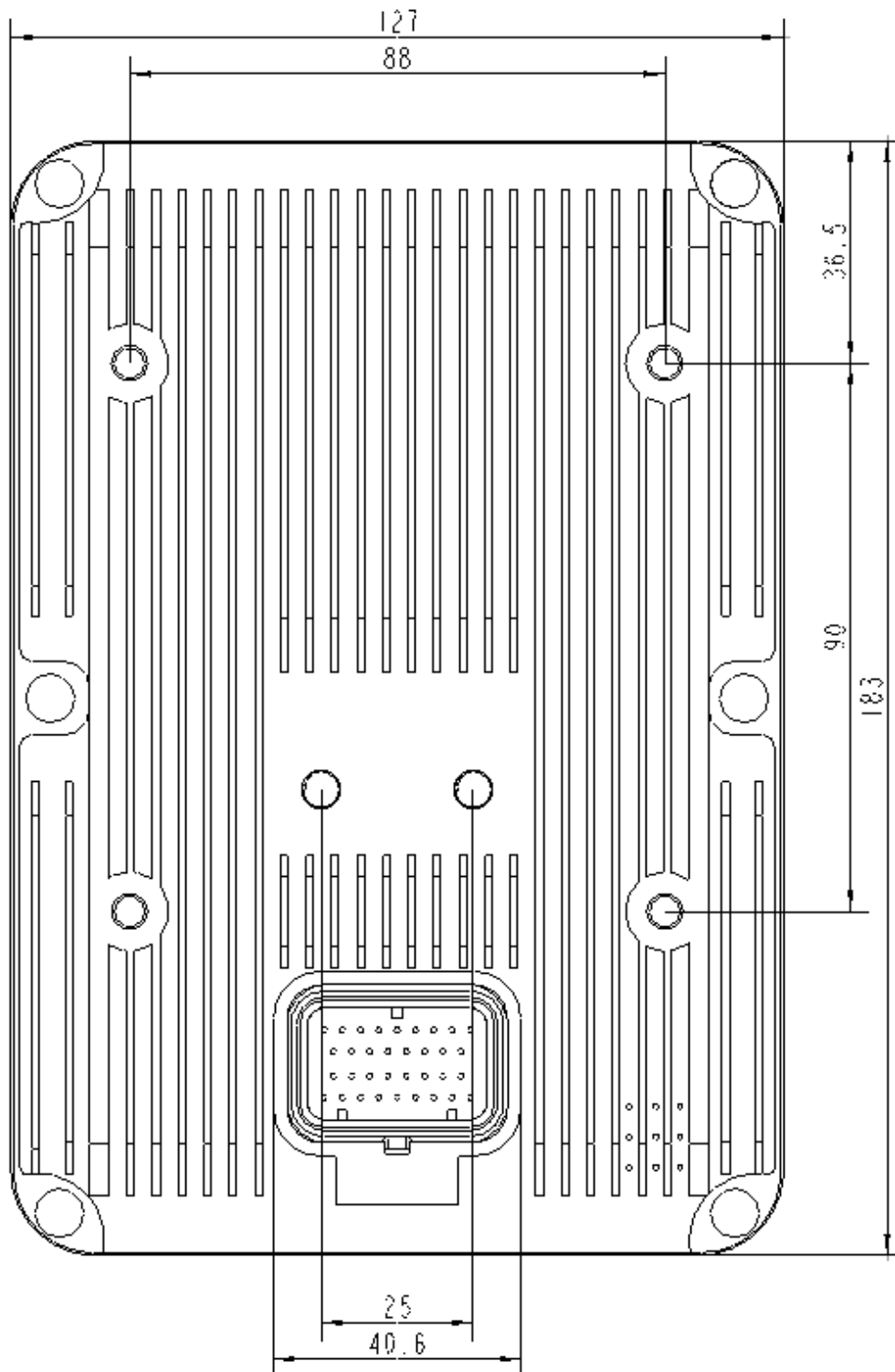
- power supply : 18 ~ 36V.DC ( Under the recommended voltage 24 v DC 36 v can't work for a long time )
- output voltage : 5V.DC , 0.75A
- Current consumption : 0.2A.DC ( 24V.DC )
- Working temperature : -20 ~ +65°C
- Storage temperature : -25 ~ +80°C
- overvoltage protection : 37.2V
- high temperature protection : 80°C
- protection grade : IP65 , all-round protection
- relative humidity : 10% ~ 90%
- overall dimensions : 183mm×127mm×51.5mm

## 2. Installation drawing

Front view



# Rear view



Right side chart

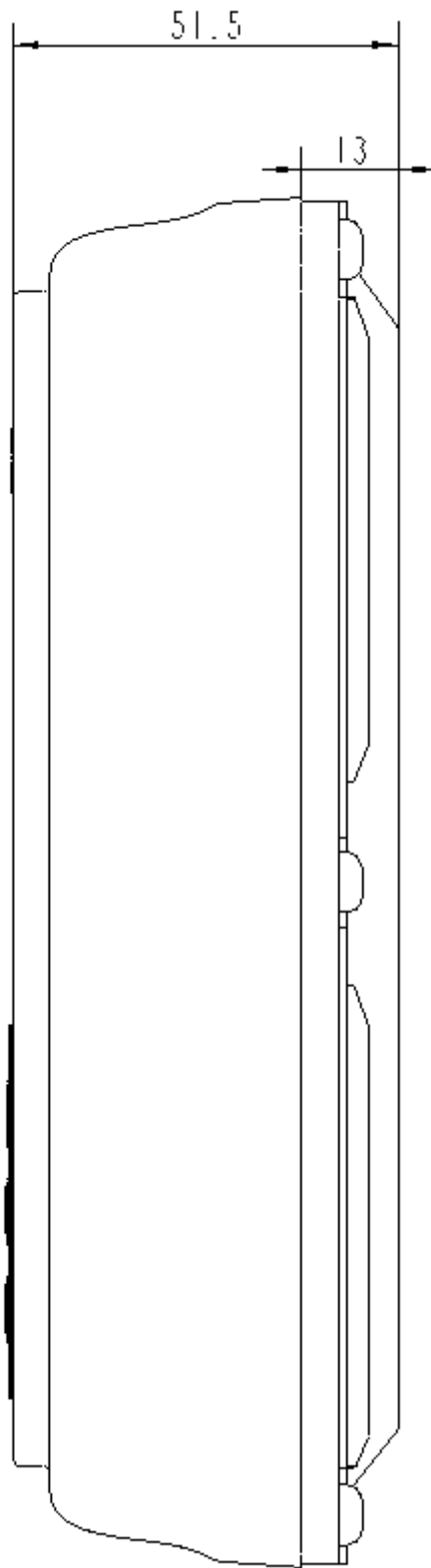
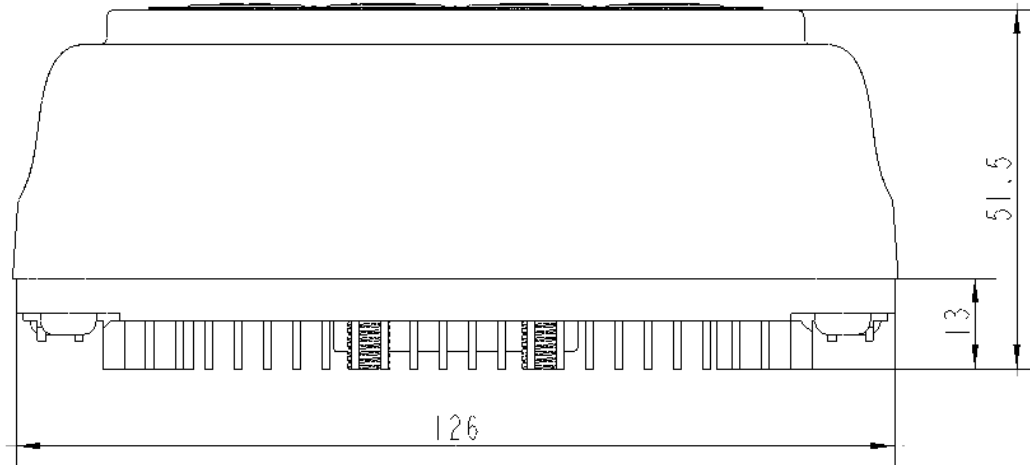
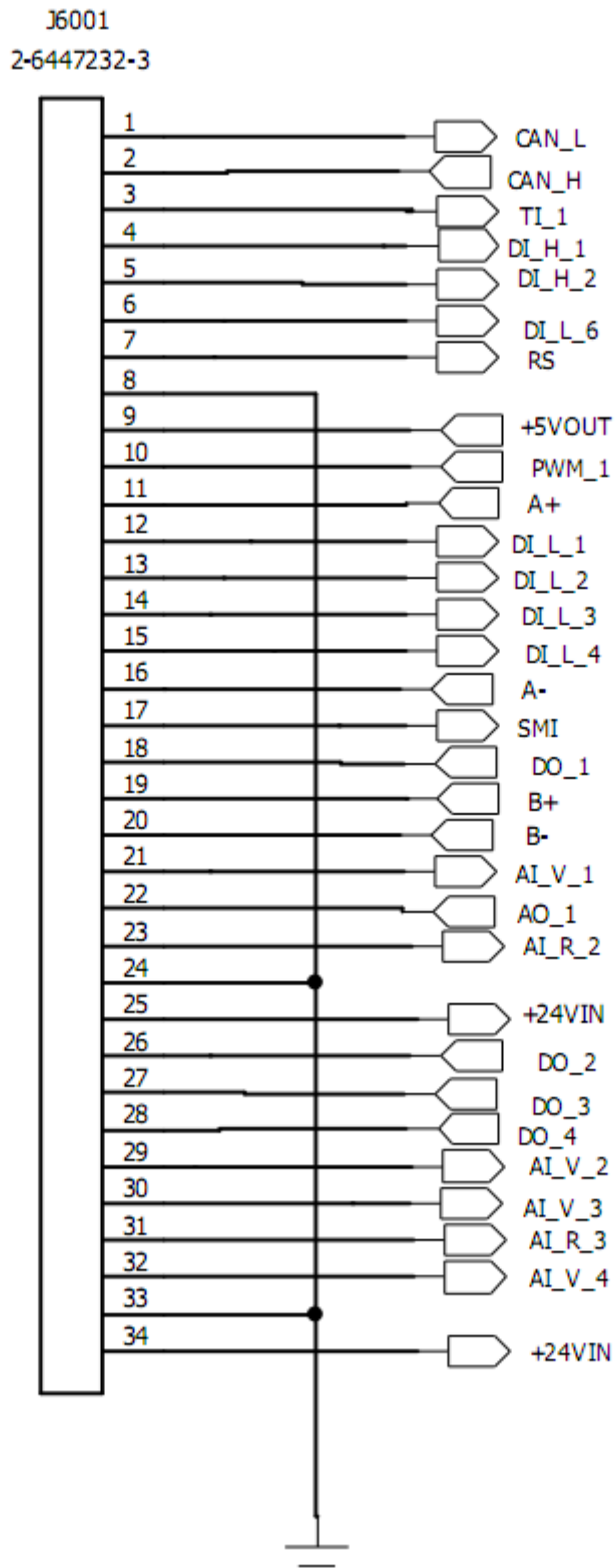




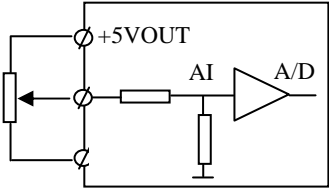
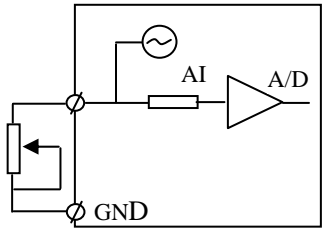
Figure of the side



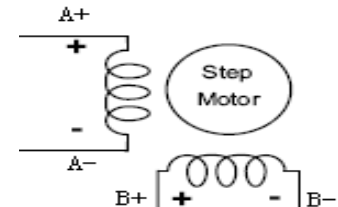
### 3、 Pin definition



4、 Terminal blocks that :

Signal name	Parameter	I/O type	Unit	Range	Precision	Terminal number	Instructions
Positive	+24VIN	Analog input	V	18 ~ 36		J1-25, J1-34	Analog output without load (open), switch output without load (open), PWM output without load (open), the standard + 24 VDC power supply, the current consumption of about 0.2 A.
Negative	GND	Analog input	V	0		J1-8,J1-24,J1-33	
Voltage input	AI_V_i ( i = 4 )	Analog input	V	0 ~ 5	0.5%	J1-21,J1-29,J1-30 , J1-32	
Resistance input	AI_R_i ( i = 2 )	Analog input	Ω	0 ~ 130	0.5%	J1-23,J1-31	

Signal name	Parameter	I/O type	Unit	Range	Precision	Terminal number	Instructions
Discrete input ( low level )	DI_L_i ( i = 1 ~ 5 )	Digital input	V	0 ~ 40		J1-6,J1-12,J1-13, J1-14,J1-15	
Discrete input ( high level )	DI_H_i ( i = 2 )	Digital input	V	0 ~ 40		J1-4,J1-5	
Periodic input	TI_i ( i = 1 )	Digital input	Hz	10 ~ 70000	0.1%	J1-3	
Analog output	A0_i ( i = 1 )	Analog output	V	0 ~ 5		J1-22	

Signal name	Parameter	I/O type	Unit	Range	Precision	Terminal number	Instructions
PWM output	PWM_i ( i = 1 )	Analog output	A	0 ~ 1.5	1%	J1-10	
CAN high level line	CAN_H	Digital input output	V	2.5 ~ 5		J1-2	CAN by way of bus connection , terminal 120Ω resistance
CAN low level line	CAN_L			0 ~ 2.5		J1-1	
Program reshipment jump line	RS	Digital input				J1-7	RS short, after receiving the program can be heavy on electricity.
+5V power output	+5VOUT	Analog output	V	5.0	±5%	J1-9	The external device, such as sensor with power supply
Sleep mode input	SMI	Digital input	V	0 ~ 36		J1-17	1) 0<SMI<6.5V The controller into sleep mode; 2) 11V<SMI<36V) Controller into the normal working mode.
Motor driver output	MO_i ( i = 4 )	Digital output	V	0 ~ 36		J1-11,J1-16 J1-19,J1-20	

## 5、Matters needing attention :

- 1、 besides display shell well grounded, all connected to display the load, and so on input and output points must connect into a closed loop, which all of the input and output must be connected with display corresponding to.
- 2、 4G, GPS antenna installation, pay attention to the antenna will tighten the joint after use.

## 6、Radiation Exposure Statement

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This device must be installed and operated with a minimum distance of 20 cm away from radiator/antenna to user body.

## 7、Declaration of Conformity



Hereby Shanghai Rising Digital Co.,Ltd., declares that this SECD-315A-02display screen, SECD-517C-02 display

screen,SECD-710F-02 display screen (Model No. SECD-3I5A-02, SECD-5I7C-02, SECD-710F-02) is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Input Power:7~37 DC V, Normal 24DC V

Rating Current: 0.2A

Ambient Temperature ranges -20 ~ +65°C°C

This device must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

Manufacture

Shanghai Rising Digital Co.,Ltd.

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## **8、 FCC Statement**

FCC identification number is not visible when the device is installed inside another device, then the outside of the device into which

the device is installed must also display a label referring to the enclosed device. This exterior label can use wording such as the following: "FCC ID: 2AJONSECD-3I5A-02"

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The radios in this device have been designed and manufactured to not exceed stipulated emission limits for exposure to radio frequency (RF) energy as required by the Federal Communications Commission of the U.S. Government 47 C.F.R. § 2.1091 and



2.1093.

The antennas should be put up by the professional parts who take full responsibility for compliance with FCC 15.203