

Offical Website





**User Manual** 

Solar Communication Box

SCB3000

V1.1-2023-07-10

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# **1** Symbol Definition



# 2 Installation Instructions and Warnings

The SCB3000 is designed and tested in strict accordance with relevant safety regulations. However, as electrical and electronic equipment, the following safety instructions must be observed during installation and maintenance, and improper operation will cause serious injury and property damage to the operator and a third party.

• The SCB3000 must be installed and maintained by professionals in accordance with local standards and regulations.

• When installing and maintaining the SCB3000, power must be disconnected from the SCB3000 to prevent electric shock.

• During operation, do not touch any live parts of the SCB3000, such as its internal components and cables, to avoid electric shock.

Before replacing any components within the SCB3000, power must be disconnected from the SCB3000 and the newly replaced components must be ensured to meet the requirements for use of the SCB3000, and GOODWE will not be liable for any personal harms or warranty claims arising from noncompliance with this instruction.
When the SCB3000 is in operation, do not plug in or remove any cable.

• The SCB3000 has an internal lightning protection module installed, inside which the PE is connected to ground when installing the SCB3000.

• Ensure that the AC input voltage and current are matched with the voltage and current ratings of SCB3000, Otherwise the components could be damaged or not functioning properly, and GOODWE will not be liable for any responsibilities or warranty claims arising from this mismatch.

# **3 Product Introduction**

## 3.1 Product Overview

The SCB3000 is used in photovoltaic power generation systems to integrate data collectors, allowing for the port aggregation, data acquisition and storage, as well as centralized monitoring and maintenance of inverters and instrumentations in photovoltaic power generation systems.

SCB3000 model description:

SCB3000 includes the SCB3000P00 and SCB3000P01. The SCB3000 is the name of the series of photovoltaic communication boxes; P means that the local communication mode is PLC2.0; 00 means that the cloud communication method supports LAN; 01 means that the cloud communication method supports LAN and optical fibre. In this manual, the SCB3000P00 and SCB3000P01 models are both referred to as the SCB3000.

Flexible networking:

Communication with inverters supported via PLC or RS485.

#### Communication with the server available via Ethernet, fiber optics, etc.

Note: When the SCB3000 uses PLC communication, it can only communicate with inverters supporting PLC2.0. Currently, inverters equipped with PLC2.0 function include the HT and SMT series. For details, please contact the Goodwe after-sales service centre.

## 3.2 Appearance Introduction

After opening the package, check the product to confirm whether it is consistent with the specifications of the SCB3000 you purchased. The appearance of the SCB3000 is shown in Figure 3.2-1.



No.	Label	Description
1	L1/L2/L3/PE	Three-phase AC and protective ground wiring port (with a waterproof cap)
2	LAN/ANTENNA	Ethernet/Antenna port (with a waterproof cap)
3	COM1	RS485-1 port (with a waterproof cap)
4	COM2	RS485-2 port (with a waterproof cap)
5	COM3	RS485-3 port (with a waterproof cap)
6	COM4	RS485-4 port (with a waterproof cap)
7	FXL1/FXL2	Fiber Optic Wiring port (with a waterproof cap)
8	L/N	AC Power Supply port (with a waterproof cap)

## 3.3 Packaging information

Hexagon socket

screw×3



# **4 Equipment Installation**

### 4.1 Installation Instructions

- The SCB3000 is installed in places where there is no significant shaking, shock or vibration, and not subject to rain or snow.
- The installation height shall be parallel to the line of sight for easy operation and maintenance.

• The installation location of the SCB3000 should be free of explosive media containing gases

and dust sufficient to corrode metals and damage insulation.

- The parameter labels and warning signs must be clearly visible after the SCB3000 is installed.
- The installation location of the SCB3000 shall avoid sunlight, rain, and snow.



## 4.2 Installation Location

The following factors must be considered when choosing the installation location:

- The installation method and location must be suitable for the weight and size of the SCB3000.
- Install on a solid surface.
- The installation location must be sufficiently ventilated.
- The SCB3000 can be horizontally placed or vertically installed.
- The vertical installation or tilt back can not exceed 15 degrees, must not be tilted sideways, the

wiring area should be facing down, as shown in Figure 4.2-1.



Cable Tie×5

• To ensure good heat dissipation and easy disassembly, the minimum clearance around the SCB3000 must not be less than the following values, as shown in Figure 4.2-2.



## 4.3 Installation Method

Vertical Installation:

Drill holes in the wall with a diameter of 8mm and a depth of 45mm. The spacing of the holes is shown in Figure 4.3-1.
 Use the expansion screws in the accessory pack to fix the back plate on the wall, as shown in Figure 4.3-2.



3. Install the enclosure as shown in Figure 4.3-3.



Horizontal Placement:

1. The SCB3000 can be placed horizontally, as shown in Figure 4.3-4.

2. The SCB3000 needs to be placed indoors at a location where it can be fixed, as shown in Figure 4.3-5.



## 4.4 Port Description

The internal ports of SCB3000 are described as follows:



No.	Port	Port Description	
1	POWER	DC Power Input (occupied)	
2	NET	Ethernet (occupied for fiber optic version)	
3	DI	DRED (for Australia) or RCR (for Germany) function	
4	NC	Reserved	
5	COM1	RS485 port for communications with the inverter	
6	COM2	RS485 port for communications with the inverter	
7	COM3	RS485 port for communications with the inverter	
8	COM4	For connections to third-party equipment	
9	TP1, TP2	Ethernet (for fiber optic version only)	
10	TP3	Ethernet (occupied, for fiber optic version only)	
11	FXL1, FXL2	Fiber Optical Port (for fiber optic version only)	

Note: Item numbers 9, 10 and 11 in the above list are fiber optic module ports, and will only be used when the fiber optic version is selected. These 3 ports will not exist if there is no fiber optic version. Ports 5, 6 and 7 are RS485 ports, and will not be used when the SCB3000 is communicating with inverters through the PLC.

## 4.5 Wiring Instructions



#### RESET Button:

• Long press the button for 10s to switch the equipment from dynamic IP mode to static IP mode. The indicator lights up from right to left after switching the mode.

• Long press the button for 3s to switch the equipment from static IP mode to dynamic IP mode. The indicator lights up from left to right after switching the mode.

#### 4.5.1 Description of SCB3000 Power Supply Cable

The single-phase power supply cable is connected to the internal single-phase switches L and N of the SCB3000.

Input phase voltage range: AC100V~AC240V; AC frequency: 50Hz/60Hz Input wire and crimping:



Note: Before connecting the AC power line, make sure that the switch upstream of SCB3000 is open

#### **4.5.2 PLC Wiring Instructions**

(a) Protective Earth Wiring:

The protective ground wire is connected to the PE of the base plate of inside the SCB3000 enclosure.

(b) Remove the three-phase AC power line cover panel.

(c) Connect the three-phase AC power line

Note: Before connecting the AC power line, make sure that the switch upstream of SCB3000 is open. Three-phase input line voltage range: AC342V~AC800V; AC frequency: 50Hz/60Hz.

The three-phase AC power line is connected to the transformer bus, and then to the circuit breakers L1, L2 and L3 in the SCB3000 via port (1).

(d) Install the three-phase AC power line cover panel.

AC Input wire specifications and crimping:



#### 4.5.3 Description of RS485 communication wiring

COM1, COM2 and COM3 are RS485 ports for communications with the inverter that can be left unused if communications with inverter PLC can meet the requirements, users can choose to connect COM1, COM2 or COM3 for communications with the inverter as needed. The COM4 port is only connected to third-party equipment such as environment monitors.

Note:

1. Contact the after-sales service if you need to connect a third-party device, like an environmental monitoring device, to the COM4 port of the SCB3000.

2. For RS485 communication wiring, please use standard RS485 communication twisted pair.

3. The maximum number of inverters connected to each of COM1, COM2 and COM3 is 20 units, with the total

of 60 units allowed for the 3 ports.

4. In the ports COM1, COM2, COM3 and COM4, A corresponds to the differential signal +, and B corresponds to the differential signal.

# Wire specifications and installation: for RS485 communication cables, shielded twisted pair cables with a conductor cross-sectional area of 1mm<sup>2</sup> are recommended for use.



#### 4.5.4 Description of LAN communication wiring

The SCB3000 can be connected to routers, computers, switches and other equipment through

the network cable; The network cable is connected to the internal NET port of the SCB3000; if you select the fiber optic version of this device, the network cable can be connected to the TP1 or TP2 port (the NET port has been connected to the TP3 port for the fiber optic version of this device).

Cat 5e is recommended for use as the network cable. After wiring, please use the fire clay included to block it to ensure its fireproof performance.

#### 4.5.5 Description of fiber optic communication wiring

The SCB3000 fiber optic version can be connected to fiber optic terminals through optical cables for data transmission.

The optical cables are connected to the FXL1 and FXL2 ports inside the SCB3000.

Note: Both ends of the same fiber optic must be connected to the TX and RX ports, otherwise the fiber optic connection will not be made correctly.

#### 4.5.6 Wiring instructions for other ports

The DI port of SCB3000 is compatible with both RCR (for Germany) and DRED (for Australia)

functions. The port definitions in different functions are as follows:

	REF1	1	2	3	4	REF2
RCR	+5V	D_IN1	D_IN2	D_IN3	D_IN4	+5V
DRED	RefGen	DRM1/5	DRM2/6	DRM3/7	DRM4/8	Com/DRM0

If the user does not need to use this function, the port does not need to be wired.

### 4.6 Networking Diagrams





One of the SCB3000s need to be set as the master (root node), with the others as the slaves (slave nodes).

SCB3000 can work with the environmental monitoring device from Jinzhou Sunshine Technology Co.Ltd. Contact the after-sales service to get more information if you have any questions.

## **5** System Operations

### 5.1 Indicator Description

$\bigcirc$	$\bigcirc$		<b>?</b>	() ()	() ()	(î;	Ť
POWER	RUN	SERVER	PC	COM1	COM2	COM3	COM4

Port	Status	Status Description
	Blue Light On	The power supply is OK
POWER	Blue Light Off	The power supply is Off
DUN	Blue Light flashing (on for 1 second, off for 1 second)	The SCB3000 is not operating properly
RUN	Blue Light On or Off continuously	The SCB3000 is operating properly
	Blue Light On continuously	The SCB3000 is connected to the external network server correctly.
SERVER	Blue Light flashing (on for 1 second, off for 1 second)	The SCB3000 is connected to the router correctly, but not connected to the external network server.
	Blue Light Off	No network connection for SCB3000
DC	Blue Light On	The SCB3000 is connected to a computer and ProMate software
	Blue Light Off	The SCB3000 is not connected to a computer and ProMate software
	Blue Light On	The actual number of inverters acquired by SCB3000 is equal to the number of acquired inverters set for the port
COM1	Blue Light flashing (on for 1 second, off for 1 second)	The actual number of inverters acquired by SCB3000 is less than the number of acquired inverters set for the port
	Blue Light flashing (on for 1 second, off for 3 seconds)	The number of inverters acquired by SCB3000 is not set for the port
	Blue Light Off	The SCB3000 has not acquired any data from the inverter
	Blue Light On	The actual number of inverters acquired by SCB3000 is equal to the number of acquired inverters set for the port
COM2	Blue Light flashing (on for 1 second, off for 1 second)	The actual number of inverters acquired by SCB3000 is less than the number of acquired inverters set for the port
	Blue Light flashing (on for 1 second, off for 3 seconds)	The number of inverters acquired by SCB3000 is not set for the port
	Blue Light Off	The SCB3000 has acquired data from the inverter
	Blue Light On	The actual number of inverters acquired by SCB3000 is equal to the number of acquired inverters set for the port
сомз	Blue Light flashing (on for 1 second, off for 1 second)	The actual number of inverters acquired by SCB3000 is less than the number of acquired inverters set for the port
	Blue Light flashing (on for 1 second, off for 3 seconds)	The number of inverters acquired by SCB3000 is not set for the port
	Blue Light Off	The SCB3000 has not acquired any data from the inverter
COM4	Blue Light On	Other equipment (such as external environment monitors) communication good.
	Blue Light Off	No other equipment, such as external environment monitors

## 5.2 Master Computer Operations & Parameter Configurations

ProMate is a software released by us for the configuration of the SCB3000 functions, it enables the modification of the network IP address of the SCB3000, the configuration of the number of port-connected inverters, time settings, RCR and DRED feature configuration, field debugging and more.

Please download the ProMate app at https://en.goodwe.com/.

#### 5.2.1 Connecting to the Master Computer Software

If the user wants to configure the SCB3000 using ProMate software, the master computer needs to be connected in either dynamic IP (DHCP) or static IP according to the way the network is connected.

1. SCB3000 dynamic IP address connection:

SCB3000 is set to dynamic IP mode by default, and the network connection is simply made by connecting the SCB3000 NET port to the router LAN port with the network cable, which is plug and play. To configure the SCB3000, connect your computer to the router with a network cable, and launch the ProMate software in which you can click "Scan" to complete the connection successfully. When the configuration is complete, disconnect the computer from the router.

➡ Pro≣ate ¥2.0.19			
<ul> <li>☐ DataLogger</li> <li>② GPRS Setting</li> <li>② GPRS Setting</li> <li>③ Environment Setting</li> <li>③ Protocol Setting</li> <li>④ Protocol Setting</li> <li>④ Protocol Setting</li> <li>④ PLC Setting</li> <li>⑦ Radio Setting</li> <li>⑦ Meter Config</li> <li>③ Ragider Pasc Through</li> </ul>	LAN Configuration         DHCP Enable           IP         192         168         8         115         Scan           Submet Mark         255         225         235         0         Connect           Gateway         192         168         8         8         9         Setemation           DIS         8         8         8         9         Setemation         Setemation           DIS         8         8         8         9         Setemation         Setemation           DED         6.8         8         8         9         Setemation         Setemation           DIS         8         8         8         9         Setemation         Setemation         Setemation           Capacity         KW Power Limit         KW         Set         Setemation         Setemation           Ratio of CT         Set         Set         Set         Set         Set         Set           OVER MOR         OVER MOR         Constact Int Status         Recovery Time         Set	COM Configuration COM Configuration COM Configuration COM 2 Device Amount COM 3 Device Amount COM 3 Device Amount Set COM 5 Configuration Device Count (9 Bax No: 10 Set Configuration Concer Protocol Custom Modus  of " "0,5s Read Write	Excouper Pio Info           Status           Correction Succeds           N           Isabosci 2018/85/3           Software Version           V1.p4           Set Time           Dimente Last           1           6           2239+TL/2018/001           01         82294+TL/2018/001           01         82294+TL/2018/001           01         82294+TL/2018/001           05         82294+TL/2018/001           05         82294+TL/2018/001           05         82294+TL/2018/001           06         82294+TL/2018/001           07         82294+TL/2018/001           09         82294+TL/2018/0012
/ II /			Online/Offline Amount 0/9
- / /			Refresh
中文 English	Cerrico jogino The Meage 09.2513. Cet inverter Statu Lit Soccessfulyi 09.2535. Cet inverter Media Address Lit Soccessfulyi 09.2535. Cet Inverter Media Address Lit Soccessfulyi 09.2537. Set Time Soccessfulyi		

Note: If the SCB3000 is set to static IP mode, you need to switch to dynamic IP mode before you can configure it using dynamic IP connection. Press and hold the "RESET" button for about 4 seconds, this will make the LED signal indicators flash from right to left, indicating a completed reset and restart, after which the SCB3000 will be switched to static IP mode.

#### 2. SCB3000 static IP address connection:

Note: SCB3000 is set to dynamic IP mode by default, you need to switch the SCB3000 to static IP mode first by pressing and holding the "RESET" button for about 10 seconds, this will make the LED signal indicators of the SCB3000 flash from right to left, indicating a completed reset and restart, after which the SCB3000 will be switched to static IP mode (the default IP address is 192.168.1.200). The user needs to set the computer to static IP mode, and configure the computer's IP address and the SCB3000's IP address in the same network segment. The steps are as follows (using Windows 7 OS as an example). Users can find the methods on the Internet that can be used to modify the IP addresses of computers running different operating systems.

(a) Use a network cable to connect the "NET" of the SCB3000 to the Computer's Ethernet port.(b) Right-click "Network" and select "Properties".



(c) Click "Change adapter settings".



(d) In the local connection popup dialog box, right-click "Local connection" and click "Properties".



The following popup dialog box is displayed:

Connect using:		
Intel(R) Ethen	net Connection 1217-LM	
121		
This connection use	s the following items:	Configure
Client for M	icmsoft Networks	
QoS Packe	t Scheduler	
File and Pri	nter Sharing for Microsoft	Networks
🗹 🔺 Internet Pro	tocol Version 6 (TCP/IPv	(6)
🗹 📥 Internet Pro	tocol Version 4 (TCP/IPv	(4)
🗹 🔺 Link-Layer	Topology Discovery Map	per I/O Driver
🗹 📥 Link-Layer	Topology Discovery Resp	onder
	Uninstall	Properties
Install		
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Install Description Transmission Con wide area network across diverse int	trol Protocol/Internet Prot c protocol that provides c	tocol. The default ommunication
Install Description Transmission Con wide area network across diverse inter	trol Protocol/Internet Prot k protocol that provides c erconnected networks.	tocol. The default communication

(e) Double-click "Internet Protocol Version 4 (TCP/IPv4)" to show the "Internet Protocol Version 4 (TCP/IPv4)" popup dialog box, and set up the dialog box according to the requirements below. The default IP address of the SCB3000 is 192.168.1.200. To keep the computer and SCB3000 in the same network segment, the "IP address" and "Default Gateway" should be set at the 192.168.1.XXX segment (1≤XXX≤250 and XXX≠200). For example: The IP address can be set to 192.168.1.100 and the default gateway 192.168.1.254.

neral	
You can get IP settings assign his capability. Otherwise, you or the appropriate IP settings	ed automatically if your network supports u need to ask your network administrator s.
Obtain an IP address aut	tomatically
() Use the following IP addr	ress:
IP address:	192 . 168 . 1 . 100
Subnet mask:	255 . 255 . 255 . 0
Default gateway:	192 . 168 . 1 . 254
Obtain DNS server addre	ess automatically
Use the following DNS se	rver addresses:
Preferred DNS server:	· · ·
Alternate DNS server:	
🔄 Validate settings upon e	xit Advanced

Click the "Connect" button in ProMate, when it shows that the connection is successful, ProMate is connected to the SCB3000 successfully.

ProMate ¥2.0.19			
DataLogger     Detracoger     GPRS Setting     Power Setting     Environment Setting	LAL Configuration         D HCP Enable           P         152         144         1         155           Submit Mail         255         255         0         Connect           Cellers         1         1         Connect         Set           DIS         8         8         8         1         Connect           Cellers         1         1         Set         Set           DIS         8         8         8         Set           Cellers         DED Enable         HeAlt Pressure Am Boother	COM Configuration COM Configuration COM Configuration COM 2 Device Amount COM 3 Device Amount Set RCR Setting Configuration Conf	Excoper Plo Info Status Connection Succeeds SN (S0005002153853 Software Version V1p4 Set Time Torother Las
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中文 English	Clear Log Log Info Time I Versage 0022531 Celt Inverter Status List Successfully1 0022535 Celt Inverter Mobile Address List Successfully1 0022535 Celt Inverter Status List Successfully1 002255 Celt Inverter Status List Successfully1 00225 Celt Inverter Status List Successfully1 00225 Celt Inverter		Online/Office Amount 509 Refresh

Note: If there is only one Box-type substation on the customer site, and the data is uploaded to GOODWE servers, there is no need to configure the box number and address through ProMate, simply connect ProMate, click to get the inverter list to see if the inverter is all online. If there are multiple box Box-type substations onsite, refer to 5.2.2 for setup.

#### 5.2.2 Parameter Configurations (for PLC communication with the inverter)

When the connection to ProMate is successful, parameter configurations can be made on the SCB3000 and the inverter to which it is connected. (a) Choose Protocol

Click the "Ezlogger Pro" button and select the protocol in the following popup. Custom is used for parameter configuration and Modbus protocol for normal communication.

The machine is set to "Custom" in the factory by default, and the following protocol showed in grey is the one that is currently used. After switching protocols, ProMate waits about 1 minute to proceed.

Pro <b>≣</b> ate ¥2.0.19			
😬 DataLogger	LAN Configuration DHCP Enable	COM Configuration	EzLogger Pro Info
🚯 GPRS Setting	IP         192         168         8         115         Scan           Subnet Mask         255         255         0         Connect           Gateway         192         168         8         1	COM1 Device Amount COM2 Device Amount COM3 Device Amount COM3 Device Amount	Connection Succeeds
💤 Power Setting	DNS 8 . 8 . 8 . 8	Set	83000SCB02183853 Software Version
Environment Setting	DRED & ARCB	RCR Setting	V1.p4 Set Time
Protocol Setting	Export Enable DRED Enable Hight Pressure Anti Backflow	Enable Only for Germany  SCB Configuration	Inverter List
PLC Setting	Total Capacity kw Power Limit kw Set	Device Count: 9 Box No : 10	No.         InverterSN         Status           01         8225KHTU201R0011         Offline           02         8225KHTU201R0011         Offline
음 Radio Setting	Ratio of PT Set	Choose Protoco Custom Modbus	03 8225KHTU201R0006 Offline 04 8225KHTU201R0010 Offline 05 8225KHTU201R0010 Offline
🚰 Meter Config	OVGR/RPR OWGR ORPR Close:Checked Open:Uchecked Default:Oth	her	06 8225KHTU201R0017 Offine 07 8225KHTU201R0018 Offine 08 8225KHTU201R0018 Offine
A			
/    /			Online/Offline Amount 0/9
. / / /			Refresh
10/00	Clear Log Log Info		
	Time         Message           09:25:31         Get Inverter Status List Successfully!           09:25:35         Get Inverter Moduus Address List Successfully!           09:25:35         Get Inverter Status List Successfully!           09:26:37         Set Imsetcer Status List Successfully!           09:28:37         Get Imsetcer Status List Successfully!           09:28:37         Set Imsetcersfully!           09:28:37         Set Imsetcersfully!		

Note: Select the GOODWE custom protocol first to configure the BOX No and inverter address, then switch to the Modbus protocol for communications after all parameters have been configured.

#### (b) Settings of Device Count and Box No

Enter numbers for both "Device Count" and "Box No".

For "Device Count", enter the number of inverters actually connected to the current SCB3000. The "Box No" is used to identify the Box-type substations onsite. (For example, if there are multiple SCB3000s in use onsite, they must be corresponding to different box numbers) As shown below: the number of inverters connected to the SCB3000 on-site is 3, so the "Device



Note: The Device Count and Box No are required, the devices will not function properly if either field is not filled in.

#### As shown below: When finished setting the Device Count and the Box No, you can click

#### the "Read" button to see if the settings are successful.

- ProMate ¥2.0.19	
<ul> <li>Froil Stet V2: 0.19</li> <li>Britzoger</li> <li>CHY Stating</li> <li>CHY Stating</li> <li>CHY Stating</li> <li>Christmant Setting</li> <li>Protoci Setti</li></ul>	COM Configuration     COM Configuration     COM Configuration     COM Configuration     COM Configuration     COM Comparison     COM Comparis
	Online/Offline Amount 0/9
Clear Log Log Info The Message 09:2531 Get Inverter Status List Successfullyri 09:2535 Get Inverter Mobiou Address List Successfullyri 09:2535 Get Inverter Status List Successfullyri 09:2535 Get Inverter Status List Successfullyri 09:2535 Set The Successfullyri 09:2555 Set The Succesfullyri 09:2555 Set The Succesfullyri 09:2555 Set The Suc	Refresh

(c) Inverter Address Configuration

Connecting the SCB3000 to the inverter requires the Modbus address to be configured, with the option of one click and manual operation available for the inverter address configuration.

# As shown below: Click the "One key config" button, and the software randomly assigns the inverter address.

- ProMate ¥2.0.19					-
	ie.         InverterSN           B229471U20 \$40001         B229471U20 \$40001           B229471U20 \$40002         B229471U20 \$40002           B229471U20 \$40002         B229471U20 \$40002           B229471U20 \$40002         B229471U20 \$40002           B229471U20 \$40002         B229471U20 \$40012           B401         B4010           B4010         B40100           B4010         B40	Box Number         Address           10         1           10         2           10         3           10         5           10         5           10         6           10         7           10         7           10         7           10         7           10         9           a device is less than 4, the '           ta         getNum           pater         pater	ARM Version	Ore key config Marcal (Add Update Delete Manual config Get d 'Update" functions are Set Get Get	Etacoger Pro Info           Status           Correction Souceds           SN           Software Version           VIL.pd           Set Time           Nometer SN           Status           Cli         8.2354:TL0280803           Status         Cliffie           Status         Status           Status         Cliffie           Status         Cliffie           Status         Cliffie
a	ear Log Info	]			Online/Offline Amount 0/9 Refresh
1 1 1 中文 English	ime Message :25:31 Get Inverter Status List 5 :25:35 Get Inverter Modbus Add :25:35 Get Inverter Status List 5 :28:37 Set Time Successfully!	Successfully! Iress List Successfully! Successfully!			



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DataLogger  G DataLogger  G Drins Setting  Power Setting  Friedow Setting  Protocol Setting  Protocol Setting  Protocol Setting  Meter Config  Negister Dest Through	No. 1 2 3 4 5 6 7 8 9 9 Note: ac Modbus Start A HT Adr 1044	InverterSN           8229547029180011           822947029180010           822947029180010           822947029180010           822947029180010           822947029180011           822947029180012           822947029180013           822947029180013           822947029180013           822947029180013           822947029180012           822947029180012           7           822947029180012           822947029180012           822947029180012           822947029180012           910012           822947029180012	Box Number 10 10 10 10 10 10 10 10 10 10	Address 1 2 3 4 5 6 7 8 9	ARM Version	One key config Marual Delete Marual config Get T and 'Update' functione are Set Get Restart	Education         Status           Correction Succeeds
	Clear Log Time 09:25:31 09:25:35	Log Info Message Get Inverter Status Lis Get Inverter Modbus J	st Successfully! Address List Succ	essfully!			Online/Offline Amount 0/9 Reifreah

#### (d) Manually configure the inverter address

As shown below: If there are special requirements for the inverter address on the customer site, you can choose to manually add the Modbus address by clicking "Add", entering the inverter serial number, box number, and the corresponding Modbus address in the following popup box, selecting "OK", and then clicking "Manual config" to add the address.



As shown below: If you need to modify the Modbus address after adding it, you can select the inverter serial number that needs to be modified, click the "Update" button, enter the parameters to be modified in the popup dialog box, click "OK" and then click "Manual confin".

config".

						-	EzLogg	er Pro Info	
taLogger	No.	InverterSN	Box Number	Address	ARM Version		Course -		
	1	8225KHTU201R0011	10	1	0	One key config	Carrow	ten Conservate	
RS Setting	3	8225KHTU201R0006	10	3	ő	Manual	Connec	JUIT SUCCEEUS	
	4	8225KHTU201R0010	10	4	0		SN		
wer Setting	5	8225KHTU201R0007	10	5	0	Add	830005	CB02183853	
wer betting	2	8225KHTU201R0018	10	7	0		Softwar	e Version	
vironment Catting	8	8225kHTU201R0003	10	8	0	Update	V1.p4		Set Time
moniment Secong	9	8225KHTU201R0012	10	9	0				
atocol Setting						Delete	Inverte	r List	
						Manual config	No.	InverterSN	Status
c Setting							01	8225KHTU201R0011	Offine
						Get	02	8225KHTU201R0008	Offine
dio Setting	,						03	8225KHT U201R0006 8225KHT U201R0010	Offine
	Note: as	long as the arm version	of a device is les	s than 4, the	"One key config", "Add	" and "Update" functions are	05	8225kHTU201R0007	Offine
ter Config	Modbus	Read Write					06	8225KHTU201R0017	Offine
	Start A	drr Regit Num	Data				08	8225KHTU201R0003	Offine
gister Pass Through						Set	09	8225kHTU201R0012	Offine
	HT Adn	r Start Adm	Regit Num D	ata					
						Get			
< a/	<u> </u>						-11		
Part	C Rout	tine/Fast Acq 🔝 Timely/	Regular Upgrade	- I	Set R	ead Restart			
1	III 104	PointTable III TimingIs							
$\sim 11$									
							Online	/Offline Amount 0/9	
								Refresh	
	Clear Log	Log tofo					_		
L		- cog sind							
	Time	Message							
	09:25:31	Get Inverter Status Lis	it Successfully!						
	09:25:31 09:25:35	Get Inverter Status Lis Get Inverter Modbus A	It Successfully! Address List Succ	essfully1					

Note: After selecting "Add", "Update" or "Delete" in the manual configuration section, you must click the "Manual config" button to make it become effective.

As shown below: Click the "Update" button, enter the parameters to be modified in the popup dialog box, click "OK" and then click "Manual config".

⇒ Pro≣ate ¥2.0.19		×
DataLogger     GPRS Setting     GPRS Setting     Power Setting     Environment Setting     Protocol Setting	No.         EvertheSH         Box Number         Address         <	Ed.ogor Pia Sho Status Comercion Succesis 91 [33005CR02123353] Software Version [1:1:4] Zeverte: Lut
C Pic Setting	Update         Cet           Notes at long at the am version of a device         Inverter SH:         22259710296001           Modulos field Wite         Data         Address:         7           Start Adr         Regitium         Data         Address:         7           Inf Adr         Start Adr         Regitium         Cet         Set           Address:         7         Get         Get           Cot:         CANCEL         Get         Get           Oximum Config         Cet         Set interview         Restart	No.         Invertes/H         Status           1         822847028308         Online           02         82284702830001         Online           03         62284702810012         Online
中文 English	Ceer Log Log Info Time Montage (95:55)	Ordere/Offine Amount  30 Refresh

#### (e) Protocol Switching

As shown below: In the inverter list section at the right side, click "Refresh" to show the SCB3000 connected inverters' status, confirm that all inverters are online. After the Modbus address has been configured, you can return to the "EzLogger Pro" interface where the Modbus protocol is selected in the protocol selection.

Pro≣ate ¥2.0.19			
😁 DataLogger	LAN Configuration DHCP Enable	COM Configuration	ExLogger Pro Info
GPRS Setting	Subnet Mask 255 , 255 , 255 , 0 Gateway 102 168 8 1	COM2 Device Amount	Connection Succeeds SN
🛠 Power Setting	DNS 208 . 67 . 222 . 222	Set	83000SCB02183853 Software Version
S Environment Setting	DRED & ARCB	RCR Setting	V1.p4 Set Time
Protocol Setting	Export Enable DRED Enable Hight Pressure Anti Backflow	Configuration	Inverter List
💬 PLC Setting	Total Capacity KW Power Limit KW Set	Device Count: 3 Box No: 10	No.         InverterSN         Status           01         8225K9/TU201R0018         Online           02         8225K9/TU201R0018         Online
즘 Radio Setting	Ratio of PT	Modbus	03 8225KHTU201R0012 Online
😨 Meter Config	OVGR/RPR OVGR ORPR Close: Please comfirm to charm	e Goodwe's own	
🕥 Register Pass Through	Fuction Swith Contact	Cancel	
A			
			Online/Offline Amount 3/0
	Clear Log Info		Refresh
中文 English	Time         Message           09:17:56         Get Inverter Status List Successfully!           09:27:59         Get Inverter Moßus Addees List Successfully!           09:27:59         Get Inverter Status List Successfully!           09:37:59         Get Inverter Status List Successfully!           09:37:50         Get Data Successfully!		

#### Note:

Please confirm the inverter Box No and SCB3000 Box No are set to the same value. If this is not the case, after switching to Modbus protocol, the SCB3000 will not be able to communicate with the inverter.
 It takes about 1 minute to complete the protocol switching. After the switching is successful, wait for all the inverters to go online and the SCB3000 communicates properly with the inverters.

#### 5.2.3 RS485 Port Configuration

If it is required to apply the three RS485 ports COM1, COM2 and COM3 to connect the inverters on the customer site, you can use the port configuration to pre-set the number of inverters. For example, if you set the number of inverters connected to the COM1 and COM2 ports to 10 and 13 respectively, then check COM1 and COM2, enter the numbers 10 and 13, click "Set" to complete the setting.



### 5.3 Configuration Instructions for Fiber Optic Switches

Refer to these instructions if you choose the fiber optic version. Partial parameters of fiber optic switches: fiber optic switches use single-mode single fiber with the optical port of SC, center wavelength of 1310/1550nm, and transmission distance of 20KM.

#### 5.3.1 Instruction for Use of Fiber Optic Switches

Connect the fiber jumper or tail fiber from the terminal boxes at both ends of the fiber to the optical port of the Gigabit fiber optic switch, or the Gigabit fiber optic port with one end being connected to the transmitter or router. Please note that both ends of the same fiber optic must be connected to the TX and RX ports, otherwise the fiber optic connection will not be made correctly.

Note: When using the fiber optic ring networking, there must be only one root node in one ring, with the others being slave node devices.

#### 5.3.2 Indicator Description for Fiber Optic Switches

PWR	Power Indicator	When it's on, it indicates that the power supply is OK.		
RUN	System Operation Indicator	Flashing slowly: System operating properly; Flashing rapidly: Ring network functions enabled		
FXL1	FXL1 Optical port indicator	On: Optical port connection good; Flashing: Data transmission in progress at the port		
FXL2	FXL2 Optical port indicator	On: Optical port connection good; Flashing: Data transmission in progress at the port		
1000M	Network Port Indicator	On: indicates a rate of 1000M		
ACT	Network Port Indicator	Light On and Flashing: Data transmission in progress		

#### 5.3.3 Resetting and Restoring Factory Settings

Press and hold the RESET key, turning the RUN indicator on continuously and then flashing rapidly, after which it turns back on continuously, now release the RESET key, and wait until the RUN indicator is flashing slowly, which means the factory defaults has been restored.

#### 5.3.4 Instructions for Use of the Ring Network

(1) Login: System Default IP: 11.11.11.254; User name: root; Password: admin
(2) Ring network configuration: In the ring network, only one of its computers needs to be configured as the root node of the ring network, and the others are not required to be configured. The other computers default to ring slave nodes.

(3) IP Configuration: For easy management, the IP address can be modified, but each device must be in the same IP address segment.

(4) If one or more devices in the ring network cannot function properly, make sure to plug in one set of optical fibers after replacement, and then plug in another set after the device system has been started.

## 6 Program Upgrade

### 6.1 Local Upgrade

Copy the bin file required for the upgrade to the root directory of a USB flash drive (please use a USB 2.0 device with the format of FAT32), insert it into the USB port of the SCB3000, power off the SCB3000 and power it on again, and the program will be automatically upgraded.

Note: The name of the bin file required for program upgrade is "SCB3000\_new.bin". The bin file will be sent to customers by email. After reception of the bin file, customers put it in the root directory of the USB flash drive and check whether the file name is "SCB3000\_new.bin". During the upgrade process, all 8 indicators of SCB3000 are on, indicating that the program is being upgraded. When the indicators return to normal operation mode, the program is upgraded successfully. Do not power off during the program upgrade.

## 6.2 Remote Upgrade

The upgrade program is uploaded to the server by GOODWE in the background, and

the SCB3000 will detect the upgrade by itself.

# 7 Maintenance and troubleshooting

Note: When maintaining, power off the system. Make sure power is completely

disconnected before performing maintenance.

### 7.1 Maintenance

#### Scope of maintenance:

Make sure there are no strong electromagnetic interference devices located close to the SCB3000. Make sure there is no heat source located close to the SCB3000. Check the SCB3000 regularly for signs of loose cable connections; make sure all cables are connected securely.

## 7.2 Troubleshooting

#### Typical faults:

No.	System error	Possible Causes	Recommendations	
		There is no power supply to the socket	Check that the LN power input is correct	
	The system is not powered on	AC Input on the adapter is not inserted correctly	Check the adapter to make sure the AC Input is fully inserted into the socket	
1		DC Input on the adapter is not inserted correctly	Check the adapter to make sure the DC Output is inserted into the Power port	
		The power adapter is faulty	Replace the power adapter	
		The SCB3000 system failure	Contact the supplier or GOODWE Services	
2	Cannot acquire any inverter device in ProMate software	The three-phase AC power line is not connected	Check the three-phase AC power line is connected correctly and cecurely. If not, reconnect it.	
		The device Modbus address is not set	Depending on the actual connected inverter to set Modbus address	
		The three-phase switch is not closed	Check the internal three-phase switch of the SCB3000 is connected correctly and cecurely.	
		The PLC communication board is faulty	Contact the supplier or GOODWE Services	

Note: since the SCB3000 is maintained for its entirety, replace the whole machine if there is an internal failure.

When replacing the SCB3000, power off the system.

# 8 Technical Data

Model	SCB3000					
Communication						
Max. Inverters Supported	60					
RS485 interface	4					
Ethernet	1*RJ45, 10/100 Mbps					
Number of PLC	1					
Input Voltage Range of PLC (V)	800					
Configuration						
Datalogger	Ezlogger Pro*1					
Fibre Channel Switch	2 optical ports, 6 electrical ports					
Fiber Termination Box	4-input, 24-ouput, SC single-mode					
Power Supply	100–277Vac, 50/60 Hz					
Power Consumption (W)	≤18					
Mechanical						
Dimensions (W×H×D mm)	350*460*143					
Weight (kg)	10.5					
Installation Method	Wall mounting, bracket mounting, pole mounting					
Environment						
Operating Temperature Range (°C)	-30 ~ 60°C					
Storage Temperature Range(°C)	-40 ~ 70°C					
Relative Humidity	0-100% (non-condensing)					
Max. Operating Altitude (m)	2000					
Ingress Protection Rating	IP65					

# 9 Certifications

CE