

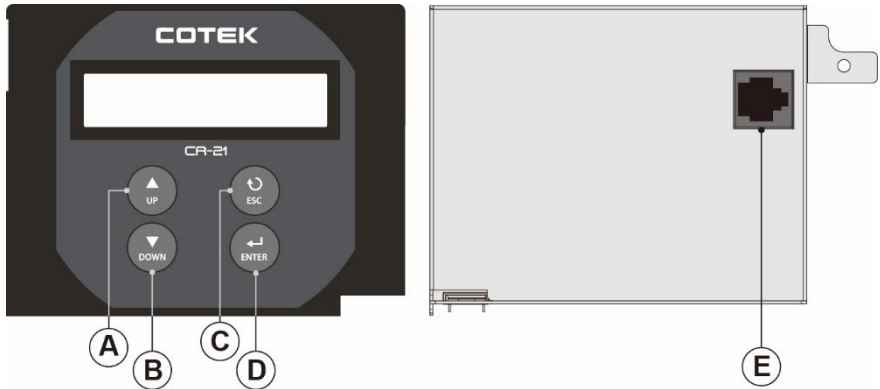
# COTEK

## User Guide For CR-21 PLUS Remote Control

### 1. Introduction

#### 1-1. System

The remote is designed to easily and quickly connect Cotech SR-1600 Plus. The LCD display is used for setting up the inverter, as well as displaying current status or fault messages. Pressing buttons allows you to select a menu item or to save a setting, once it is displayed on the LCD screen.

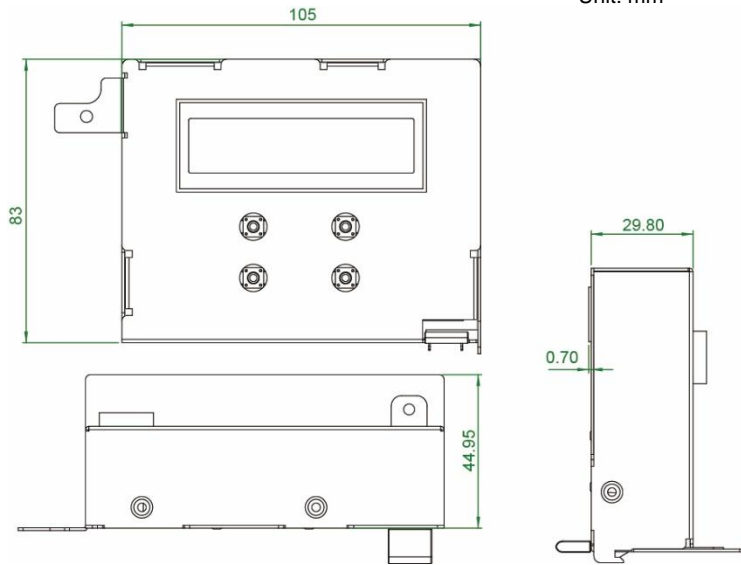


*Front and rear Panel introduction*

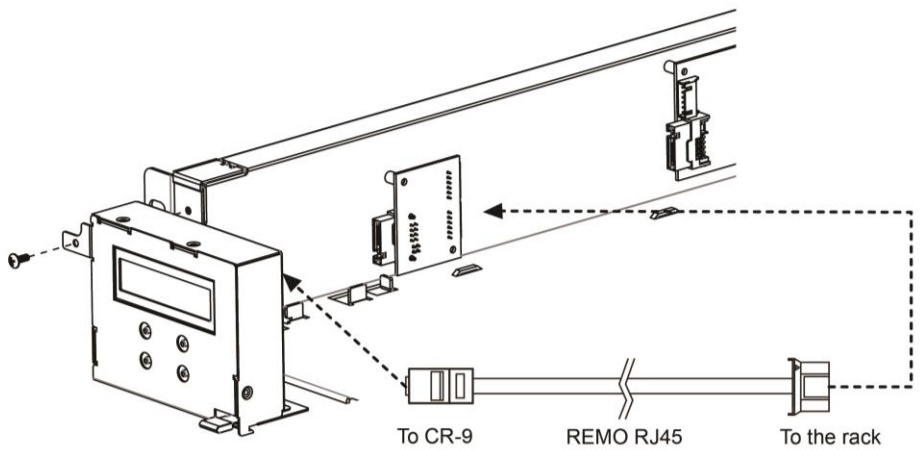
	Description	Function
A	UP	Scroll up
B	DOWN	Scroll down
C	ESC	Go back to previous page.
D	ENTER	Enter next page and save setting value
E	RJ-45 port	Connect to the Inverter

## 1-2. Mechanical Drawings

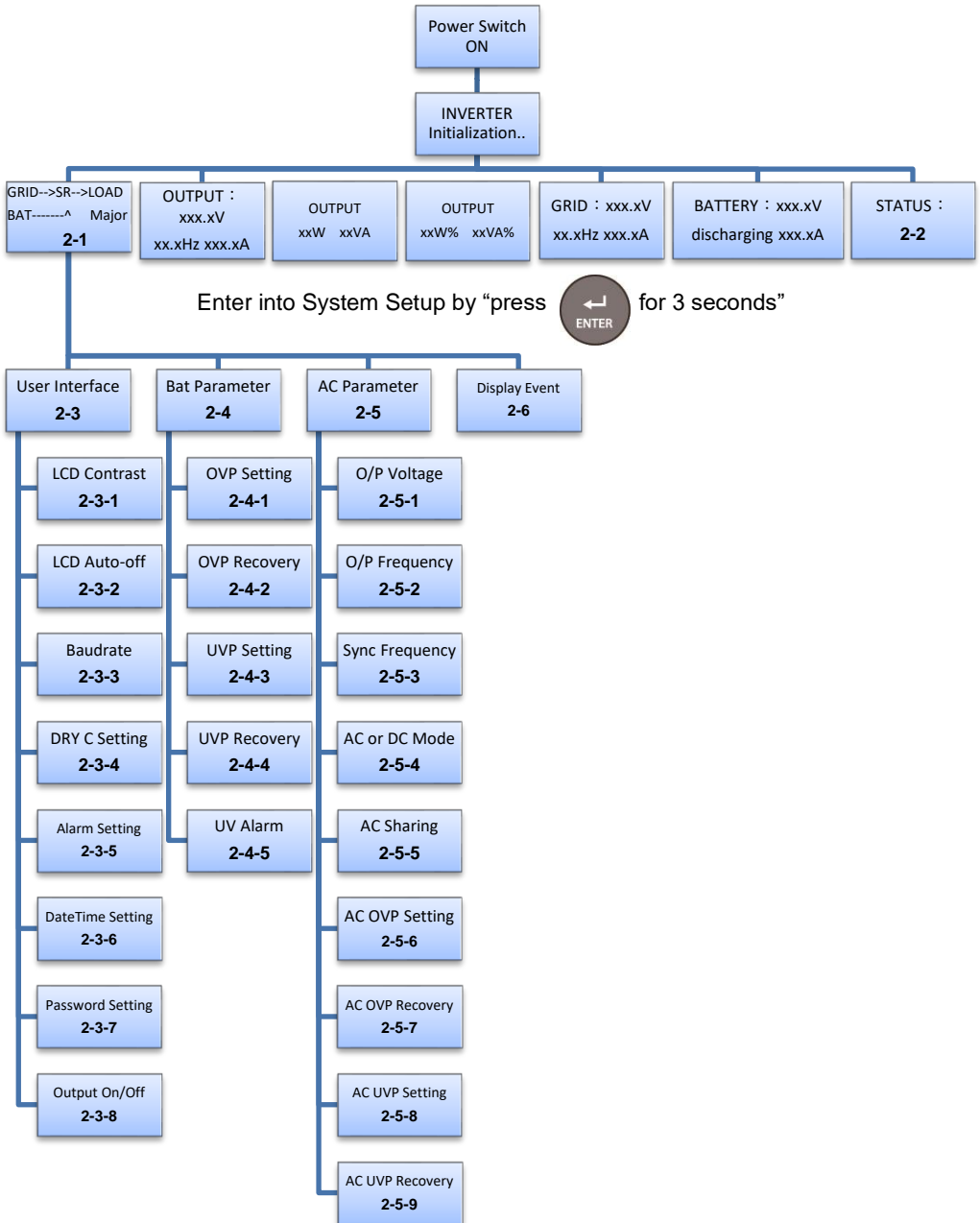
Unit: mm



## 1-3. Hardware Installation



## 2. Display tree



## 2-1 GRID-->SR-->LOAD BAT-----^ Major

The connection status and Alarm type. For the description of alarm type, (Major / Minor Alarm) please refer to Alarm List in the “SR-1600 Plus User Manual.”

## 2-2 STATUS :

STATIS	Possible Cause
Normal	The machine is working normally
Machine Abnormal	Parallel Fault or Module Fault
Grid Abnormal	AC source abnormal
Fan Fault	Fan does not work
BAT. Low	Under DC voltage protection
BAT. High	Over DC voltage protection
Over Load	The system over the rated capacity(OLA >15sec)
Redundancy Fault	Remove the redundancy module or redundant module failure
Over Temperature	Temperature is too high
BAT. Low Alarm	Under DC voltage Alarm
BAT. High Alarm	Over DC voltage Alarm
Over Load Alarm	The system over the rated apacity(OLA )
Major Relay On	Pin 12~13 voltage keep high(485 board)
Minor Relay On	Pin 14~13 voltage keep high(485 board)
Remote OFF	Turn off the machine from dry contact pin1& pin2

## 2-3 User Interface

※The first time use the setting interface, must enter password (000000).

### 2-3-1 LCD contrast : Sets the LCD screen contrast.

Default = 50%      Setting range = 0% ~ 100%

Setting Menu	SETT<value>
LCD Contrast	0 ~ 100

### 2-3-2 LCD Auto-off : Sets the LCD screen backlight auto off timer

Default = 120 seconds      Setting range = 0 ~ 120 seconds

Setting Menu	SETT<value>
LCD Auto-off	0 ~ 120

**2-3-3 Baud rate** : Default setting : 4800

Setting Menu	SETT <value>
RS-485 Baud rate	1200
	2400
	4800
	9600
	19200

**2-3-4 Dry contact C setting** : Default =1, Setting range = 0~2, default=1.

Setting Menu	SETT <value>	Description
Dry C setting	Disable	Disable
	DRY C for Major	Selectable extra alarm to go with Major
	DRY C for Minor	Selectable extra alarm to go with Minor alarm

**2-3-5 Alarm Setting:** Default =1

Setting Menu	SETT <value>	Description
Alarm Setting	Normal	Normal
	Mute	Mute all alarms
	One time	Silent warning for current status

**2-3-6 Date Time Setting:** Date yyyy-mm-dd Time hh-mm-ss  
 YY :year MM :month DD :date HH :hour MM :minute SS :second

**2-3-7 Password Setting:** 000000~999999, default setting:000000

**2-3-8 Output On/Off:**

Setting Menu	SETT <value>	Description
Output On/Off	On	Turn on the output
	Off	Turn off the output

## 2-4 Bat Parameter

**2-4-1 OVP Setting** : Set the Over Voltage Protection (OVP) and shutdown.

Default = 34 VDC @ 24V Model. 68 VDC @ 48V Model

Model	Setting value range
24V	30 VDC ~ 34 VDC
48V	60 VDC ~ 68 VDC

**2-4-2 OVP Recovery** : When the DC input voltage is higher than the OVP setting, the SR series shuts down; once the input voltage falls below the set OVP value, the SR series will automatically restart.

Default = 28 VDC @ 24V Model. 56 VDC @ 48V Model

Model	Setting value range
24V	26 VDC ~ 30 VDC
48V	52 VDC ~ 60 VDC

**2-4-3 UVP Setting** : Setting Under Voltage Protection (UVP) and shutdown on the inverter operation. Default= 18 VDC @ 24V Model. 36VDC @ 48V Model

Model	Setting value range
24V	18 VDC ~ 25 VDC
48V	36 VDC ~ 50 VDC

**2-4-4 UVP Recovery** : When the DC input voltage is below the set UVP value, the SR series shuts down; once the input voltage rises above the set UVP value, the SR series will automatically restart.

Default= 25 VDC @ 24V Model. 50VDC @ 48V Model

Model	Setting value range
24V	23 VDC ~ 27 VDC
48V	46 VDC ~ 54 VDC

**2-4-5 UV Alarm** : Setting Under Voltage (UV) alarm. When the input voltage is lower than the set value, the SR series will sound a “beep” to remind you that the unit is going to shutdown. Default= 21 VDC @ 24 V Model. 42 VDC @ 48 V Model

Model	Setting value range
24V	19 VDC ~ 26 VDC
48V	38 VDC ~ 52 VDC

## 2-5 AC Parameter

**2-5-1 O/P Voltage** : Setting the SR series output voltage on the inverter operation. 1xx = 100V, 110V, 115V or 120V ; 2xx = 200V, 220V, 230V or 240V.

Model	Setting value range
1XX	97 VAC ~ 127 VAC
2XX	194 VAC ~ 254 VAC

**2-5-2 O/P Frequency** : Setting the SR series output frequency on the inverter operation. 1xx = 100V, 110V, 115V or 120V ; 2xx = 200V, 220V, 230V or 240V.

Model	Setting value range
1XX & 2XX	50 or 60 Hz

**2-5-3 Sync Frequency** : Setting SR series output frequency tolerance range on the inverter operation. 1xx = 100V, 110V, 115V, 120V ; 2xx = 200V, 220V, 230V or 240V.

Model	Setting value range
1XX & 2XX	0 Hz ~ 3 Hz

**2-5-4 AC or DC Mode** : Default =1, AC Mode is the 1st priority source.

DC Mode : DC is the 1st priority source, and the AC power is the 2nd priority source.

AC Mode : AC is the 1st priority source, and the DC power is the 2nd priority source.

Mode Priority	SETT<value>
DC Mode	0
AC Mode	1

**2-5-5 AC Sharing** : Setting range = 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

Default= 100 (Disable)

Setting Menu	SETT<value>	Description
AC Ratio	10	AC load 10%, DC load 90%
	20	AC load 20%, DC load 80%
	30	AC load 30%, DC load 70%
	40	AC load 40%, DC load 60%
	50	AC load 50%, DC load 50%
	60	AC load 60%, DC load 40%
	70	AC load 70%, DC load 30%
	80	AC load 80%, DC load 20%
	90	AC load 90%, DC load 10%
	100	Disable

**2-5-6 AC OVP Setting** : Set the Grid Over Voltage Protection (OVP) and transfer to DC mode(or shuts down without battery).

Default = 130 VAC @ 1xx Model. 260 VAC @ 2xx Model

Model	Setting value range
1xx	127.5 VAC ~ 132.5 VAC
2xx	255 VAC ~ 260 VAC

**2-5-7 AC OVP Recovery** : When the AC input voltage is higher than the OVP setting, the SR series transfer to DC mode(or shuts down without battery); once the input voltage falls below the set AC OVP recovery value, the SR series will re-operate in AC mode. Default = 125 VAC @ 1xx Model. 150 VAC @ 2xx Model

Model	Setting value range
1xx	120 VAC ~ 127 VAC
2xx	240 VAC ~254 VAC

**2-5-8 AC UVP Setting** : Set the Grid Under Voltage Protection (UVP) and transfer to DC mode(or shuts down without battery).

Default= 90 VAC @ 1xx Model. 180VAC @ 2xx Model

Model	Setting value range
1xx	75 VAC ~ 90 VAC
2xx	150 VAC ~ 180 VAC

**2-5-9 AC UVP Recovery** : When the AC input voltage is below the set UVP value, the SR series transfer to DC mode(or shuts down without battery) ; once the input voltage rises above the set UVP recovery value, the SR series will re-operate in AC mode.

Default= 95 VAC @ 1xx Model. 190VAC @ 2xx Model

Model	Setting value range
1xx	90.5 VAC ~ 100 VAC
2xx	181 VAC ~ 200 VAC

## 2-6 Display Event

### 2-6-1 Display description

XXX (index) code:XXX (please refer to Error code List)

YY-MMDD-HH-MM-SS (Event time)

※Enter the event page the first information is the latest event

Model	Setting value range	Model	Setting value range
002	Output off	020	Under DC voltage protection recovery
003	Output on	021	Under DC voltage protection
004	AC share off	022	Overload alarm recovery
005	AC share on	023	Overload alarm
006	AC mode off	024	Overload protection recovery
007	AC mode on	025	Overload protection
008	DC mode off	026	Fan normal
009	DC mode on	027	Fan failure
010	Grid Volt normal	028	Over temperature protection recovery
011	Grid Volt abnormal	029	Over temperature protection
012	Freq normal	030	The Machine was working
013	Freq abnormal	031	Component failed
014	Over DC voltage alarm recovery	032	IC Power voltage normal
015	Over DC voltage alarm	033	IC Power voltage abnormal
016	Over DC voltage protection recovery	034	Insert the module
017	Over DC voltage protection	035	Remove the module
018	Under DC voltage alarm recovery	036	Redundancy_OK
019	Under DC voltage alarm	037	Redundancy_lost

*Error code list*

# COTEK

No.33, Sec. 2, Renhe Rd., DaxiDist., Taoyuan City 33548, Taiwan

Phone : +886-3-3891999 FAX : +886-3-3802333

[http : // www.cotek.com.tw](http://www.cotek.com.tw)

2019.03\_A0