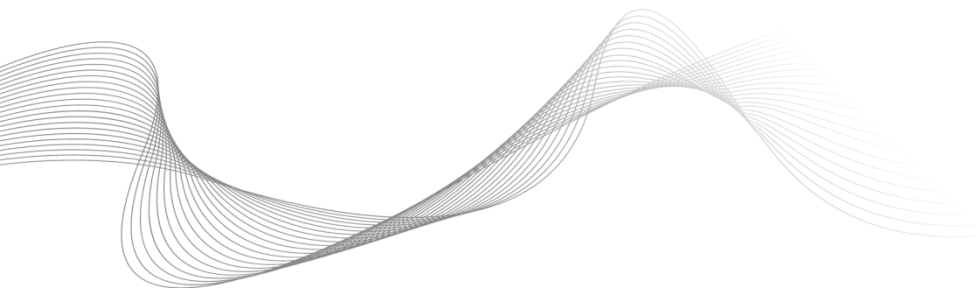


COTEK



SR-1600 Shelf User's Manual

Telecom / Datacom

PURE SINE WAVE INVERTER

Legal Provisions

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1. Safety Instructions

1-1. General Safety Precautions



Warning! Before using the Inverter, read the safety instructions.

- Do not expose the inverter to rain, snow, spray or dust. To reduce the risk of fire hazard, do not cover or obstruct the ventilation openings and do not install the inverter in a zero-clearance compartment.
- To avoid the risk of fire and electric shock, make sure that the existing wiring is in good electrical condition, and the wire size is not undersized.
- This equipment contains components which can produce arcs or sparks. To prevent fire or explosion do not install in compartments containing batteries or flammable materials or in locations which require ignition protected equipment. This includes any space containing gasoline-powered machinery, fuel tanks, or joints, fittings, or other connection between components of the fuel system.
- Depending on the user scenario, the AC output of the inverter may require user installed breaker or fuse. In AC output hardwire application, AC socket will not be provided. The inverter incorporates standard AC short circuit protection.
- The following precautions should be taken when working on the inverter :
 - Step 1 Remove watches, rings, or other metal objects
 - Step 2 Use tools with insulated handles
 - Step 3 Wear rubber gloves and boots

1-2. Other Safety Notes

- Upon receipt, examine the carton box for damage. Notify the carrier immediately, before opening, if damage is evident.
- Do not operate near water or in excessive humidity.
- The DC side connections should be firm and tight.
- Grounding : Reliable grounding should be maintained.
- Do not drop a metal tool on the battery. The resulting spark or short-circuit on the battery or on the other electrical part may cause an explosion.
- Install the inverter in a well-ventilated area. Do not block the front air vents, or the rear air exhausts of the unit.
- Wiring : Adequate input power must be supplied to the inverter for proper use; correct wiring sizes must be ensured.
- Mount the inverter such that the fan axis is horizontal.
- Do not operate the inverter close to combustible gas or open fire.
- Do not operate appliances that may feed power back into the inverter.
- Temperature : The inverter should be operated in an ambient temperature range of -25°C to 40 °C otherwise the output efficiency may be affected. Air flow to the inverter must not be blocked.

2. Mechanical Drawings (19" 2U)

Unit: mm[inch]

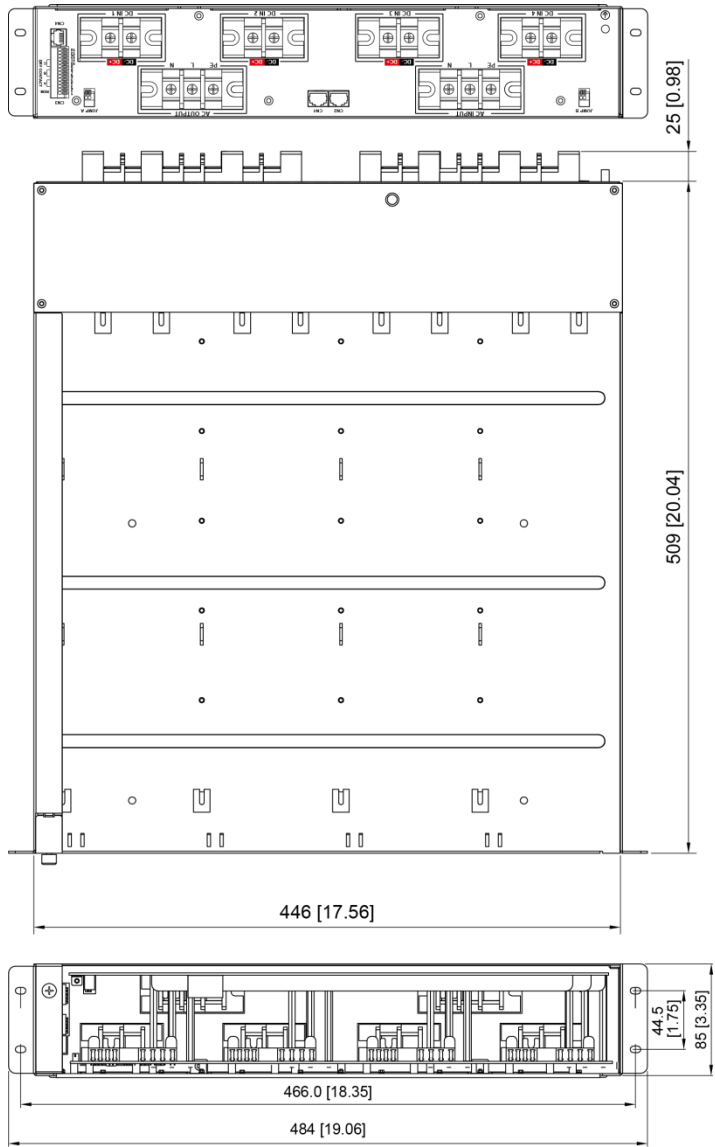


Figure 1. SR-1600 mechanical drawing-rack

3. Introduction and Installation

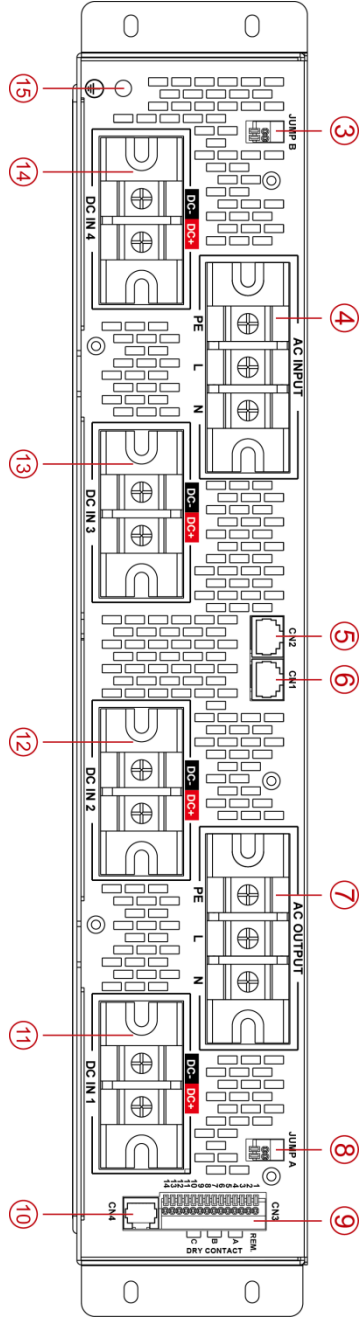
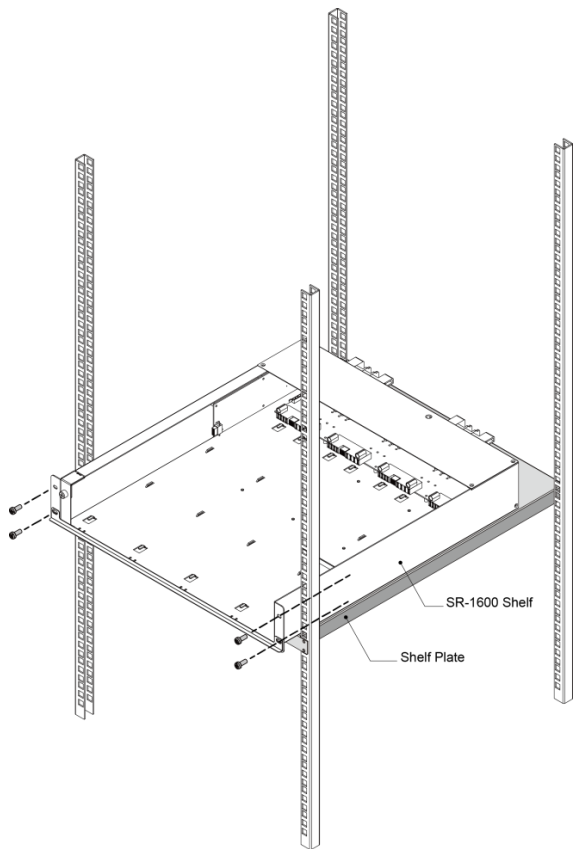


Figure 2. SR-1600 shelf rear panel view

Description	
③ Jumper B (terminal resistor)	⑩ RS-485
④ AC input terminal	⑪ DC input (Battery) #1
⑤ Parallel connection port CN2	⑫ DC input (Battery) #2
⑥ Parallel connection port CN1	⑬ DC input (Battery) #3
⑦ AC output terminal (load)	⑭ DC input (Battery) #4
⑧ Jumper A (terminal resistor)	⑮ Chassis ground
⑨ CN3 Dry contact and remote	

Table 1. SR-1600 description

3-1. Installation



① Insert SR-1600 shelf in to the shelf plate.

② Fix SR-1600 shelf by 4 screws at its front side.

Note: Please make sure the mounting bracket of your rack mount device is equipped before installing SR-1600 shelf.

Figure 3.
SR-1600 shelf installation

3-2. Green Terminal Introduction ③⑧⑨

There are three green terminals at the rear side, please refer to following figure :

Terminal	Description
Jumper A & B	Single shelf / Parallel connection setting
CN3 Dry contact and remote	Remote setting, and dry contacts

Table 2. SR-1600 green terminal introduction

3-2-1. Jumper A & B ③⑧

JUMP



1 2 Figure 4. Jumper A & B

Pin	Function	Wiring	Status description
1	Terminal Resistor	Pin#1 and Pin#2 short/open	Short : 1. Signal shelf setting ^{*Note} 2. Parallel connection setting at first and last shelf (terminal shelf) Open : Parallel connection : non-terminal shelf (Refer to 3-2-2.)
2			

Table 3. SR-1600 jumper A & B status description

*Note : Jumper A pin1 & pin2 must be shorted and Jumper B pin1 & pin2 must be shorted.

3-2-2. AC Input / Output Terminal ④ ⑦

● AC Input Terminal ④

SR-1600 provides the AC utility input terminal at the rear side, and user can connect the AC cable at L / N / FG. The SR-1600 support the AC input side internal parallel connection.

● AC Output Terminal ⑦

The AC output terminal at the rear side of the SR-1600. User can connect the L / N / FG.

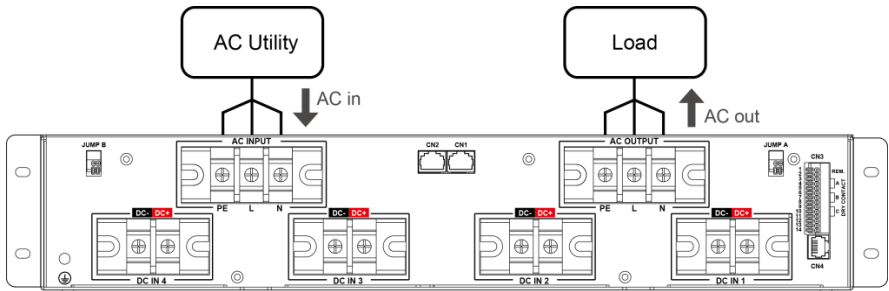


Figure 5. AC terminal connection

3-2-3. Dry contact and remote ⑨

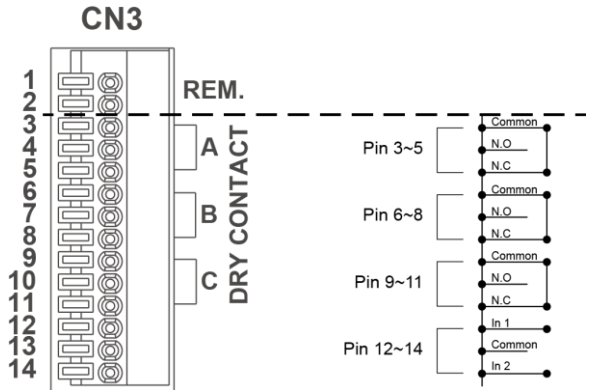


Figure 6. CN3 dry contact pin assignment

Pin	Function	Wiring	Status Description
Pin 1~2	Remote ON/OFF	Pin#1 and pin #2 short/open	Open : Normal output Short : Stop output
Pin 3~5	Major alarm	Switching power 60W Rating 2A at 30VDC wire size 20~24AWG	Normal : N.C-Common short Abnormal : N.O-Common short (Refer to Figure 9.)
Pin 6~8	Minor alarm		
Pin 9~11	Programmable setting alarm		
Pin12~13	Digital signal input for Major alarm	Signal voltage : 5V wire size 20~24AWG	High : +5V Action Low : 0V Normal
Pin 13~14	Digital signal input for Minor alarm		

Table 4. SR-1600 CN3 status description

AC Mode	DC Mode	Description	Possible Cause
Major		Over Load	The system over the rated capacity(OLA >15sec)
		Module Fault	Parallel Fault or Module Fault
		Over Temp.	Temperature is too high
		BAT. / Grid abnormal	Second source abnormal
		Digital input abnormal	Pin 12~13 voltage keep high
		Redundancy Fault	Remove the redundancy module or redundant module failure
		CN1/CN2 communication abnormal	Not connected properly
Minor		Grid / BAT. abnormal	Main source failure
		Over Load Alarm	The system over the rated capacity(OLA)
		Fan failure	Fan does not work
		Others alarm	Refer to alarm LED indicator (refer to page 10)

Table 5. Alarm list for dry contact

● Single Shelf Setting

1. Please short the Jumper A pin#1 and pin#2.
2. Please short the Jumper B pin#1 and pin#2.

3-3. Parallel Connection

3-3-1. Multi-shelves Installation

There are two parallel connection methods for the SR-1600 system capacity expansion: Setting jumper

3-3-2. Parallel Connection with Jumper Setting

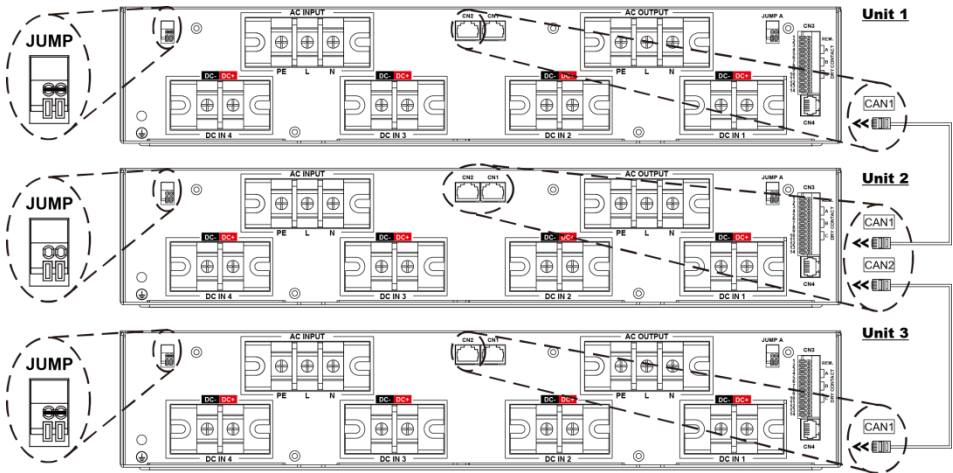


Figure 7. Parallel connection via jumper setting

Green terminal JUMP connection :

Parallel connect	Unit 1	Unit 2	Unit 3
JUMP	Connected	Not connected	Connected

※ Take 3 units for example, only the first and the last unit need to connect jumper.

4. Warranty



Warning! Do not open or disassemble the Inverter. Attempting to do so may cause risk of electrical shock or fire.

We guarantee this product against defects in materials and workmanship for a period of 24 months from the date of purchase. In case you need to repair or replace any defective power inverters, please contact COTEK local distributor.

This warranty will be considered void if the unit has been misused, altered, or accidentally damaged. COTEK is not liable for anything that occurs as a result of the user's fault.

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