



3200~12800W 1U Distributed Power/Charger System

# DHP-1UT-B Rack System

## Rack Dimension

| L    | * | W    | * | H         |      |
|------|---|------|---|-----------|------|
| 400  | * | 440  | * | 44 (1U)   | mm   |
| 14.4 | * | 17.3 | * | 1.73 (1U) | inch |

User's Manual



Front



Back



## Features

- Universal AC input / Full range
- 1U profile 19" rack shelf, fitting four 3200W modules up to 12800W with active current sharing
- Maximum 10 rack shelves in parallel
- Output voltage and current programmable
- Support hot swap (hot plug)
- Built-in PMBus/CANBus protocol
- 5 years warranty

## Applications

- Industrial automation
- Distributed power architecture system
- Wireless/telecommunication solution
- Redundant power system
- Large scale DC UPS or emergency backup system
- Electric scooter or vehicle charger station
- Wastewater treatment system
- Electrolysis system

## GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## Description

DHP-1UT-B rack power system and rack charger system are the complete solution for the power distribution utilizing the rack configuration with the 1U low profile. Starting with a single unit of 3200W, NCP-3200 is a 2-in-1 Rack-mounted Switching Power Supply & Battery Charger. NCP-3200-380 is the power supply and 380V output voltage. With the active current sharing function, up to 12800W is able to be provided by 1 stack of the 19" rack mountable shelf DHP-1UT-B(HV), with either rectifier or charger, and maximum 19" rack mountable shelf that can be connected in parallel is ten.

## Model Encoding

**DHP-1U T -B**  

{ Blank: 24V/48V  
HV: 380V

Rack Shelf for 3200W unit

T: Terminal block

Profile of the system

Series name

**SPECIFICATION FOR POWER SUPPLY SYSTEM (Default)**

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                          |                                                                                                               |                                         |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| POWER SYSTEM CONFIGURATION | 19" RACK SHELF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | DHP-1UT-B                                                                                                                                |                                                                                                               |                                         |
|                            | POWER UNIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | NCP-3200-24*4                                                                                                                            |                                                                                                               | NCP-3200-48*4                           |
| OUTPUT                     | OUTPUT VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 24V                                                                                                                                      |                                                                                                               | 48V                                     |
|                            | MAX. OUTPUT CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 532A                                                                                                                                     |                                                                                                               | 268A                                    |
|                            | MAX. OUTPUT POWER <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 12768W                                                                                                                                   |                                                                                                               | 12864W                                  |
| INPUT                      | VOLTAGE RANGE <small>Note.6</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 90 ~ 264VAC      127 ~ 400VDC                                                                                                            |                                                                                                               |                                         |
|                            | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 47 ~ 63Hz                                                                                                                                |                                                                                                               |                                         |
|                            | AC CURRENT (Typ.) per RECTIFIER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 17A/230VAC                                                                                                                               |                                                                                                               |                                         |
|                            | LEAKAGE CURRENT per RECTIFIER <small>Note.8</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <2mA / 230VAC                                                                                                                            |                                                                                                               |                                         |
| FUNCTION                   | OUTPUT VOLTAGE PROGRAMMABLE(PV)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Adjustment of output voltage is allowable to 50 ~ 125% of nominal output voltage. Please refer to the Function Manual in following pages |                                                                                                               |                                         |
|                            | CONSTANT CURRENT LEVEL PROGRAMMABLE(PC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Adjustment of constant current level is allowable to 20 ~ 100% of rated current. Please refer to the Function Manual in following pages  |                                                                                                               |                                         |
|                            | REMOTE ON-OFF CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | By electrical signal or dry contact    ON:short    OFF:open. Please refer to the Function Manual in following pages                      |                                                                                                               |                                         |
|                            | REMOTE SENSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Compensate voltage drop on the load wiring up to 0.5V                                                                                    |                                                                                                               |                                         |
|                            | AUXILIARY POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 5V @ 0.3A, tolerance ±10%, ripple 150mVp-p, 12V @ 0.8A, tolerance ±10%, ripple 450mVp-p                                                  |                                                                                                               |                                         |
|                            | ALARM SIGNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Isolated TTL signal output for T-Alarm, AC-OK and DC-OK                                                                                  |                                                                                                               |                                         |
| ENVIRONMENT                | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | -30 ~ +70℃, when 3 or 4 power units are paralleled in power shelf, highest working temperature shall de-rate to 40℃ at full load         |                                                                                                               |                                         |
|                            | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 20 ~ 90% RH non-condensing                                                                                                               |                                                                                                               |                                         |
|                            | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -40 ~ +85℃, 10 ~ 95% RH non-condensing                                                                                                   |                                                                                                               |                                         |
|                            | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ±0.03%/℃ (0 ~ 50℃)                                                                                                                       |                                                                                                               |                                         |
|                            | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                                             |                                                                                                               |                                         |
|                            | SAFETY & EMC<br>(Note 9)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | SAFETY STANDARDS                                                                                                                         | UL62368-1, CSA C22.2 No. 62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved ; Design refer to AS/NZS62368.1 |                                         |
| WITHSTAND VOLTAGE          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | I/P-O/P:3KVAC    I/P-FG:2KVAC    O/P-FG:1.5KVDC                                                                                          |                                                                                                               |                                         |
| ISOLATION RESISTANCE       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH                                                                                |                                                                                                               |                                         |
| EMC EMISSION               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Parameter                                                                                                                                | Standard                                                                                                      | Test Level / Note                       |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Conducted                                                                                                                                | BS EN/EN55032 (CISPR32)                                                                                       | Class B                                 |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Radiated                                                                                                                                 | BS EN/EN55032 (CISPR32)                                                                                       | Class A                                 |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Harmonic Current                                                                                                                         | BS EN/EN61000-3-2                                                                                             | Class A                                 |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Voltage Flicker                                                                                                                          | BS EN/EN61000-3-3                                                                                             | -----                                   |
| EMC IMMUNITY               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BS EN/EN55024, BS EN/EN61000-6-2                                                                                                         |                                                                                                               |                                         |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Parameter                                                                                                                                | Standard                                                                                                      | Test Level / Note                       |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ESD                                                                                                                                      | BS EN/EN61000-4-2                                                                                             | Level 3, 8KV air ; Level 2, 4KV contact |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Radiated                                                                                                                                 | BS EN/EN61000-4-3                                                                                             | Level 3                                 |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | EFT / Burst                                                                                                                              | BS EN/EN61000-4-4                                                                                             | Level 3                                 |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Surge                                                                                                                                    | BS EN/EN61000-4-5                                                                                             | Level 4, 2KV/Line-Line 4KV/Line-Earth   |
|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Conducted                                                                                                                                | BS EN/EN61000-4-6                                                                                             | Level 3                                 |
|                            | Magnetic Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | BS EN/EN61000-4-8                                                                                                                        | Level 4                                                                                                       |                                         |
|                            | Voltage Dips and Interruptions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | BS EN/EN61000-4-11                                                                                                                       | >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods                                      |                                         |
| OTHERS                     | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 3698.9K hrs min.    Telcordia SR-332 (Bellcore) ; 818.3K hrs min.    MIL-HDBK-217F (25℃)                                                 |                                                                                                               |                                         |
|                            | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Rack 400*482.6*44(L*W*H, with mounting bracket) ; 400*440*44(L*W*H, without mounting bracket)                                            |                                                                                                               |                                         |
|                            | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 4.76Kg; 3pcs/17.4Kg/3.3UFT                                                                                                               |                                                                                                               |                                         |
| NOTE                       | <div>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.</div> <div>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor. Under parallel operation of more than one rack connecting together, ripple of the output voltage may be higher than the SPEC at light load condition. It will go back to normal ripple level once the output load is more than 5%.</div> <div>3. Tolerance : includes set up tolerance, line regulation and load regulation.</div> <div>4. Output of all the NCP-3200 modules are connected in parallel in the rack.</div> <div>5. RCM is on a voluntary basis and meets relevant IEC or AS/NZS standards complying with AS/NES 4417.1.</div> <div>6. Derating may be needed under low input voltages. Please check the static characteristics for more details.</div> <div>7. Because of component tolerance, there is a possibility that some of units connected in parallel will reach an overcurrent limit then overloading the other units when operating at full load condition. If overload conditions happen in parallel usage, it is suggested that derate the total output current by 10%.</div> <div>8. The equivalent leakage current of the system is determined by the quantity of populated rectifiers.</div> <div>9. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 1000mm*1300mm metal plate with 2mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."<br/>(as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a>)</div> <div>10. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).</div> <div>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></div> |                                                                                                                                          |                                                                                                               |                                         |



## SPECIFICATION FOR POWER SUPPLY SYSTEM (Default)

|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                          |                         |                                                                          |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------|
| POWER SYSTEM CONFIGURATION              | 19" RACK SHELF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DHP-1UT-BHV                                                                                                                              |                         |                                                                          |
|                                         | POWER UNIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | NCP-3200-380*4                                                                                                                           |                         |                                                                          |
| OUTPUT                                  | OUTPUT VOLTAGE (factory default)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 380V                                                                                                                                     |                         |                                                                          |
|                                         | CURRENT (factory default)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 33.6A                                                                                                                                    |                         |                                                                          |
|                                         | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0 ~ 38.4A                                                                                                                                |                         |                                                                          |
|                                         | MAX. OUTPUT POWER <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 12825.6W                                                                                                                                 |                         |                                                                          |
| INPUT                                   | VOLTAGE RANGE <small>Note.6</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 90 ~ 264VAC                                                                                                                              | 127 ~ 400VDC            |                                                                          |
|                                         | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 47 ~ 63Hz                                                                                                                                |                         |                                                                          |
|                                         | AC CURRENT (Typ.) per RECTIFIER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 17A/230VAC                                                                                                                               |                         |                                                                          |
|                                         | LEAKAGE CURRENT per RECTIFIER <small>Note.8</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <2mA / 230VAC                                                                                                                            |                         |                                                                          |
| FUNCTION                                | OUTPUT VOLTAGE PROGRAMMABLE(PV)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Adjustment of output voltage is allowable to 50 ~ 120% of nominal output voltage. Please refer to the Function Manual in following pages |                         |                                                                          |
|                                         | CONSTANT CURRENT LEVEL PROGRAMMABLE(PC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Adjustment of constant current level is allowable to 20 ~ 100% of rated current. Please refer to the Function Manual in following pages  |                         |                                                                          |
|                                         | REMOTE ON-OFF CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | By electrical signal or dry contact    ON:short    OFF:open. Please refer to the Function Manual in following pages                      |                         |                                                                          |
|                                         | AUXILIARY POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5V @ 0.3A, tolerance ±10%, ripple 150mVp-p, 12V @ 0.8A, tolerance ±10%, ripple 450mVp-p                                                  |                         |                                                                          |
|                                         | ALARM SIGNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Isolated TTL signal output for T-Alarm, AC-OK and DC-OK                                                                                  |                         |                                                                          |
| ENVIRONMENT                             | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -30 ~ +70℃, when 3 or 4 power units are paralleled in power shelf, highest working temperature shall de-rate to 40℃ at full load         |                         |                                                                          |
|                                         | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 20 ~ 90% RH non-condensing                                                                                                               |                         |                                                                          |
|                                         | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -40 ~ +85℃, 10 ~ 95% RH non-condensing                                                                                                   |                         |                                                                          |
|                                         | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ±0.03%/℃ (0 ~ 50℃)                                                                                                                       |                         |                                                                          |
|                                         | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                                             |                         |                                                                          |
| SAFETY & EMC<br><small>(Note 9)</small> | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | UL62368-1, CSA C22.2 No. 62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved ; Design refer to AS/NZS62368.1                            |                         |                                                                          |
|                                         | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | I/P-O/P:3KVAC    I/P-FG:2KVAC    O/P-FG:1.5KVDC                                                                                          |                         |                                                                          |
|                                         | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH                                                                                |                         |                                                                          |
|                                         | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Parameter                                                                                                                                | Standard                | Test Level / Note                                                        |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Conducted                                                                                                                                | BS EN/EN55032 (CISPR32) | Class B                                                                  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Radiated                                                                                                                                 | BS EN/EN55032 (CISPR32) | Class A                                                                  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Harmonic Current                                                                                                                         | BS EN/EN61000-3-2       | Class A                                                                  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Voltage Flicker                                                                                                                          | BS EN/EN61000-3-3       | -----                                                                    |
|                                         | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BS EN/EN55024, BS EN/EN61000-6-2                                                                                                         |                         |                                                                          |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Parameter                                                                                                                                | Standard                | Test Level / Note                                                        |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ESD                                                                                                                                      | BS EN/EN61000-4-2       | Level 3, 8KV air ; Level 2, 4KV contact                                  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Radiated                                                                                                                                 | BS EN/EN61000-4-3       | Level 3                                                                  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | EFT / Burst                                                                                                                              | BS EN/EN61000-4-4       | Level 3                                                                  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Surge                                                                                                                                    | BS EN/EN61000-4-5       | Level 4, 2KV/Line-Line 4KV/Line-Earth                                    |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Conducted                                                                                                                                | BS EN/EN61000-4-6       | Level 3                                                                  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Magnetic Field                                                                                                                           | BS EN/EN61000-4-8       | Level 4                                                                  |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Voltage Dips and Interruptions                                                                                                           | BS EN/EN61000-4-11      | >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods |
| OTHERS                                  | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3698.9K hrs min.    Telcordia SR-332 (Bellcore) ; 818.3K hrs min.    MIL-HDBK-217F (25℃)                                                 |                         |                                                                          |
|                                         | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Rack 400*482.6*44(L*W*H, with mounting bracket) ; 400*440*44(L*W*H, without mounting bracket)                                            |                         |                                                                          |
|                                         | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 4.76Kg; 3pcs/17.4Kg/3.3UFT                                                                                                               |                         |                                                                          |
| NOTE                                    | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Under parallel operation of more than one rack connecting together, ripple of the output voltage may be higher than the SPEC at light load condition. It will go back to normal ripple level once the output load is more than 5%.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. Output of all the NCP-3200 modules are connected in parallel in the rack.<br>5. RCM is on a voluntary basis and meets relevant IEC or AS/NZS standards complying with AS/NES 4417.1.<br>6. Derating may be needed under low input voltages. Please check the static characteristics for more details.<br>7. Because of component tolerance, there is a possibility that some of units connected in parallel will reach an overcurrent limit then overloading the other units when operating at full load condition. If overload conditions happen in parallel usage, it is suggested that derate the total output current by 10%.<br>8. The equivalent leakage current of the system is determined by the quantity of populated rectifiers.<br>9. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 1000mm*1300mm metal plate with 2mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."<br>(as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a> )<br>10. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).<br>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |                                                                                                                                          |                         |                                                                          |

**SPECIFICATION FOR CHARGER SYSTEM (Selectable by PMBus, CANBus or SBP-001)**

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                   |                                                                          |                                         |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|-----------------------------------------|
| CHARGER SYSTEM CONFIGURATION   | 19" RACK SHELF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DHP-1UT-B                                                                                                                         |                                                                          |                                         |
|                                | CHARGER UNIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | NCP-3200-24*4                                                                                                                     |                                                                          | NCP-3200-48*4                           |
| OUTPUT                         | BOOST CHARGE VOLTAGE(Vboost)(default)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 28.8V                                                                                                                             |                                                                          | 57.6V                                   |
|                                | FLOAT CHARGE VOLTAGE(Vfloat)(default)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 27.6V                                                                                                                             |                                                                          | 55.2V                                   |
|                                | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0 ~ 440A                                                                                                                          |                                                                          | 0 ~ 220A                                |
| INPUT                          | VOLTAGE RANGE <span>Note.2</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 90 ~ 264VAC      127 ~ 400VDC                                                                                                     |                                                                          |                                         |
|                                | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 47 ~ 63Hz                                                                                                                         |                                                                          |                                         |
|                                | AC CURRENT (Typ.) per CHARGER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 17A/230VAC                                                                                                                        |                                                                          |                                         |
|                                | LEAKAGE CURRENT per CHARGER <span>Note.4</span>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <2mA / 230VAC                                                                                                                     |                                                                          |                                         |
| FUNCTION                       | REMOTE ON-OFF CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | By electrical signal or dry contact    ON:short    OFF:open. Please refer to the Function Manual in following pages               |                                                                          |                                         |
|                                | AUXILIARY POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 5V @ 0.3A, tolerance ±10%, ripple 150mVp-p, 12V @ 0.8A, tolerance ±10%, ripple 450mVp-p                                           |                                                                          |                                         |
|                                | ALARM SIGNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Isolated TTL signal output for T-Alarm, AC-OK and DC-OK. Please refer to Installation Manual                                      |                                                                          |                                         |
| ENVIRONMENT                    | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -30 ~ +70℃ when 3 or 4 charger units are paralleled in power shelf, highest working temperature shall de-rate to 40℃ at full load |                                                                          |                                         |
|                                | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 20 ~ 90% RH non-condensing                                                                                                        |                                                                          |                                         |
|                                | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -40 ~ +85℃, 10 ~ 95% RH non-condensing                                                                                            |                                                                          |                                         |
|                                | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ±0.03%/℃ (0 ~ 50℃)                                                                                                                |                                                                          |                                         |
|                                | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes                                                                      |                                                                          |                                         |
| SAFETY & EMC<br>(Note 6)       | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved                                                                            |                                                                          |                                         |
|                                | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | I/P-O/P:3KVAC    I/P-FG:2KVAC    O/P-FG:1.5KVDC                                                                                   |                                                                          |                                         |
|                                | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃ / 70% RH                                                                         |                                                                          |                                         |
|                                | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Parameter                                                                                                                         | Standard                                                                 | Test Level / Note                       |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Conducted                                                                                                                         | BS EN/EN55032 (CISPR32)                                                  | Class B                                 |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Radiated                                                                                                                          | BS EN/EN55032 (CISPR32)                                                  | Class A                                 |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Harmonic Current                                                                                                                  | BS EN/EN61000-3-2                                                        | Class A                                 |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Voltage Flicker                                                                                                                   | BS EN/EN61000-3-3                                                        | -----                                   |
|                                | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | BS EN/EN55024, BS EN/EN61000-6-2                                                                                                  |                                                                          |                                         |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Parameter                                                                                                                         | Standard                                                                 | Test Level / Note                       |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ESD                                                                                                                               | BS EN/EN61000-4-2                                                        | Level 3, 8KV air ; Level 2, 4KV contact |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Radiated                                                                                                                          | BS EN/EN61000-4-3                                                        | Level 3                                 |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | EFT / Burst                                                                                                                       | BS EN/EN61000-4-4                                                        | Level 3                                 |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Surge                                                                                                                             | BS EN/EN61000-4-5                                                        | Level 4, 2KV/Line-Line 4KV/Line-Earth   |
|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Conducted                                                                                                                         | BS EN/EN61000-4-6                                                        | Level 3                                 |
| Magnetic Field                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | BS EN/EN61000-4-8                                                                                                                 | Level 4                                                                  |                                         |
| Voltage Dips and Interruptions |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | BS EN/EN61000-4-11                                                                                                                | >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods |                                         |
| OTHERS                         | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3698.9K hrs min.    Telcordia SR-332 (Bellcore) ; 818.3K hrs min.    MIL-HDBK-217F (25℃)                                          |                                                                          |                                         |
|                                | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Rack 400*482.6*44(L*W*H, with mounting bracket) ; 400*440*44(L*W*H, without mounting bracket)                                     |                                                                          |                                         |
|                                | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 4.76Kg; 3pcs/17.4Kg/3.3UFT                                                                                                        |                                                                          |                                         |
| NOTE                           | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.<br>2. Derating may be needed under low input voltages. Please check the static characteristics for more details.<br>3. Output of all the NCP-3200 modules are connected in parallel in the rack.<br>4. The equivalent leakage current of the system is determined by the quantity of populated chargers.<br>5. RCM is on a voluntary basis and meets relevant IEC or AS/NZS standards complying with AS/NES 4417.1.<br>6. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 1000mm*1300mm metal plate with 2mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to “EMI testing of component power supplies.”<br>(as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a> )<br>7. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).<br>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |                                                                                                                                   |                                                                          |                                         |

## FUNCTION MANUAL

### 1. Voltage Drop Compensation

- ※ Built-in remote sense circuit that is able to compensate voltage drop up to 0.5V.
- ※ When using this function, the sensing wires should either be twisted or shielded to prevent external noise interference (refer to Figure 1-1).
- ※ Voltage drop across the output wires must be limited to less than 0.5V. Also wires with adequate current rating should be used between +V, -V and the loads. Please firmly connect the output wires to prevent them from loosening, or the power supply may be out of order.
- ※ The +S and -S have to be connected to the +V(signal) and -V(signal), respectively, as shown in Figure 1-2, which is Local Sense, in order to get the correct output voltage if Remote Sense is not used. Otherwise, the output voltage will increase to an extremely high level which may trigger OVP.

#### 1.1 Remote Sense (For 24V/48V models under power supply system only)

The remote sense compensates voltage drop on the load wiring up to 0.5V.

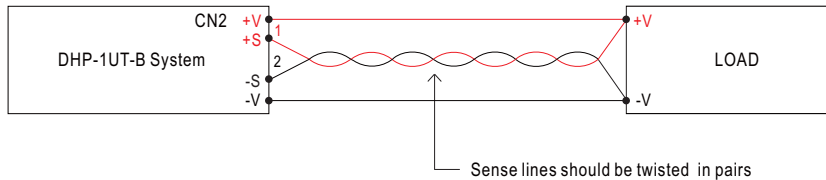


Figure 1-1 Connection of Remote Sense

#### 1.2 Local Sense (For 24V/48V models under power supply system only)

**Notice :** The +S, -S have to be connected to the +V(signal), -V(signal), respectively, in order to get the correct output voltage if the remote sensing is not used.

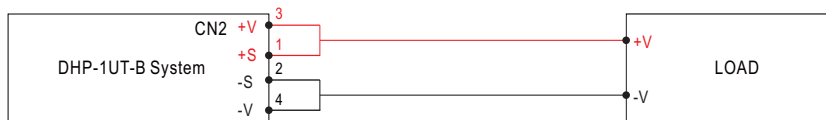
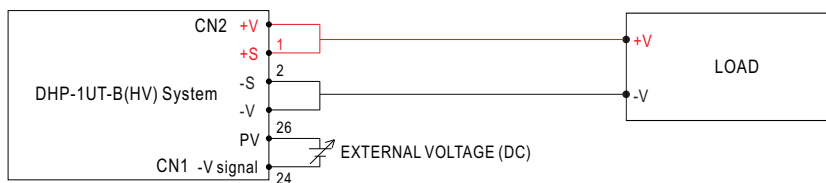


Figure 1-2 Connection of Local Sense

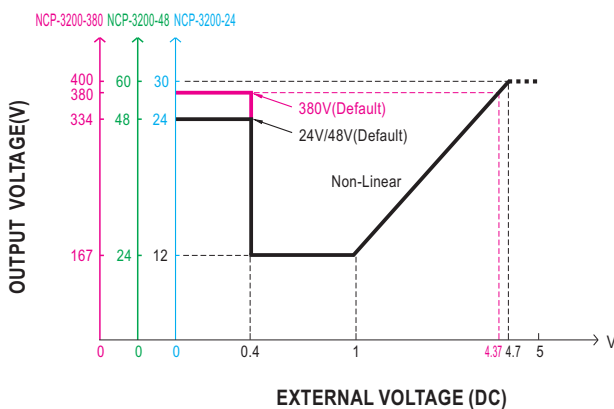
### 2. Output Voltage Programming (or, PV / remote voltage programming / remote adjust / margin programming / dynamic voltage trim)

- ※ In addition to the adjustment via the built-in potentiometer, the output voltage can be trimmed by applying EXTERNAL VOLTAGE.



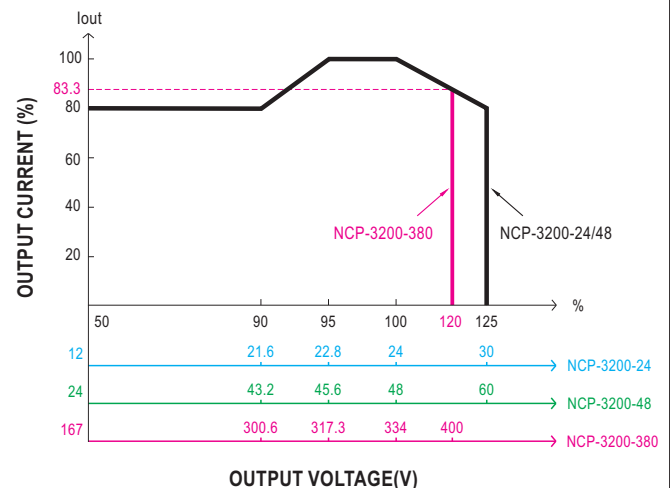
+S & +V, -S & -V also need to be connected on CN2.

(Voltage compensation function for 24V/48V models under power supply system only)



◎ For power supply mode

◎ The 100% output voltage is 24/48/334V.



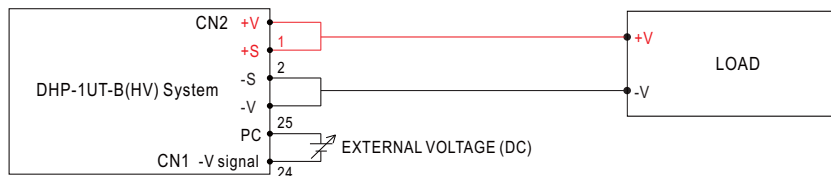
◎ The rated current should change with the Output Voltage Programming accordingly.

◎ The 100% output current is 532/268/38.4A.

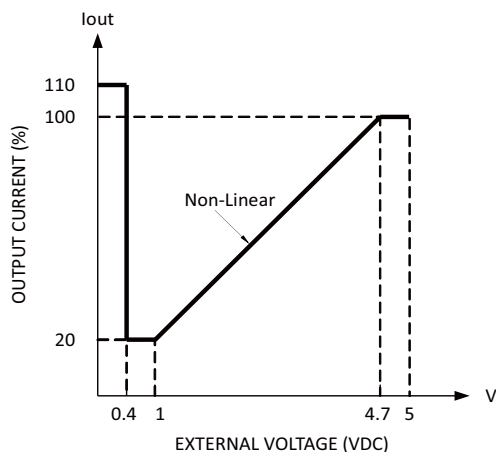
◎ For Remote Sense / Local Sense, please refer to "Voltage Drop Compensation" section.

### 3. Output Current Programming (or, PC / remote current programming / dynamic current trim)

※ The output current can be trimmed to 20~100% of the rated current by applying EXTERNAL VOLTAGE.



+S & +V, -S & -V also need to be connected on CN2. (For 24V/48V models under power supply system only)



◎ For power supply system

◎ The 100% output current is 532/268/38.4A.

◎ Notice the output power do not over max. output power.

### 4. Remote Control

※ Built-in remote ON/OFF control circuit, refer to Figure 4-1 for control methods of single unit or whole rack system.

※ Please be aware that "ON/OFF" and "+5V-AUX" on CN1 should be linked together to allow the units operate normally; If kept open, there will be no output voltage.

※ Maximum input voltage 5.5V.

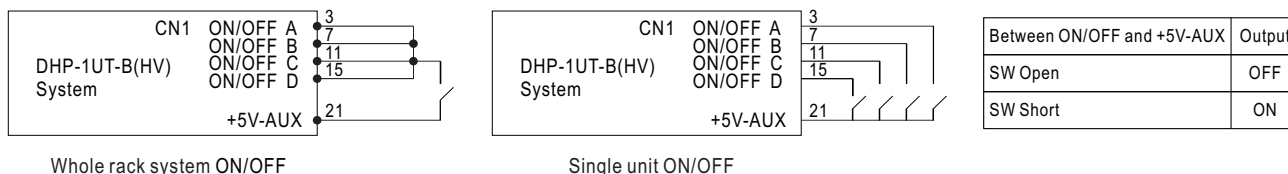


Figure 4-1 Connection of Remote Control

### 5.PMBus Communication Interface

NCP-3200 supports PMBus Rev. 1.1 with maximum 100KHz bus speed, allowing information reading, status monitoring, output trimming, etc. For details, please refer to the Function Manual.

### 6.CANBus Communication Interface

NCP-3200 supports CAN 2.0B with maximum 250KHz bus speed, allowing information reading, status monitoring, output trimming, etc. For details, please refer to the User's Manual.

### 7. Parallel Operation

#### 7.1 Operation of Single Rack Shelf

※ Parallel operation in a single rack shelf is only suitable for the identical units (with the same model and the same output voltage/current).

※ Each rack shelf (DHP-1UT-B) has built-in parallel connection/wiring. Once have NCP-3200 units inserted in the rack shelf then these front end unit are operated in parallel.

※ Please refer to 1~4 for the connection/wiring of other functions.

※ Read installation manual before using this device. For NCP-3200-380 high output voltage model, correct rack system DHP-1UT-BHV should be used. Fail to do so will cause permanent damage.

|                                      |               |               |                |
|--------------------------------------|---------------|---------------|----------------|
| 19" Rack shelf                       | DHP-1UT-B     | DHP-1UT-B     | DHP-1UT-BHV    |
| Power supply or battery charger unit | NCP-3200-24*4 | NCP-3200-48*4 | NCP-3200-380*4 |



## 7.2 Operation of two or more rack shelves in parallel

- ※ Parallel operation is only suitable for the identical units (with the same model and the same output voltage/current). Up to 10 rack shelves and the maximum supply units that can be connected in parallel is 40.
- ※ Because of component tolerance, there is a possibility that some of the units connected in parallel will reach an overcurrent limiting then overloading the other units when operating at full load condition. It is suggested that reduce the total output current by 10%.  
For example: NCP-3200-24x8 connected in parallel (in 2 rack shelves), the total output current should be reduced to  $133\text{A} \times 8\text{unit} \times 0.9 = 957.6\text{A}$ .
- ※ Difference of output voltage among parallel units should be less than 0.2V.
- ※ Configure rack shelf units in parallel before connecting to the load. Do not connect rack shelf units to the load separately. Refer to Figure 7-1.
- ※ Control singles of DA, DB and -V should also be connected in parallel. (Refer to Figure 7-1).
- ※ Use twisted wires for the wiring of +S and -S, the twisted wires should not touch the load wires to avoid interference. Refer to Figure 7-1.
- ※ A too long cable length might be with a higher amount of noise that affects rack units' proper operation in parallel. To reduce the noise, installing termination resistors, an accessory, to the unused JK1 is recommended. Please refer to Accessory list.

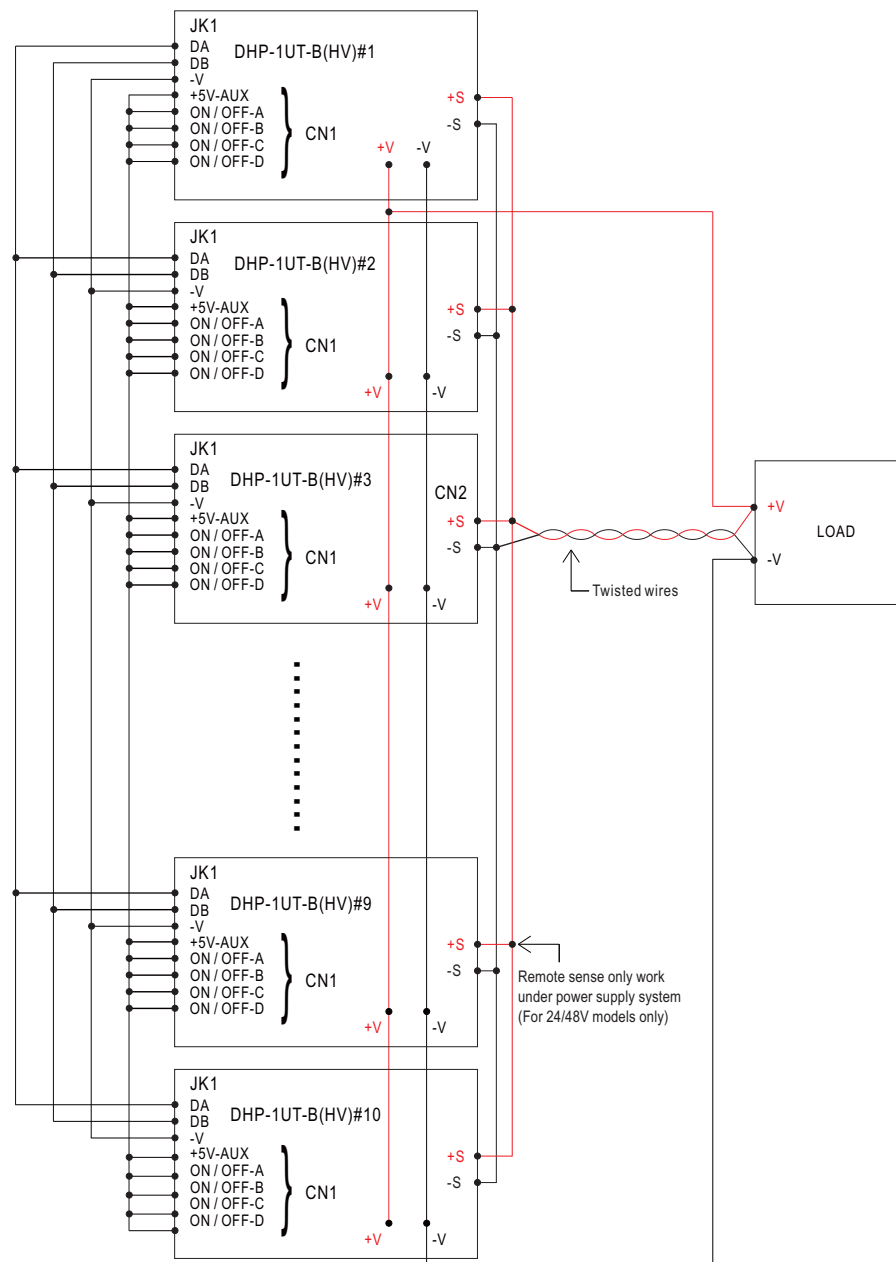


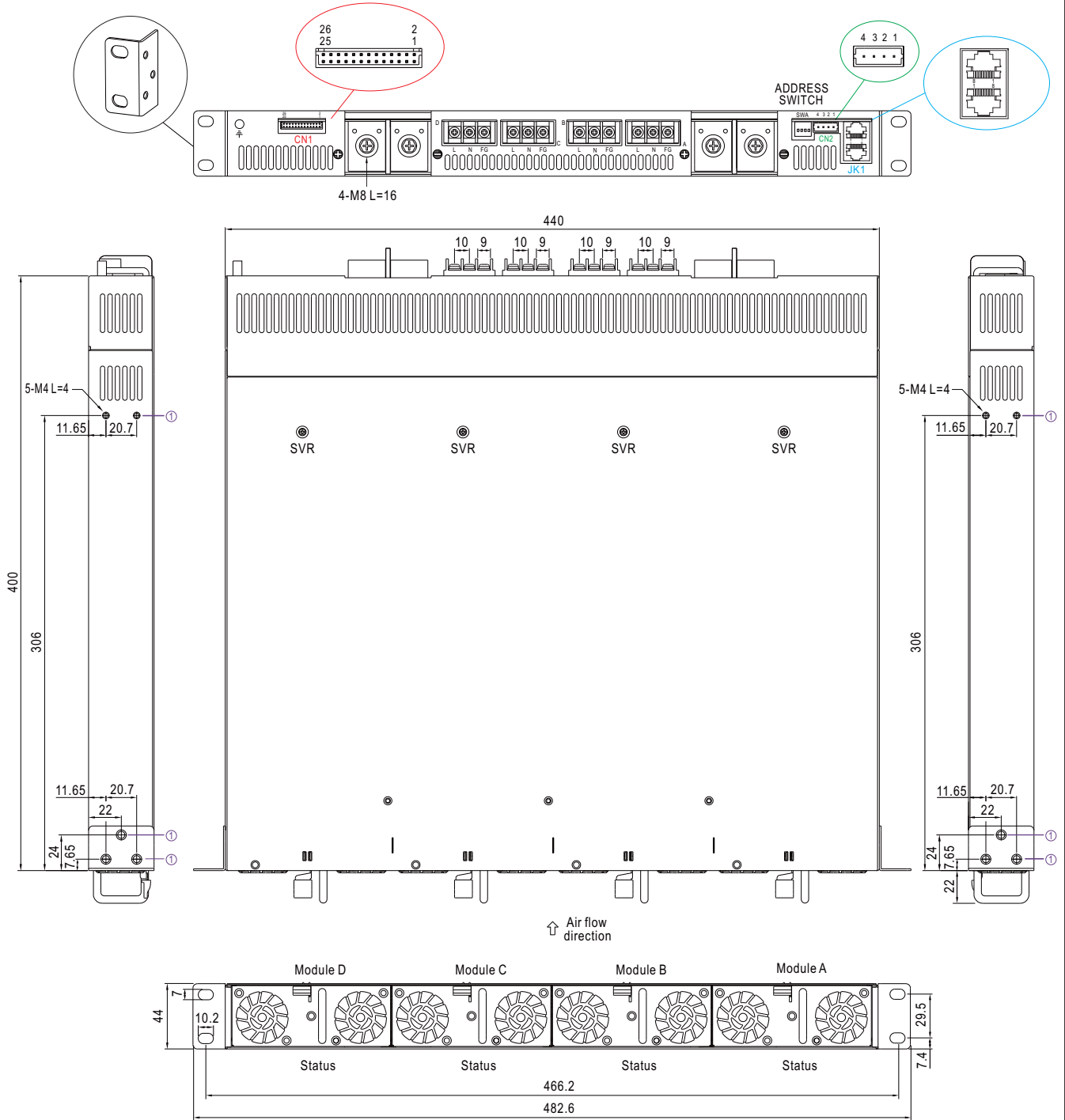
Figure 7-1 Configuration of ten rack shelf units in parallel

© Under operation of more than one rack shelf in parallel, value of Ripple & Noise may be larger than that stated in the specification at light load or no load condition. It will return to normal level once the loads draw more current than 10% of the total rating.

## MECHANICAL SPECIFICATION

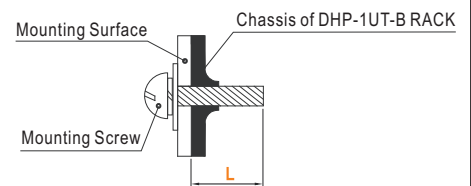
Case No.257B

Unit:mm



### ※ Mounting Instruction

| Hole No. | Recommended Screw Size | MAX. Penetration Depth L | Recommended mounting torque |
|----------|------------------------|--------------------------|-----------------------------|
| ①        | M4                     | 4mm                      | 7~10Kgf-cm                  |





## ※ LED Status Indicators & Corresponding Signal at Function Pins

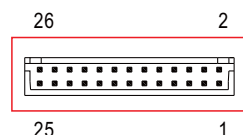
### ◎ For power supply system

| LED                                                                                              | Description                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  Green          | The power supply functions normally.                                                                                                                                                                                                                   |
|  Red            | The LED will present a constant red light when the abnormal status (OTP, OLP, fan fail and charging timeout) arises.                                                                                                                                   |
|  Red (Flashing) | The LED will flash with the red light when the internal temperature reaches 60°C; under this condition, the unit still operates normally without entering OTP. (In the meantime, an alarm signal will be sent out through the PMBus/CANBus interface.) |

### ◎ For charger system

| LED                                                                                              | Description                                                                                                                                                                                                                                            |
|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  Green          | Float (stage 3)                                                                                                                                                                                                                                        |
|  Orange         | Charging (stage 1 or stage 2)                                                                                                                                                                                                                          |
|  Red            | The LED will present a constant red light when the abnormal status (OTP, OLP, fan fail and charging timeout) arises.                                                                                                                                   |
|  Red (Flashing) | The LED will flash with the red light when the internal temperature reaches 60°C; under this condition, the unit still operates normally without entering OTP. (In the meantime, an alarm signal will be sent out through the PMBus/CANBus interface.) |

## ※ Connector Pin No. Assignment(CN1) : HRS DF11-26DP-2DS



|                |                             |
|----------------|-----------------------------|
| Mating Housing | HRS DF11-26DS or equivalent |
| Terminal       | HRS DF11-26SC or equivalent |

| Pin No.     | Function      | Description                                                                                                                                                                                                                                                                   |
|-------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1,5,9,13    | AC-OK         | High (3.5 ~ 5.5V) : When the input voltage is $\geq 87V_{rms}$ .<br>Low (-0.5 ~ 0.5V) : When the input voltage is $\leq 75V_{rms}$ .<br>The maximum sourcing current is 10mA and only for output. (Note.2)                                                                    |
| 2,6,10,14   | DC-OK         | For power supply system<br>High (3.5 ~ 5.5V) : When the $V_{out} \leq 77\% \pm 5\%$ .<br>Low (-0.5 ~ 0.5V) : When $V_{out} \geq 80\% \pm 5\%$ .<br>The maximum sourcing current is 10mA and only for output. (Note.2)                                                         |
|             |               | For charger system<br>High (3.5 ~ 5.5V) : When the $V_{out} \leq 66\% \pm 5\%$ .<br>Low (-0.5 ~ 0.5V) : When $V_{out} \geq 67\% \pm 5\%$ . The maximum sourcing current is 10mA and only for output. (Note.2)<br>DC OK is associated with battery low protection.             |
| 3,7,11,15   | Remote ON-OFF | The unit can turn the output ON/OFF by electrical signal or dry contact between Remote ON-OFF and +5V-AUX. (Note.2)<br>Short (4.5 ~ 5.5V) : Power ON ; Open (-0.5 ~ 0.5V) : Power OFF ; The maximum input voltage is 5.5V.                                                    |
| 4,8,12,16   | T-ALARM       | High (3.5 ~ 5.5V) : When the internal temperature exceeds the limit of temperature alarm, or when fan fails.<br>Low (-0.5 ~ 0.5V) : When the internal temperature is normal, and when fan normally works.<br>The maximum sourcing current is 10mA and only for output(Note.2) |
| 17,18,19,20 | NC            | Retain for future use.                                                                                                                                                                                                                                                        |
| 21          | +5V-AUX       | Auxiliary voltage output, 4.5~5.5V, reference to GND_AUX(pin22).The maximum load current is 0.3A.                                                                                                                                                                             |
| 22          | GND-AUX       | Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V).                                                                                                                                                                              |
| 23          | +12V-AUX      | Auxiliary voltage output, 10.8~13.2V, referenced to GND-AUX (pin 22).<br>The maximum load current is 0.8A. This output has the built-in "Oring diodes" and is not controlled by the remote ON/OFF control.                                                                    |
| 24          | -V(Signal)    | Negative output voltage. For local sense use only; It can't be connected directly to the load.                                                                                                                                                                                |
| 25          | PC            | Connection for output current programming. The current can be trimmed within its defined range. (Note.1)                                                                                                                                                                      |
| 26          | PV            | Connection for output voltage programming. The voltage can be trimmed within its defined range. (Note.1)                                                                                                                                                                      |

Note.1: Non-isolated signal, referenced to [-V(signal)].

Note.2: Isolated signal, referenced to GND-AUX.

## ※ Connector Pin No. Assignment(CN2) : JST SM04(4.0) B-BHS-1-TB

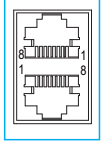


|                |                                  |
|----------------|----------------------------------|
| Mating Housing | JST BHR-04VS-1 or equivalent     |
| Terminal       | JST SBH-001T-P-0.5 or equivalent |

### ◎ For 24V/48V models under power supply system only

|   |            |                                                                                                                                                                                                                       |
|---|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | +S         | Positive sensing. The +S signal should be connected to the positive terminal of the load. The +S and -S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V. |
| 2 | -S         | Negative sensing. The -S signal should be connected to the negative terminal of the load. The -S and +S leads should be twisted in pair to minimize noise pick-up effect. The maximum line drop compensation is 0.5V. |
| 3 | +V(Signal) | Positive output voltage. For local sense use only, can't be connected directly to the load.                                                                                                                           |
| 4 | -V(Signal) | Negative output voltage. For local sense use only, can't be connected directly to the load.                                                                                                                           |

※ Connector Pin No. Assignment(JK1) : RJ45 8 positions

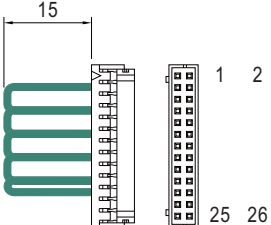
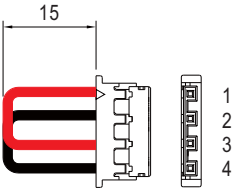
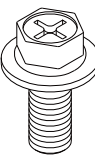


| Pin No. | Function   | Description                                                                                                                           |
|---------|------------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1,2     | DA,DB      | Differential digital signal for parallel control. (Note.1)                                                                            |
| 3       | -V(signal) | Negative output voltage signal.<br>It is for local sense and certain function reference; it cannot be connected directly to the load. |
| 4       | CONTROL    | Remote ON-OFF control pin used in the PMBus interface. (Note.2)                                                                       |
| 5       | +5V-AUX    | +5V-AUX pin used in the PMBus interface (Note.2)                                                                                      |
| 6       | SDA        | For PMBus model: Serial Data used in the PMBus interface. (Note.2)                                                                    |
|         | CANH       | For CANBus model: Data line used in CANBus interface. (Note.2)                                                                        |
| 7       | SCL        | For PMBus model: Serial Clock used in the PMBus interface. (Note.2)                                                                   |
|         | CANL       | For CANBus model: Data line used in CANBus interface. (Note.2)                                                                        |
| 8       | GND-AUX    | Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V).                                      |

Note.1: Non-isolated signal, referenced to [-V(signal)].

Note.2: Isolated signal, referenced to GND-AUX.

## ■ Accessory List

|   | Item                                                                                                                                                              | Quantity |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| ① | <p>Remote Control mating wire (CN1)</p> <p>UL1061 28AWG</p>                      | 1        |
| ② | <p>Remote Sense mating wire (CN2)</p> <p>UL1007 26AWG</p>                        | 1        |
| ③ | <p>PMBus Termination resistor (JK1)</p> <p>Wire color : Black &amp; White</p>  | 1        |
| ④ | <p>CANBus Termination resistor (JK1)</p> <p>Wire color : Black &amp; Red</p>   | 1        |
| ⑤ | <p>Screw (+V,-V Terminal)</p>                                                  | 4        |