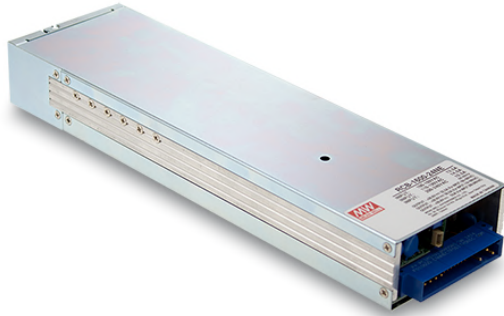
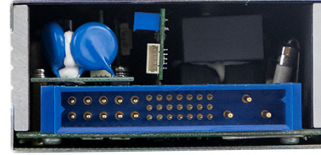


## Dimension

| L    | W    | H              |
|------|------|----------------|
| 300  | 85   | 41 (1U) mm     |
| 11.8 | 3.35 | 1.61 (1U) inch |



Front



User's Manual



Click Me

Back



## Features

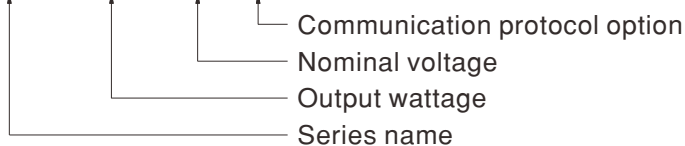
- Charger for lead-acid batteries (Gel, flooded and AGM) and Li-ion batteries (lithium iron and lithium manganese)
- Built-in default 3 stage charging curves and programmable curve
- Built-in I<sup>2</sup>C interface, PMBus protocol (Optional CANBus protocol)
- Output voltage and current programmable
- Universal AC input / Full range (Withstand 300VAC surge input for 5 seconds)
- Built-in active PFC function
- Forced air cooling by built-in DC fan
- Built-in OR-ing FET, support hot swap (hot plug)
- Active current sharing up to 8000W for one 19" rack shelf
- Protections: Battery under voltage / Battery no connection / Short circuit / Over voltage / Over temperature
- Optional conformal coating
- 5 years warranty

## Description

RCB-1600 series is a single output 1600W AC/DC charger with 1U low profile (41mm). It is an intelligent charger with embedded charging curves which are programmable. Users are also able to adjust the charging voltage and current via the built-in potentiometer, output programmable functions, PMBus, or CANBus to charge different types of batteries, such as lead-acid batteries and li-ion batteries. Various protection mechanisms as well as the temperature compensation function are provided to assure the normal and safe operations. The rack-mountable attribute allows RCB-1600 to perfectly suit the charging, backup or constant current source applications exploiting the rack architecture or central management.

## Model Encoding

RCB - 1600 - 12



※ Note: 19" rack shelf, RHP-1U, available.

## Applications

- Large scale DC UPS or emergency backup system
- Marine battery charger module
- Electric scooter or vehicle charger station
- Wastewater treatment system
- Electrolysis system

## GTIN CODE

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

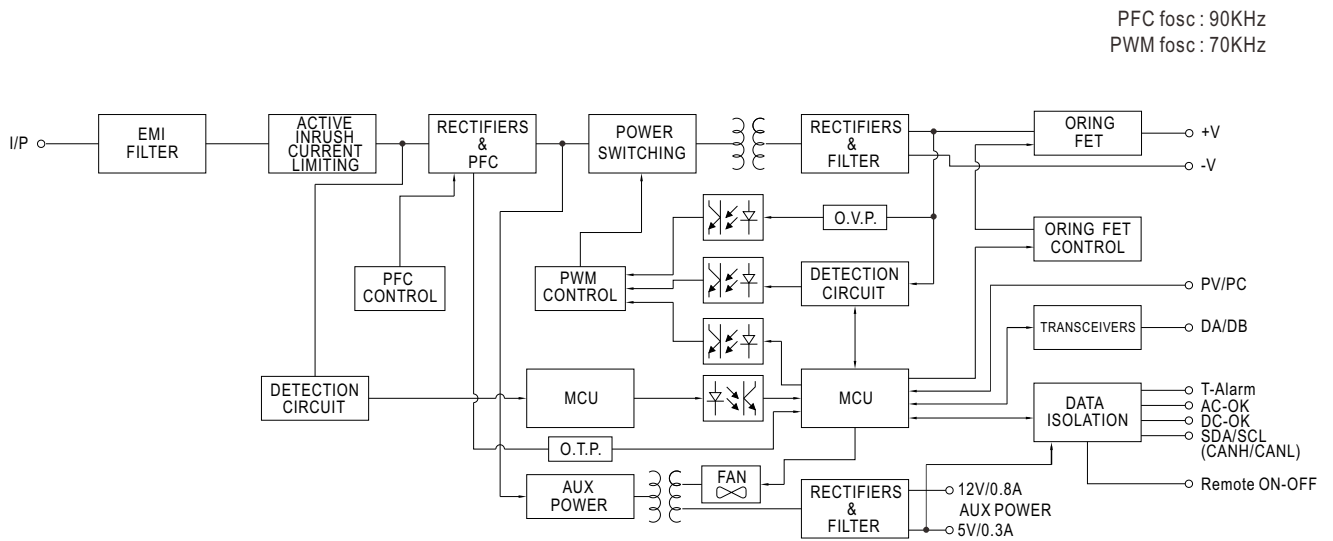
| Type  | Communication Protocol | Note       |
|-------|------------------------|------------|
| Blank | PMBus protocol         | In Stock   |
| CAN   | CANBus protocol        | By request |



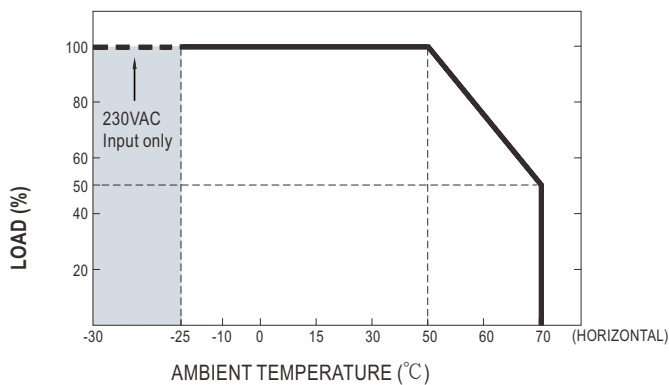
## SPECIFICATION

| MODEL                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RCB-1600-12                                                                                                                                  |  | RCB-1600-24               |  | RCB-1600-48  |  |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------|--|--------------|--|
| OUTPUT                                                    | BOOST CHARGE VOLTAGE(Vboost)(default)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 14.4V                                                                                                                                        |  | 28.8V                     |  | 57.6V        |  |
|                                                           | FLOAT CHARGE VOLTAGE(Vfloat)(default)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 13.8V                                                                                                                                        |  | 27.6V                     |  | 55.2V        |  |
|                                                           | CONSTANT CURRENT(CC)(default)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 100A                                                                                                                                         |  | 55A                       |  | 27.5A        |  |
|                                                           | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1440W                                                                                                                                        |  | 1584W                     |  | 1584W        |  |
|                                                           | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | By built-in potentiometer, SVR                                                                                                               |  |                           |  |              |  |
|                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 11.5 ~ 15V                                                                                                                                   |  | 23.5 ~ 30V                |  | 47.5 ~ 58.8V |  |
|                                                           | RECOMMENDED BATTERY CAPACITY(AMP HOURS) <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 330 ~ 1000Ah                                                                                                                                 |  | 180 ~ 550Ah               |  | 90 ~ 270Ah   |  |
| LEAKAGE CURRENT FROM BATTERY (Typ.) <small>Note.8</small> | <45mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                              |  |                           |  |              |  |
| INPUT                                                     | VOLTAGE RANGE <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 90 ~ 264VAC      250 ~ 370VDC                                                                                                                |  |                           |  |              |  |
|                                                           | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 47 ~ 63Hz                                                                                                                                    |  |                           |  |              |  |
|                                                           | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0.97/230VAC at full load                                                                                                                     |  |                           |  |              |  |
|                                                           | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 90.5%                                                                                                                                        |  | 92%                       |  | 93%          |  |
|                                                           | AC CURRENT (Typ.) <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 14A/115VAC    8A/230VAC                                                                                                                      |  | 15A/115VAC    8.5A/230VAC |  |              |  |
|                                                           | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | COLD START 35A/230VAC                                                                                                                        |  |                           |  |              |  |
|                                                           | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <1.5mA / 230VAC                                                                                                                              |  |                           |  |              |  |
| PROTECTION                                                | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 15.75 ~ 18.75V                                                                                                                               |  | 31.5 ~ 37.5V              |  | 63 ~ 75V     |  |
|                                                           | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Protection type : Shut down o/p voltage, re-power on to recover<br>Shut down o/p voltage, recovers automatically after temperature goes down |  |                           |  |              |  |
| FUNCTION                                                  | OUTPUT VOLTAGE PROGRAMMABLE(PV) <small>Note 5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Adjustment of output voltage is allowable to 75 ~ 125% of nominal output voltage<br>Please refer to the Function Manual.                     |  |                           |  |              |  |
|                                                           | OUTPUT CURRENT PROGRAMMABLE(PC) <small>Note 5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Adjustment of output current is allowable to 20 ~ 100% of rated current<br>Please refer to the Function Manual.                              |  |                           |  |              |  |
|                                                           | AUXILIARY POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5V @ 0.3A, 12V @ 0.8A                                                                                                                        |  |                           |  |              |  |
|                                                           | REMOTE ON-OFF CONTROL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | By electrical signal or dry contact    Power ON:short    Power OFF:open. Please refer to the Function Manual                                 |  |                           |  |              |  |
|                                                           | TEMPERATURE COMPENSATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | -3mV / °C / cell / (12V = 6 cells ; 24V = 12 cells ; 48V = 24 cells)                                                                         |  |                           |  |              |  |
|                                                           | DC OK SIGNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | The isolated TTL signal out. Please refer to the Installation Manual                                                                         |  |                           |  |              |  |
|                                                           | AC OK SIGNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | The isolated TTL signal out. Please refer to the Installation Manual                                                                         |  |                           |  |              |  |
| ENVIRONMENT                                               | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -30 ~ +70°C (Refer to "Derating Curve")                                                                                                      |  |                           |  |              |  |
|                                                           | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20 ~ 90% RH non-condensing                                                                                                                   |  |                           |  |              |  |
|                                                           | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -40 ~ +85°C, 10 ~ 95% RH non-condensing                                                                                                      |  |                           |  |              |  |
|                                                           | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ±0.03%/°C (0 ~ 50°C)                                                                                                                         |  |                           |  |              |  |
|                                                           | 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:1.5KVAC (0.5KVAC for 12V)                                                                            |  |                           |  |              |  |
|                                                           | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH                                                                                   |  |                           |  |              |  |
|                                                           | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Compliance to BS EN/EN55032 (CISPR32) Conduction Class B, Radiation Class A ; BS EN/EN61000-3-2,-3, EAC TP TC 020                            |  |                           |  |              |  |
|                                                           | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, EAC TP TC 020                                                                   |  |                           |  |              |  |
| OTHERS                                                    | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 476.7K hrs min.    Telcordia SR-332 (Bellcore) ; 38.7K hrs min.    MIL-HDBK-217F (25°C)                                                      |  |                           |  |              |  |
|                                                           | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 300*85*41mm (L*W*H)                                                                                                                          |  |                           |  |              |  |
|                                                           | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1.87Kg; 6pcs/12.2Kg/1.16CUFT                                                                                                                 |  |                           |  |              |  |
| NOTE                                                      | 1. Modification for charger specification may be required for different battery specification. Please contact battery vendor and MEAN WELL for details.<br>2. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.<br>3. This is MEAN WELL's suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation.<br>4. Derating may be needed under low input voltages. Please check the derating curve for more details.<br>5. PV/PC functions when users are not operating on PMBus/CANBus. SVR functions when users are neither operating on PMBus/CANBus nor using PV/PC.<br>6. The charger 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 720mm*360mm metal plate with 1mm 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°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).<br>8. When charging lead acid battery or battery without BMS, use breaker to disconnect charger and battery after fully charged.<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> |                                                                                                                                              |  |                           |  |              |  |

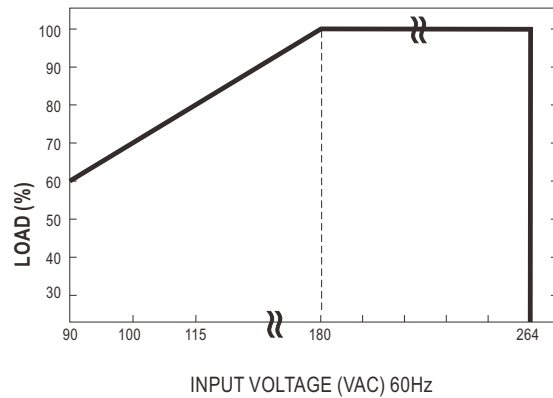
## Block Diagram



## Derating Curve



## Static Characteristics



## Function Manual

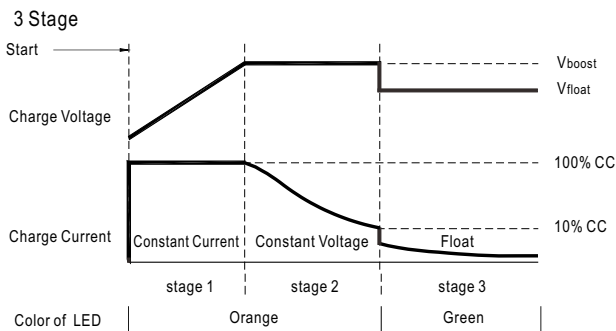
### 1. PMBus Communication Interface

※ RCB-1600 supports PMBus Rev. 1.1 with maximum 100KHz bus speed, allowing information reading, status monitoring, output trimming, etc. For details, please refer to the Installation Manual.

### 2. Charging Curve

- ※ By factory default, this charger performs the default curve which can be programmed via PMBus and CANBus.
- ※ To disable/enable the charging curve or charging timeout in each stage, change to a 2 stage curve or to a different curve frequently used for certain types of batteries in the industry, switch to PMBus, CANBus, PV/PC or SVR control instead and so on, please refer to the Installation Manual.
- ※ To program the parameters of the charging curve, SBP-001, the smart battery charging programmer designed by MEAN WELL, and a personal computer are needed. Please contact MEAN WELL for details.

#### ◎ Default 3 stage charging curve



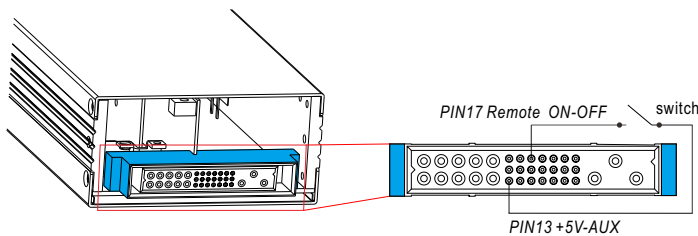
◎ Suitable for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese).

#### ◎ Embedded 3 stage charging curve

| MODEL | Description                  | Vboost | Vfloat | CC (default) |
|-------|------------------------------|--------|--------|--------------|
| 12V   | Default, programmable        | 14.4   | 13.8   | 100A         |
|       | Pre-defined, gel battery     | 14     | 13.6   |              |
|       | Pre-defined, flooded battery | 14.2   | 13.4   |              |
|       | Pre-defined, AGM battery     | 14.5   | 13.5   |              |
| 24V   | Default, programmable        | 28.8   | 27.6   | 55A          |
|       | Pre-defined, gel battery     | 28     | 27.2   |              |
|       | Pre-defined, flooded battery | 28.4   | 26.8   |              |
|       | Pre-defined, AGM battery     | 29     | 27     |              |
| 48V   | Default, programmable        | 57.6   | 55.2   | 27.5A        |
|       | Pre-defined, gel battery     | 56     | 54.4   |              |
|       | Pre-defined, flooded battery | 56.8   | 53.6   |              |
|       | Pre-defined, AGM battery     | 58     | 54     |              |

### 3. Remote ON-OFF Control

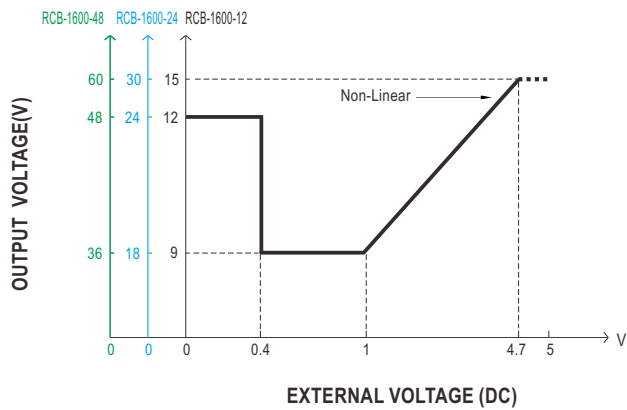
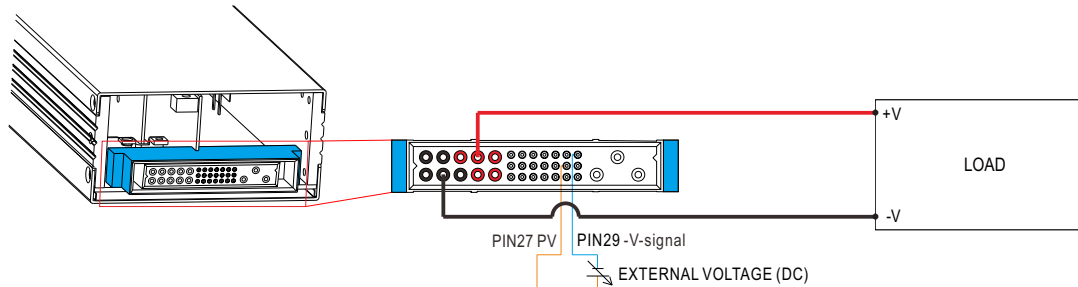
The charger can be turned ON/OFF individually or along with other units in parallel by using the "Remote ON-OFF" function.



| Between Remote ON-OFF and +5V-AUX | Charger Status |
|-----------------------------------|----------------|
| Switch Short                      | ON             |
| Switch Open                       | OFF            |

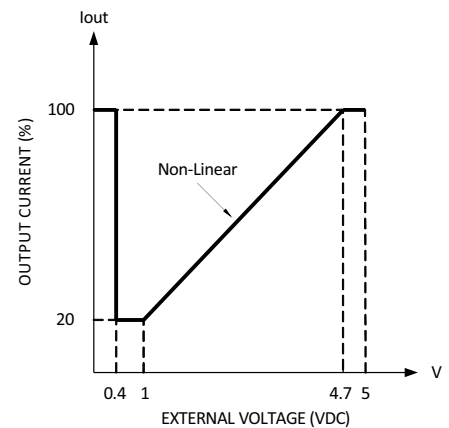
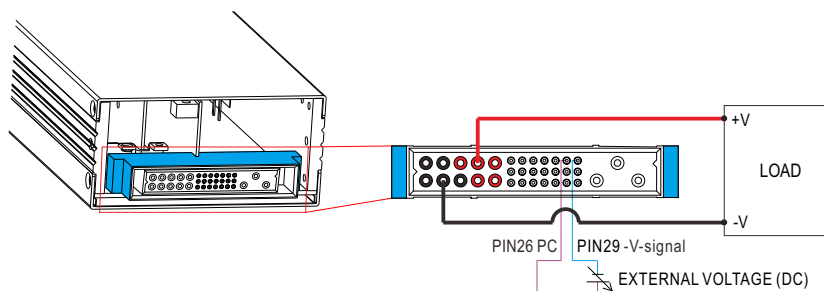
#### 4. Output Voltage Programming (or, PV / remote voltage programming / remote adjust / margin programming / dynamic voltage trim)

※ In addition to the adjustment via the built-in potentiometer, the output voltage can be trimmed to 75~125% of the nominal voltage by applying EXTERNAL VOLTAGE.

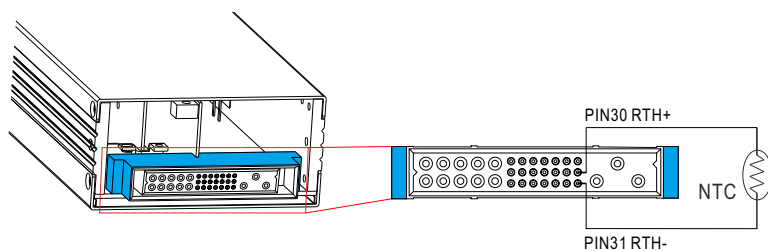


#### 5. Output Current Programming (or, PC / remote current programming / dynamic current trim)

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



#### 6. Temperature Compensation

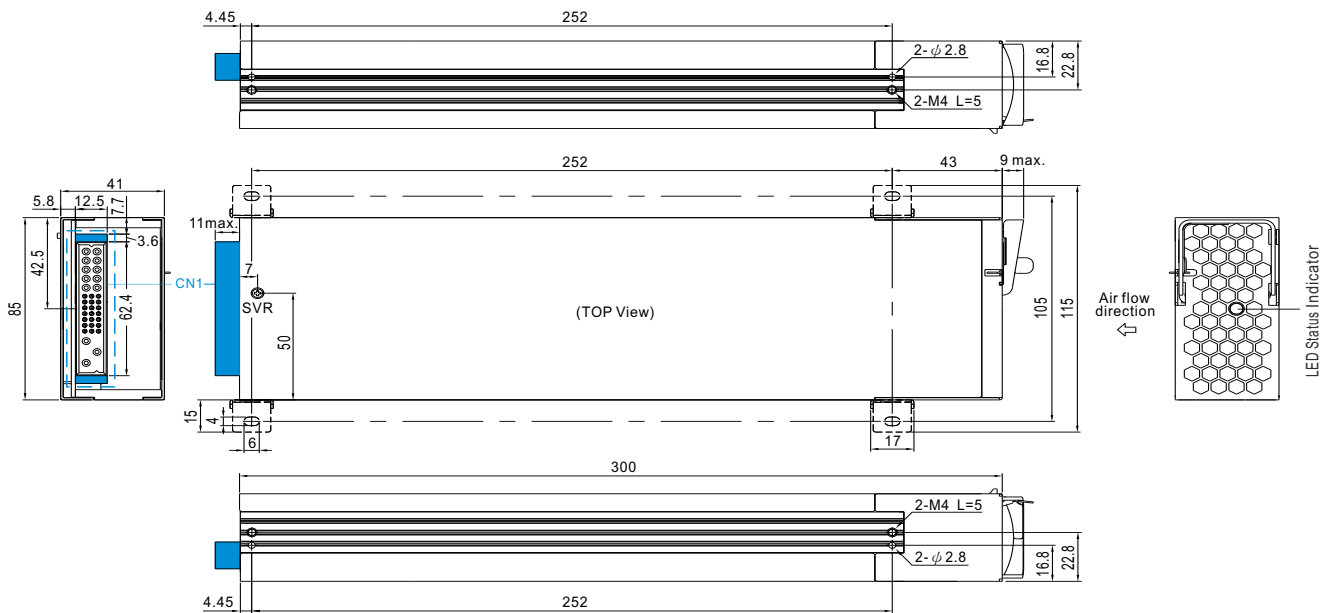


- ◎ To exploit the temperature compensation function, please attach the temperature sensor, NTC, to the battery or the battery's vicinity.
- ◎ The charger is able to work normally without the NTC.

## Mechanical Specification

(Unit: mm , tolerance  $\pm 0.5\text{mm}$ )

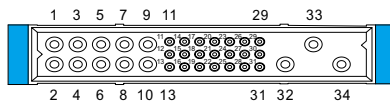
Case No.250



### ※ LED Status Indicators

| LED                                               | Description                                                                                                                                                                                                                                     |
|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <span style="color: green;">●</span> Green        | Float (stage 3)                                                                                                                                                                                                                                 |
| <span style="color: orange;">●</span> Orange      | Charging (stage 1 or stage 2)                                                                                                                                                                                                                   |
| <span style="color: red;">●</span> Red            | The LED will present a constant red light when the abnormal status (OTP, OLP, fan fail and charging timeout) arises.                                                                                                                            |
| <span style="color: red;">●</span> 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 interface.) |

### ※ Input / Output Connector Pin No. Assignment(CN1) : Positronic PCIM34W13M400A1



Mating Housing Positronic PCIM34W13F400A1

| Pin No.    | Function      | Description                                                                                                                                                                                                                                                                                             |
|------------|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1,2,3,4,6  | -V            | Negative output terminal.                                                                                                                                                                                                                                                                               |
| 5,7,8,9,10 | +V            | Positive output terminal.                                                                                                                                                                                                                                                                               |
| 11         | +12V-AUX      | Auxiliary voltage output, 10.8~13.2V, referenced to GND-AUX (pin 12). 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.                                                                                                 |
| 12         | GND-AUX       | Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V).                                                                                                                                                                                                        |
| 13         | +5V-AUX       | Auxiliary voltage output, 4.5~5.5V, referenced to GND-AUX (pin 12). The maximum load current is 0.3A. This output has the built-in "Oring diodes" and is not controlled by the Remote ON/OFF control.                                                                                                   |
| 14         | SCL           | For PMBus model: Serial Clock used in the PMBus interface. (Note.2)                                                                                                                                                                                                                                     |
| 15         | CANL          | For CANBus model: Data line used in CANBus interface. (Note.2)                                                                                                                                                                                                                                          |
| 15         | SDA           | For PMBus model: Serial Data used in the PMBus interface. (Note.2)                                                                                                                                                                                                                                      |
| 15         | CANH          | For CANBus model: Data line used in CANBus interface. (Note.2)                                                                                                                                                                                                                                          |
| 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         | 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.                                                                              |
| 18         | DC-OK         | High (3.5 ~ 5.5V) : When the Vout $\leq 8\text{V}/16\text{V}/32\text{V} \pm 1\text{V}$ .<br>Low (-0.5 ~ 0.5V) : When Vout $\geq 8\text{V}/16\text{V}/32\text{V} \pm 1\text{V}$ . The maximum sourcing current is 10mA and only for output. (Note.2)<br>DC OK is associated with battery low protection. |
| 19         | AC-OK         | High (3.5 ~ 5.5V) : When the input voltage is $\geq 87\text{Vrms}$ .<br>Low (-0.5 ~ 0.5V) : When the input voltage is $\leq 75\text{Vrms}$ .<br>The maximum sourcing current is 10mA and only for output. (Note.2)                                                                                      |
| 20         | D0            | Charging mechanism control. This pin determines, for charging operation, whether charging curve is used, or control over PMBus, PV/PC or SVR is used. Please refer to the installation Manual. (Note.1)                                                                                                 |
| 21,22,23   | A2,A1,A0      | PMBus / CANBus interface address lines. (Note.1)                                                                                                                                                                                                                                                        |
| 24,25      | DB,DA         | Differential digital signal for parallel control. (Note.1)                                                                                                                                                                                                                                              |
| 26         | PC            | Connection for output current programming. (Note.1)                                                                                                                                                                                                                                                     |
| 27         | PV            | Connection for output voltage programming. (Note.1)                                                                                                                                                                                                                                                     |
| 28         | +V(signal)    | Positive output voltage signal.<br>It cannot be connected directly to the load.                                                                                                                                                                                                                         |
| 29         | -V(signal)    | Negative output voltage signal.<br>It is for certain function reference; it cannot be connected directly to the load.                                                                                                                                                                                   |
| 30         | RTH+          | Temperature sense associated with the temperature compensation function.                                                                                                                                                                                                                                |
| 31         | RTH-          |                                                                                                                                                                                                                                                                                                         |
| 32         | FG            | AC Ground connection.                                                                                                                                                                                                                                                                                   |
| 33         | AC/L          | AC Line connection.                                                                                                                                                                                                                                                                                     |
| 34         | AC/N          | AC Neutral connection.                                                                                                                                                                                                                                                                                  |

Note1: Non-isolated signal, referenced to [-V(signal)].

Note2: Isolated signal, referenced to GND-AUX.