



Наличие и актуальные цены на

**DRS-240-36**

<https://www.mean-well.ru/store/DRS-240-36/>



User's Manual



## Features

- Universal input 90~305VAC (277VAC available)
- All-in-one function with Power supply, DC-UPS, battery charger and status monitoring in ONE compact unit
- Signal and alarms design meet UL2524,NFPA 1221,BS EN/EN54-4 and GB17945 requirement, with adjustable parameters configurable by communication interface
- Form C relay contacts and LED indicators for AC Fail, Battery Low, Charger Fail, and DC-OK
- Load-dependent high speed battery charging
- Built-in MODBus or CANBus protocol
- Protections: Short circuit / Overload / Over voltage / Over temperature(auto derating) / Battery reverse polarity (No damage) / Battery cut off
- Battery low protection / Battery reverse polarity protection
- -30 ~ +70°C wide operating temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- Charging curve can be set with SBP-001(only for CANBus model)  
(Smart programmer sold separately, please refer to: <https://www.meanwell.com/webapp/product/search.aspx?prod=SBP-001>)
- 20~100% charging current adjustable by VR
- 2 or 3-stage selectable by DIP S.W
- Suitable for lead acid and lithium-ion batteries
- 3 years warranty

## Description

DRS-240 is a 240W AC/DC DIN rail type security power supply series. In addition to the primary output, there is an additional charger circuit that will automatically adjust charge current depending on the primary output current. DRS-240 accepts the universal input between 90VAC and 305VAC, and supports output 12VDC, 24VDC, 36VDC, and 48VDC nominal systems. With high efficiency up to 92%, it can operate with free air convection cooling under -30°C through 70°C ambient temperature. In addition to the key protection features such as overload protection, over voltage protection, battery low voltage disconnect, and battery reverse polarity protection, the DRS-240 also provides Form-C contacts and LED indicator alarm signals for AC-fail, battery low, charger circuit fail, and DC-OK to allow easy integration into security systems that comply with local alarm codes.

## Model Encoding

DRS - 240 - 48

- Function (Blank: Built-in MODBus, CAN: Built-in CANBus)
- Output voltage(12V/24V/36V/48V)
- Rated wattage
- Series name

## Applications

- Public safety battery back-up (Red box)
- Security system
- Emergency lighting system
- Alarm system
- Uninterruptible DC-UPS system, battery detection system
- Central monitoring system
- Industrial automation

## GTIN CODE

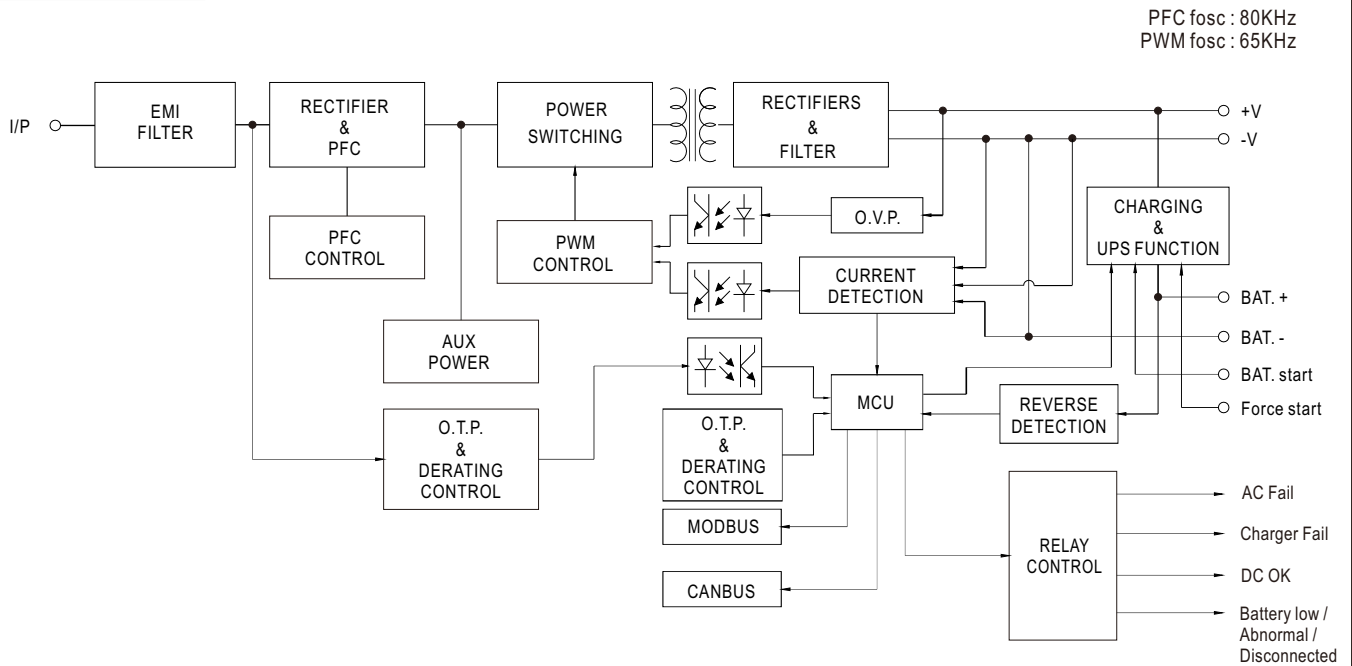
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>



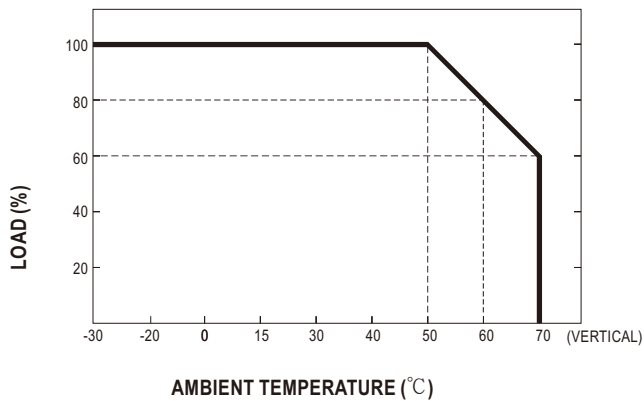
SPECIFICATION

| MODEL                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | DRS-240-12□                                                                                                                                                                             | DRS-240-24□                                                        | DRS-240-36□                     | DRS-240-48□                     |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------|---------------------------------|
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | □=Blank, CAN                                                                                                                                                                            |                                                                    |                                 |                                 |
| OUTPUT                  | OUTPUT VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Note.2                                                                                   | 12V                                                                                                                                                                                     | 24V                                                                | 36V                             | 48V                             |
|                         | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                          | 0 ~ 20A                                                                                                                                                                                 | 0 ~ 10A                                                            | 0 ~ 6.6A                        | 0 ~ 5A                          |
|                         | BATTERY CURRENT (CC)(max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                          | 15.4A                                                                                                                                                                                   | 7.7A                                                               | 5.1A                            | 3.85A                           |
|                         | RECOMMENDED BATTERY CAPACITY(AMP HOURS)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Note.3                                                                                   | 20 ~ 200AH                                                                                                                                                                              | 10 ~ 100AH                                                         | 6.6 ~ 66AH                      | 5 ~ 50AH                        |
|                         | TOTAL OUTPUT POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Note.4                                                                                   | Combined power on all Channels must not exceed 240W, load has priority. 275W peak capability within 5s.                                                                                 |                                                                    |                                 |                                 |
|                         | RIPPLE & NOISE (max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Note.5                                                                                   | 150mVp-p                                                                                                                                                                                | 240mVp-p                                                           | 360mVp-p                        | 480mVp-p                        |
|                         | VOLTAGE TOLERANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Note.6                                                                                   | ± 1.0%                                                                                                                                                                                  | ± 1.0%                                                             | ± 1.0%                          | ± 1.0%                          |
|                         | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | ± 0.5%                                                                                                                                                                                  | ± 0.5%                                                             | ± 0.5%                          | ± 0.5%                          |
|                         | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | ± 0.5%                                                                                                                                                                                  | ± 0.5%                                                             | ± 0.5%                          | ± 0.5%                          |
|                         | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Note.7                                                                                   | 2400ms, 1000ms/230VAC      2400ms, 1000ms/115VAC at full load                                                                                                                           |                                                                    |                                 |                                 |
| HOLD UP TIME (Typ.)     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 16ms/230VAC      10ms/115VAC at full load                                                |                                                                                                                                                                                         |                                                                    |                                 |                                 |
| INPUT                   | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                          | 90 ~ 305VAC      127 ~ 431VDC                                                                                                                                                           |                                                                    |                                 |                                 |
|                         | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | 47 ~ 63Hz                                                                                                                                                                               |                                                                    |                                 |                                 |
|                         | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                          | PF>0.95/230VAC      PF>0.98/115VAC at full load                                                                                                                                         |                                                                    |                                 |                                 |
|                         | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                          | 90%                                                                                                                                                                                     | 92%                                                                | 92%                             | 92%                             |
|                         | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                          | 2.8A/115VAC      1.4A/230VAC                                                                                                                                                            |                                                                    |                                 |                                 |
|                         | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                          | COLD START    30A/115VAC      60A/230VAC                                                                                                                                                |                                                                    |                                 |                                 |
| PROTECTION              | SHORT CIRCUIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                          | Protection type: Constant current limiting, power will shutdown after 5 sec, re-power on to recover.                                                                                    |                                                                    |                                 |                                 |
|                         | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                          | 105 ~ 135% rated output power                                                                                                                                                           |                                                                    |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | Protection type: Constant current limiting, shutdown output voltage after 5 sec.                                                                                                        |                                                                    |                                 |                                 |
|                         | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                          | Automatically drop load with temperature only for bat. load.<br>Protection type : Shut down o/p voltage, recover automatically after temperature goes down.                             |                                                                    |                                 |                                 |
|                         | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                          | Load main output : 16.2 ~ 18.6V                                                                                                                                                         | Load main output : 32.4 ~ 37.3V                                    | Load main output : 48.6 ~ 55.9V | Load main output : 64.8 ~ 74.5V |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | Protection type : Shut down o/p voltage, re-power on to recover                                                                                                                         |                                                                    |                                 |                                 |
|                         | BATTERY CUT OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | 10.5±0.3V                                                                                                                                                                               | 20.9±0.5V                                                          | 31.3±0.7V                       | 41.8±1V                         |
| REVERSE POLARITY        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | By internal MOSFET, no damage, recovers automatically after fault condition is removed.  |                                                                                                                                                                                         |                                                                    |                                 |                                 |
| FUNCTION                | FORM-C RELAY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | AC FAIL                                                                                  | Signals AC failure and activates when input voltage drops below : 79~89VAC of 120AC, 132~187VAC of 220VAC.<br>Relay contact output, ON : AC OK ; OFF : AC Fail ; max. rating : 30Vdc/1A |                                                                    |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | CHARGER FAIL                                                                             | Relay contact output, ON : Charger OK ; OFF : Charger Fail ; max. rating : 30Vdc/1A                                                                                                     |                                                                    |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | DC OK                                                                                    | Signals normal DC output and activates when output voltage > 90% rated value.<br>Relay contact output, ON : DC OK ; OFF : DC Fail ; max. rating : 30Vdc/1A                              |                                                                    |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | BATTERY LOW/ ABNORMAL/ DISCONNECTED                                                      | Relay contact output, ON : Battery OK ; OFF : Battery Low ; max. rating : 30Vdc/1A                                                                                                      |                                                                    |                                 |                                 |
|                         | BATTERY START                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                          | Restart system directly from battery and does not require AC power                                                                                                                      |                                                                    |                                 |                                 |
|                         | DC-UPS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                          | UPS switch to battery power within 10ms of AC failure                                                                                                                                   |                                                                    |                                 |                                 |
|                         | ADJUSTABLE CHARGING CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                          | 20% ~ 100% charging current adjustable by VR                                                                                                                                            |                                                                    |                                 |                                 |
|                         | BATTERY TEMPERATURE COMPENSATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                          | The system can change the battery charging voltage by detecting the temperature (Please refer to page 9~10 for more details).                                                           |                                                                    |                                 |                                 |
|                         | ENVIRONMENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | WORKING TEMP.                                                                            |                                                                                                                                                                                         | -30 ~ +70℃ (Refer to "Derating Curve")                             |                                 |                                 |
| WORKING HUMIDITY        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | 20 ~ 90% RH non-condensing                                                                                                                                                              |                                                                    |                                 |                                 |
| STORAGE TEMP., HUMIDITY |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | -40 ~ +85℃, 10 ~ 95% RH non-condensing                                                                                                                                                  |                                                                    |                                 |                                 |
| TEMP. COEFFICIENT       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | ±0.03%/℃ (0 ~ 50℃ ) on Load output                                                                                                                                                      |                                                                    |                                 |                                 |
| VIBRATION               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes                                                                                                                            |                                                                    |                                 |                                 |
| OPERATING ALTITUDE      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Note.8                                                                                   | 2000 meters / OVC III                                                                                                                                                                   |                                                                    |                                 |                                 |
| OVER VOLTAGE CATEGORY   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | III ; According to Dekra BS EN/EN62368-1; altitude up to 2000 meters                                                                                                                    |                                                                    |                                 |                                 |
| SAFETY STANDARDS        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                          | UL62368-1, Dekra BS EN/EN62368-1, RCM AS/NZS 62368.1, EAC TP TC 004 approved                                                                                                            |                                                                    |                                 |                                 |
| WITHSTAND VOLTAGE       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | I/P-O/P: 4KVAC    I/P-FG: 2KVAC    O/P-FG: 1.5KVAC                                       |                                                                                                                                                                                         |                                                                    |                                 |                                 |
| ISOLATION RESISTANCE    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500VDC/25℃ / 70%RH                                    |                                                                                                                                                                                         |                                                                    |                                 |                                 |
| SAFETY & EMC (Note.9)   | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Parameter                                                                                | Standard                                                                                                                                                                                | Test Level / Note                                                  |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Conducted                                                                                | BS EN/EN55032 (CISPR32)                                                                                                                                                                 | Class B                                                            |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Radiated                                                                                 | BS EN/EN55032 (CISPR32)                                                                                                                                                                 | Class B                                                            |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Harmonic Current                                                                         | BS EN/EN61000-3-2                                                                                                                                                                       | -----                                                              |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Voltage Flicker                                                                          | BS EN/EN61000-3-2                                                                                                                                                                       | -----                                                              |                                 |                                 |
|                         | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | BS EN/EN55035 , BS EN/EN61204-3, BS EN/EN61000-6-2(BS EN/EN50082-2)                      |                                                                                                                                                                                         |                                                                    |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Parameter                                                                                | Standard                                                                                                                                                                                | Test Level / Note                                                  |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | ESD                                                                                      | BS EN/EN61000-4-2                                                                                                                                                                       | Level 3, 8KV air ; Level 2, 4KV contact; criteria A                |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Radiated                                                                                 | BS EN/EN61000-4-3                                                                                                                                                                       | Level 3, 10V/m ; criteria A                                        |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | EFT / Burst                                                                              | BS EN/EN61000-4-4                                                                                                                                                                       | Level 3, 2KV ; criteria A                                          |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Surge                                                                                    | BS EN/EN61000-4-5                                                                                                                                                                       | Level 3, 1KV/Line-Line ;Level 3, 2KV/Line-Line-Chassis ;criteria A |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Conducted                                                                                | BS EN/EN61000-4-6                                                                                                                                                                       | Level 3, 10V ; criteria A                                          |                                 |                                 |
|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Magnetic Field                                                                           | BS EN/EN61000-4-8                                                                                                                                                                       | Level 4, 30A/m ; criteria A                                        |                                 |                                 |
|                         | FIRE DETECTION AND FIRE ALARM SYSTEM                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                          | Compliance to BS EN/EN54-4                                                                                                                                                              |                                                                    |                                 |                                 |
| OTHERS                  | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 564.7K hrs min.    Telcordia SR-332 (Bellcore);    73.3K hrs min.    MIL-HDBK-217F (25℃) |                                                                                                                                                                                         |                                                                    |                                 |                                 |
|                         | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 85.5*125.2*129.2mm (W*H*D)                                                               |                                                                                                                                                                                         |                                                                    |                                 |                                 |
|                         | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 1.19Kg; 8pcs/ 12.5Kg / 1.08CUFT                                                          |                                                                                                                                                                                         |                                                                    |                                 |                                 |
| NOTE                    | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.<br>2. Variable with charger voltage when battery is connected.<br>3. This is Mean Well's suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation.<br>4. If load current increases, the system will prioritize load current demand and automatically reduce the battery charging current.<br>5. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 μ F & 47 μ F parallel capacitor.<br>6. Tolerance : includes set up tolerance, line regulation and load regulation.<br>7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.<br>8. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).<br>9. Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power.<br>In case the adjacent device is a heat source, 15cm clearance is recommended.<br>10. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 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>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |                                                                                          |                                                                                                                                                                                         |                                                                    |                                 |                                 |

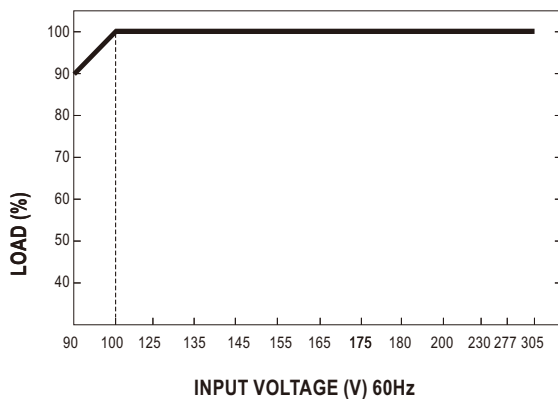
## Block Diagram



## Derating Curve



## Static Characteristics



## Function manual

### 1. Alarm signals

- (1) Alarm Signal is sent out through "AC fail " & " Battery low " & " Charger fail "pins via relay contact.
- (2) An external voltage source is required for this function. The maximum applied voltage is 30Vdc and the maximum sink current is 1A. Please refer to Fig 1.2.
- (3) Table 1.1 explains the alarm function built in the power supply

| INPUT                       | AC fail |        | DC OK  |       | Battery low/Abnormal /Disconnected |        | Charger fail |        |
|-----------------------------|---------|--------|--------|-------|------------------------------------|--------|--------------|--------|
|                             | 2-3     | 1-3    | 5-6    | 4-6   | 8-9                                | 7-9    | 11-12        | 10-12  |
| AC only                     | closed  | open   | closed | open  | open                               | closed | -----        | -----  |
| AC + BAT.                   | closed  | open   | closed | open  | closed                             | open   | -----        | -----  |
| BAT. only                   | open    | closed | closed | open  | closed                             | open   | -----        | -----  |
| Low BAT.<br>(<30% capacity) | -----   | -----  | -----  | ----- | open                               | closed | -----        | -----  |
| Charger Fail                | -----   | -----  | -----  | ----- | -----                              | -----  | open         | closed |

Table 1.1 Explanation of alarm signal

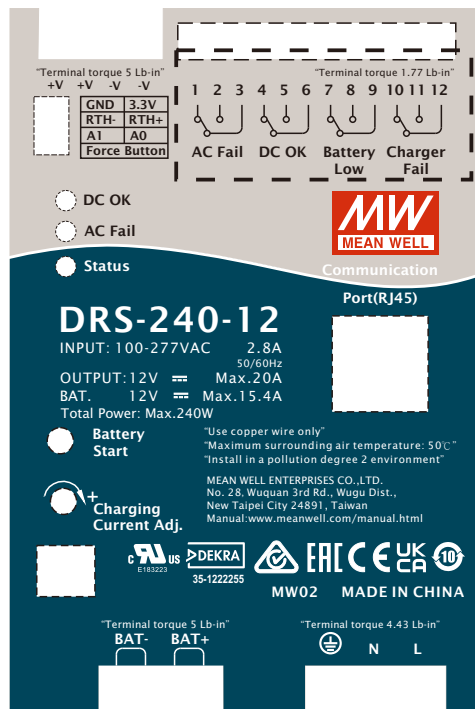


Fig 1.1 alarm signal Terminals

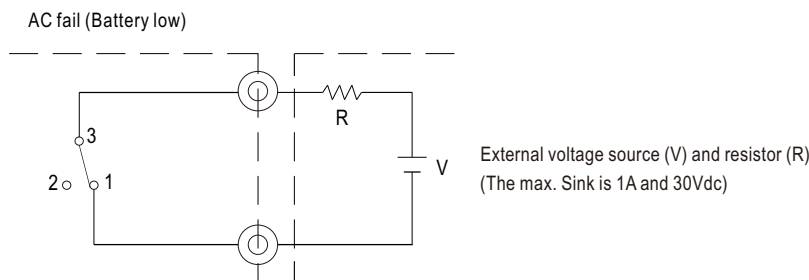
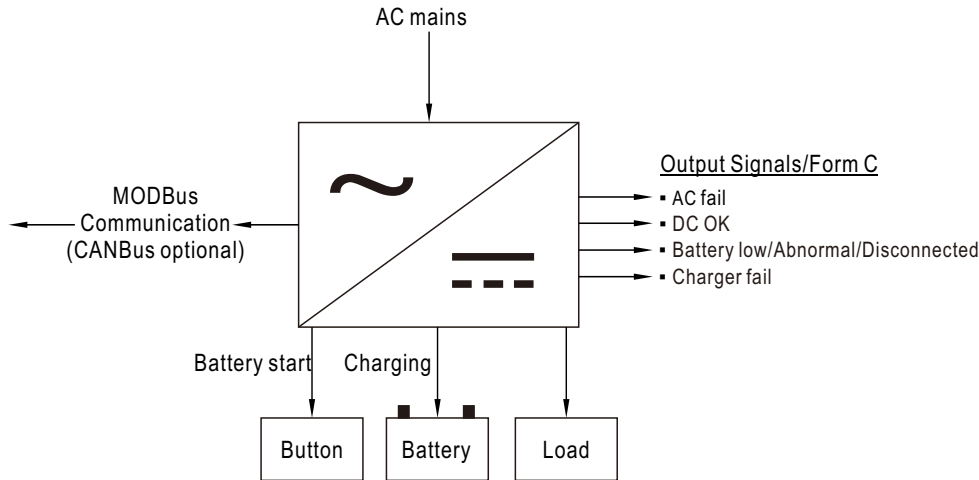


Fig 1.2 Internal circuit of AC fail (Battery low), via relay contact

## 2.DC-UPS function

When AC mains drops below:79~89VAC of 120VAC,132~187VAC of 220VAC, UPS function will activate and power source switch battery backup.

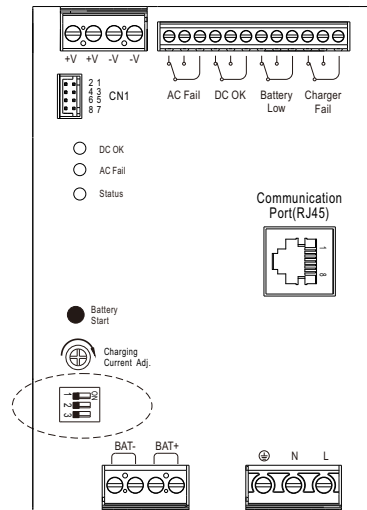


## 3.Charger setting

### 3.1.1 2 or 3-stage selectable by DIP S.W

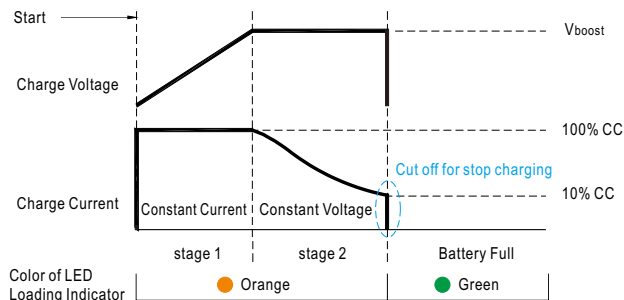
※ This series provides 2 or 3 stage charging curve.

|   |                                     |
|---|-------------------------------------|
| 1 | OFF: 3 stage(Default), ON: 2 stage  |
| 2 | Charging curve adjustable:see below |
| 3 |                                     |



### 3.1.2 Charging curve can be adjustable by DIP S.W

#### ◎ 2 stage charging curve

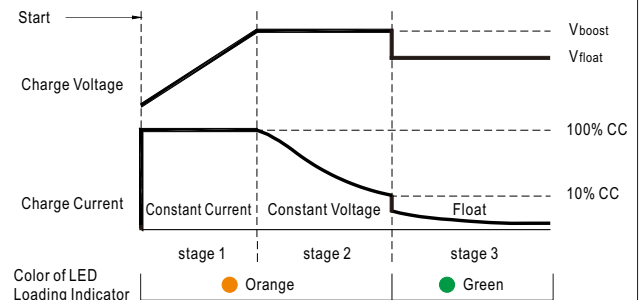


| State            | DRS-240-12 | DRS-240-24 | DRS-240-36 | DRS-240-48 |
|------------------|------------|------------|------------|------------|
| Constant Current | 15.4A      | 7.7A       | 5.1A       | 3.85A      |
| Vboost           | 14.4V      | 28.8V      | 43.2V      | 57.6V      |

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

※ The default curve is programmable, whereas other pre-defined curves can be activated by the means of the DIP S.W; please refer to the table below and the Mechanical Specification.

#### ◎ Default 3 stage charging curve



| State            | DRS-240-12 | DRS-240-24 | DRS-240-36 | DRS-240-48 |
|------------------|------------|------------|------------|------------|
| Constant Current | 15.4A      | 7.7A       | 5.1A       | 3.85A      |
| Vboost           | 14.4V      | 28.8V      | 43.2V      | 57.6V      |
| Vfloat           | 13.8V      | 27.6V      | 41.4V      | 55.2V      |

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

## ◎ Embedded 2 stage charging curve

| DIP SW position |     | 12V model                       |             |        |
|-----------------|-----|---------------------------------|-------------|--------|
| 2               | 3   | Description                     | CC(default) | Vboost |
| OFF             | OFF | Default, programmable           | 15.4A       | 14.4   |
| ON              | OFF | Pre-defined, gel batter         |             | 14.0   |
| OFF             | ON  | Pre-defined, flooded battery    |             | 14.2   |
| ON              | ON  | Pre-defined, AGM battery,LiFe04 |             | 14.6   |
| DIP SW position |     | 24V model                       |             |        |
| 2               | 3   | Description                     | CC(default) | Vboost |
| OFF             | OFF | Default, programmable           | 7.7A        | 28.8   |
| ON              | OFF | Pre-defined, gel batter         |             | 28.0   |
| OFF             | ON  | Pre-defined, flooded battery    |             | 28.4   |
| ON              | ON  | Pre-defined, AGM battery,LiFe04 |             | 29.2   |
| DIP SW position |     | 36V model                       |             |        |
| 2               | 3   | Description                     | CC(default) | Vboost |
| OFF             | OFF | Default, programmable           | 5.1A        | 43.2   |
| ON              | OFF | Pre-defined, gel battery        |             | 42     |
| OFF             | ON  | Pre-defined, flooded battery    |             | 42.6   |
| ON              | ON  | Pre-defined, AGM battery,LiFe04 |             | 43.8   |
| DIP SW position |     | 48V model                       |             |        |
| 2               | 3   | Description                     | CC(default) | Vboost |
| OFF             | OFF | Default, programmable           | 3.85A       | 57.6   |
| ON              | OFF | Pre-defined, gel battery        |             | 56.0   |
| OFF             | ON  | Pre-defined, flooded battery    |             | 56.8   |
| ON              | ON  | Pre-defined, AGM battery,LiFe04 |             | 58.4   |

## ◎ Embedded 3 stage charging curve

| DIP SW position |     | 12V model                       |             |        |        |
|-----------------|-----|---------------------------------|-------------|--------|--------|
| 2               | 3   | Description                     | CC(default) | Vboost | Vfloat |
| OFF             | OFF | Default, programmable           | 15.4A       | 14.4   | 13.8   |
| ON              | OFF | Pre-defined, gel batter         |             | 14.0   | 13.6   |
| OFF             | ON  | Pre-defined, flooded battery    |             | 14.2   | 13.4   |
| ON              | ON  | Pre-defined, AGM battery,LiFe04 |             | 14.6   | 14.0   |
| DIP SW position |     | 24V model                       |             |        |        |
| 2               | 3   | Description                     | CC(default) | Vboost | Vfloat |
| OFF             | OFF | Default, programmable           | 7.7A        | 28.8   | 27.6   |
| ON              | OFF | Pre-defined, gel batter         |             | 28.0   | 27.2   |
| OFF             | ON  | Pre-defined, flooded battery    |             | 28.4   | 26.8   |
| ON              | ON  | Pre-defined, AGM battery,LiFe04 |             | 29.2   | 28.0   |
| DIP SW position |     | 36V model                       |             |        |        |
| 2               | 3   | Description                     | CC(default) | Vboost | Vfloat |
| OFF             | OFF | Default, programmable           | 5.1A        | 43.2   | 41.4   |
| ON              | OFF | Pre-defined, gel battery        |             | 42     | 40.8   |
| OFF             | ON  | Pre-defined, flooded battery    |             | 42.6   | 40.2   |
| ON              | ON  | Pre-defined, AGM battery,LiFe04 |             | 43.8   | 42.0   |
| DIP SW position |     | 48V model                       |             |        |        |
| 2               | 3   | Description                     | CC(default) | Vboost | Vfloat |
| OFF             | OFF | Default, programmable           | 3.85A       | 57.6   | 55.2   |
| ON              | OFF | Pre-defined, gel battery        |             | 56.0   | 54.4   |
| OFF             | ON  | Pre-defined, flooded battery    |             | 56.8   | 53.6   |
| ON              | ON  | Pre-defined, AGM battery,LiFe04 |             | 58.4   | 56.0   |

### 3.2 SBP-001 can adjust the charging curves (Only CANBus Model)

## ◎ 2 stage charging curve (programmable)

| DIP SW position |     | 12V model             |             |        |
|-----------------|-----|-----------------------|-------------|--------|
| 2               | 3   | Description           | CC(default) | Vboost |
| OFF             | OFF | Default, programmable | 15.4A       | 14.4   |
| DIP SW position |     | 24V model             |             |        |
| 2               | 3   | Description           | CC(default) | Vboost |
| OFF             | OFF | Default, programmable | 7.7A        | 28.8   |
| DIP SW position |     | 36V model             |             |        |
| 2               | 3   | Description           | CC(default) | Vboost |
| OFF             | OFF | Default, programmable | 5.1A        | 43.2   |
| DIP SW position |     | 48V model             |             |        |
| 2               | 3   | Description           | CC(default) | Vboost |
| OFF             | OFF | Default, programmable | 3.85A       | 57.6   |

## ◎ 3 stage charging curve (programmable)

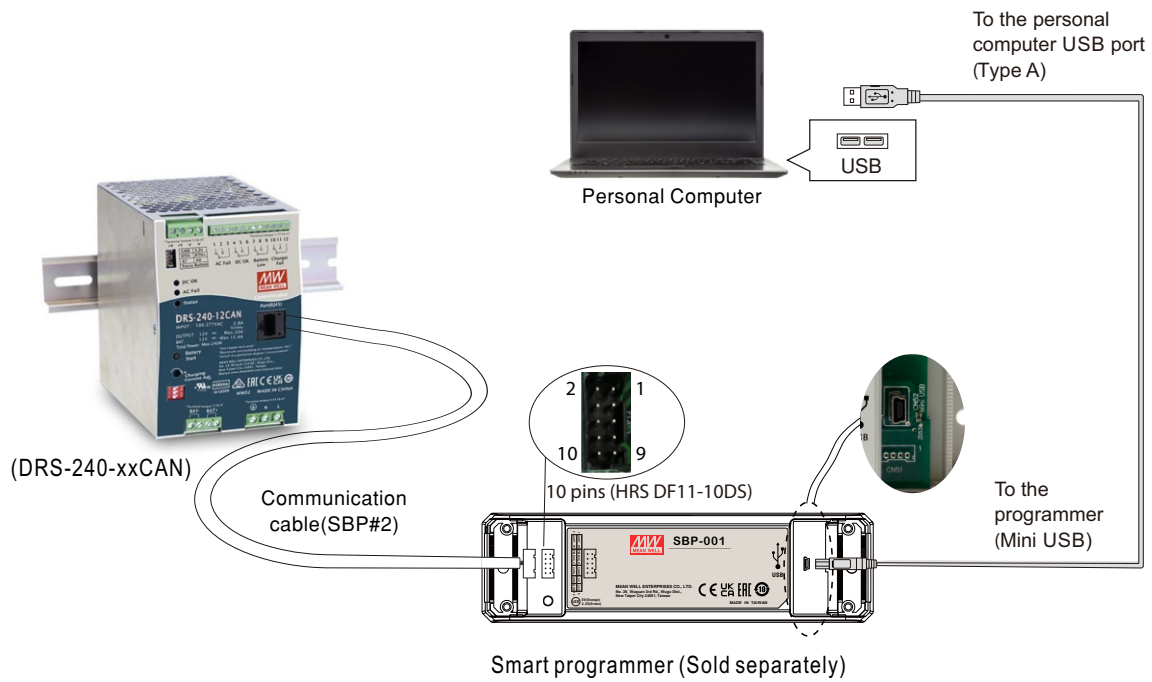
| DIP SW position |     | 12V model             |             |        |        |
|-----------------|-----|-----------------------|-------------|--------|--------|
| 2               | 3   | Description           | CC(default) | Vboost | Vfloat |
| OFF             | OFF | Default, programmable | 15.4A       | 14.4   | 13.8   |
| DIP SW position |     | 24V model             |             |        |        |
| 2               | 3   | Description           | CC(default) | Vboost | Vfloat |
| OFF             | OFF | Default, programmable | 7.7A        | 28.8   | 27.6   |
| DIP SW position |     | 36V model             |             |        |        |
| 2               | 3   | Description           | CC(default) | Vboost | Vfloat |
| OFF             | OFF | Default, programmable | 5.1A        | 43.2   | 41.4   |
| DIP SW position |     | 48V model             |             |        |        |
| 2               | 3   | Description           | CC(default) | Vboost | Vfloat |
| OFF             | OFF | Default, programmable | 3.85A       | 57.6   | 55.2   |

※ SBP-001 is a programmer, particularly for MEAN WELL's various programmable battery charger models to program the parameters of charging curves, such as the Constant current (CC), tapper current (TC), Constant voltage (CV), float voltage (FV) and so on, to accommodate the diversified battery specification in industry. With the design accounting for simplicity and convenience, users can easily configure MEAN WELL's programmable battery chargers with SBP-001 programmer and the computer; all of the setups are able to be finished easily by the means of the specific software.

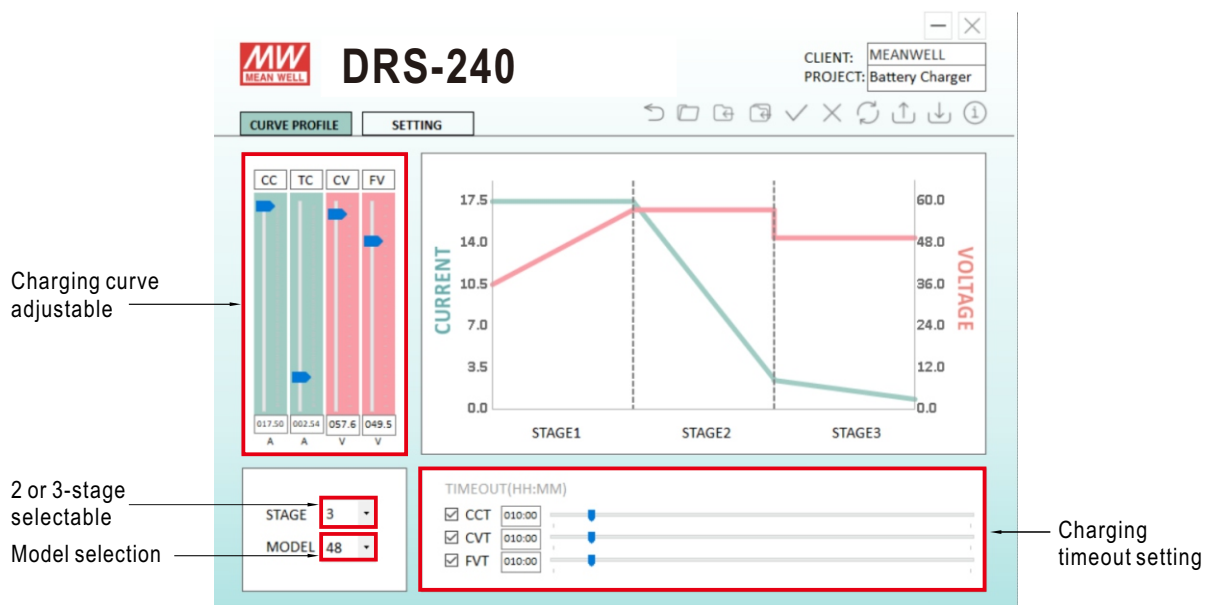
Note: (1) Tapper current (TC) default is 10%, can be fine tuned from 2% to 30% by SBP-001 with computer or CANBus Interface.

(2) The SBP-001 only supports CANBus version (DRS-240-xxCAN).

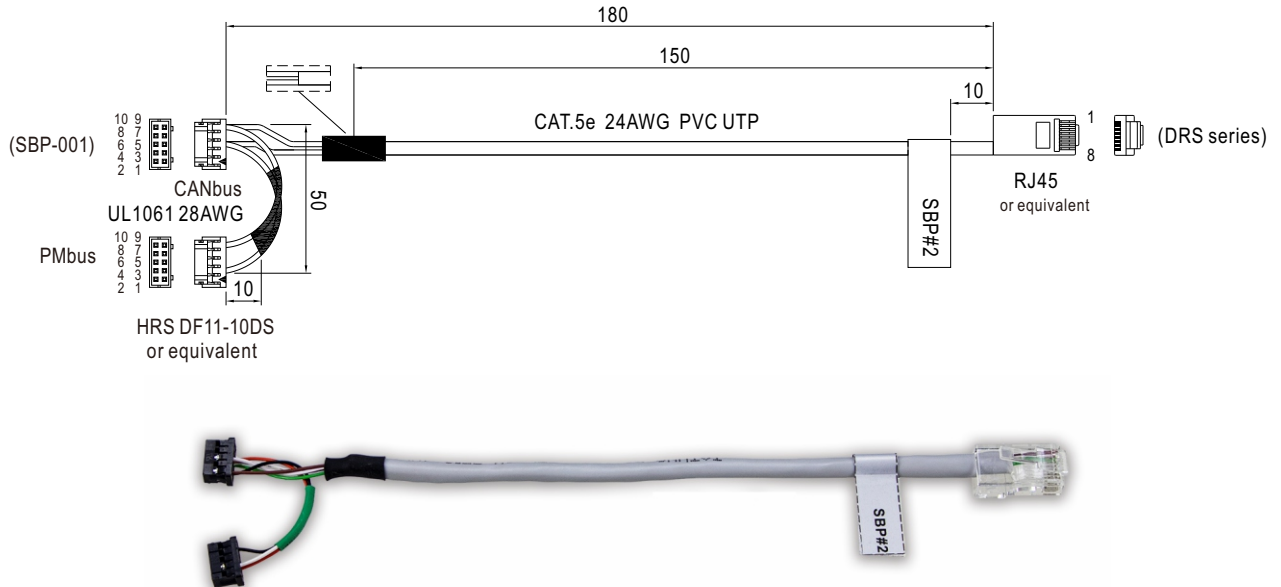
(3) Please contact MEAN WELL for more details.



## ※ User Interface:



※ Communication cable for DRS series



DRS series pin assignment :

| Connector                                                     | Pin Assignment |      |      |      |             |             |      |      |      |             |
|---------------------------------------------------------------|----------------|------|------|------|-------------|-------------|------|------|------|-------------|
| SBP-001 10pin connector<br>(Connector part No.:HRS DF11-10DS) | 1              | 2    | 3    | 4    | 5<br>(CANH) | 6<br>(CANL) | 7    | 8    | 9    | 10<br>(GND) |
| DRS-240 RJ45<br>Communication port                            | ----           | ---- | ---- | ---- | 6           | 7           | ---- | ---- | ---- | 8           |
| Wire color                                                    | ----           | ---- | ---- | ---- | Green       | White/Brown | ---- | ---- | ---- | Brown       |

### 3.3 Communication interface

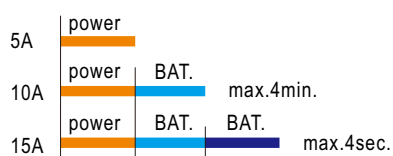
Charging parameters can be modified by MODBus (DRS-240-xx) or CANBus(DRS-240-xxCAN) communication commands.

For details, please refer to: <http://www.meanwell.com/manual.html>

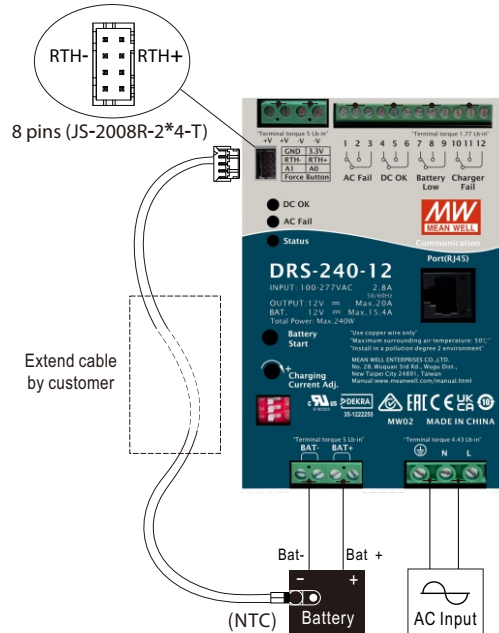
### 4.Power Boost Mode

The maximum current on the load output is the 2 times the rated current for 4 minutes max. and 3 times the rated current for 4 seconds max.  
For example (48V model):

Output load



## 5. Battery temperature compensation



- ◎ To exploit the temperature compensation function, please attach the temperature sensor(NTC) which is enclosed with DRS-240, to the battery or the battery's vicinity.
- ◎ DRS-240 is able to work normally without the temperature sensor(NTC).

5.1 The compensation parameters included Disable, -3, -4 and -5mV/ °C /Cell. It can be modified by communication command of CANBus, MODBus. The factory default value is -3mV/ °C /Cell.

5.2 It will be regarded as normal temperature and will not be compensated when temperature compensation resistance is not connected; And temperature compensation will only compensate lead-acid battery, not lithium iron battery.

5.3 The range of temperature compensation is 0-40°C , normal temperature 25°C is the central value, no compensation; When the temperature is < 0 °C or > 40 °C, the current temperature compensation value will be limited to 0 °C or 40°C.

24V model as an example

Assuming that  $V_{boost}=28.8V$ , temperature compensation set to  $-5mV/^{\circ}C/Cell$  by communication, TEMP\_bat is NTC temperature detection.

The compensating voltage can be calculated by the following equation:

$$V_{boost\_comp}=28.8V-5mV*(TEMP\_bat-25^{\circ}C)*12Cell$$

Max. compensation voltage:

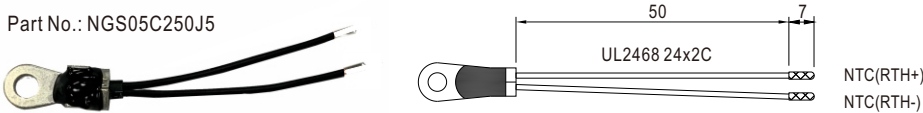
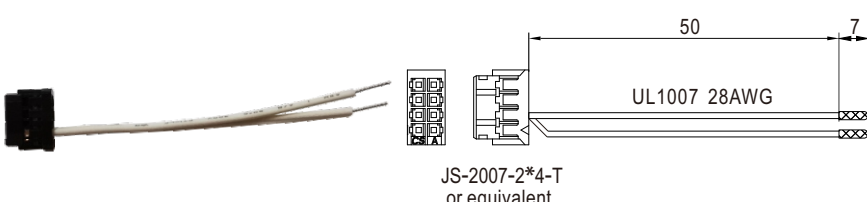
$$V_{boost\_H}=28.8V-5mV*(0^{\circ}C-25^{\circ}C)*12Cell=30.3V$$

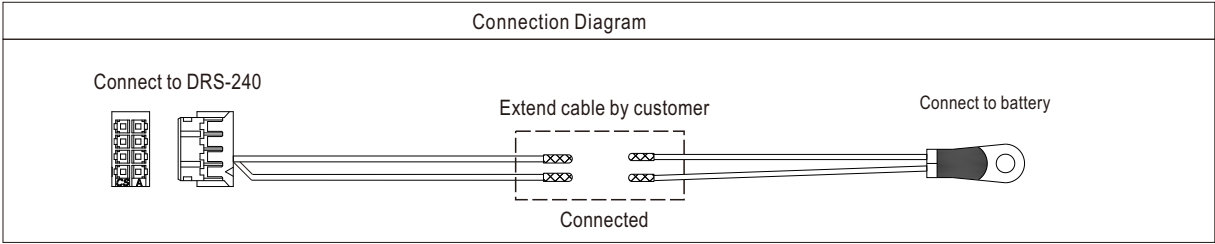
Min. compensation voltage:

$$V_{boost\_L}=28.8V-5mV*(40^{\circ}C-25^{\circ}C)*12Cell=27.9V$$

5.4 Accessory List

※ NTC Sensor and mating wire along with DRS-240 (Standard accessory)

| Item |                                                                                                                                        | Quantity |
|------|----------------------------------------------------------------------------------------------------------------------------------------|----------|
| 1    | <p>NTC sensor wire</p> <p>Part No.: NGS05C250J5</p>  | 1        |
| 2    | <p>Mating wire</p>                                   | 1        |



## 6.LED alarm

| Function |                  | Description                                       | Output of alarm                                                                                                                                                                                   |
|----------|------------------|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DC OK    |                  | DC fail                                           | OFF                                                                                                            |
|          |                  | DC OK                                             | Green                                                                                                          |
| AC fail  |                  | AC fail                                           | Red                                                                                                            |
|          |                  | AC OK                                             | OFF                                                                                                            |
| Status   | Charging status  | Float                                             | Green                                                                                                          |
|          |                  | Charging: CC/CV                                   | Orange                                                                                                         |
|          | System diagnosis | Discharging                                       | Orange: 1 Blink/Pause   |
|          |                  | Charger fail                                      | Red : 1 Blink/Pause     |
|          |                  | Battery overvoltage /<br>Battery reverse polarity | Red : 2 Blink/Pause     |
|          |                  | Battery low / No Battery                          | Red : 3 Blink/Pause     |
|          |                  | Battery discharge peak power timeout.             | Red : 4 Blink/Pause     |
|          |                  | Over load / short                                 | Red : 5 Blink/Pause     |
|          |                  | Over temperature                                  | Red : 6 Blink/Pause     |
|          |                  | Timeout                                           | Red : 7 Blink/Pause     |

## Suggested Application

### 1.Backup connection for AC interruption

(1) Please refer to Fig2.1 for suggested connection.

The power supply charges the battery and provides energy to the load at the same time when AC mains is OK.  
The battery starts to supply power to the load when AC mains fails.

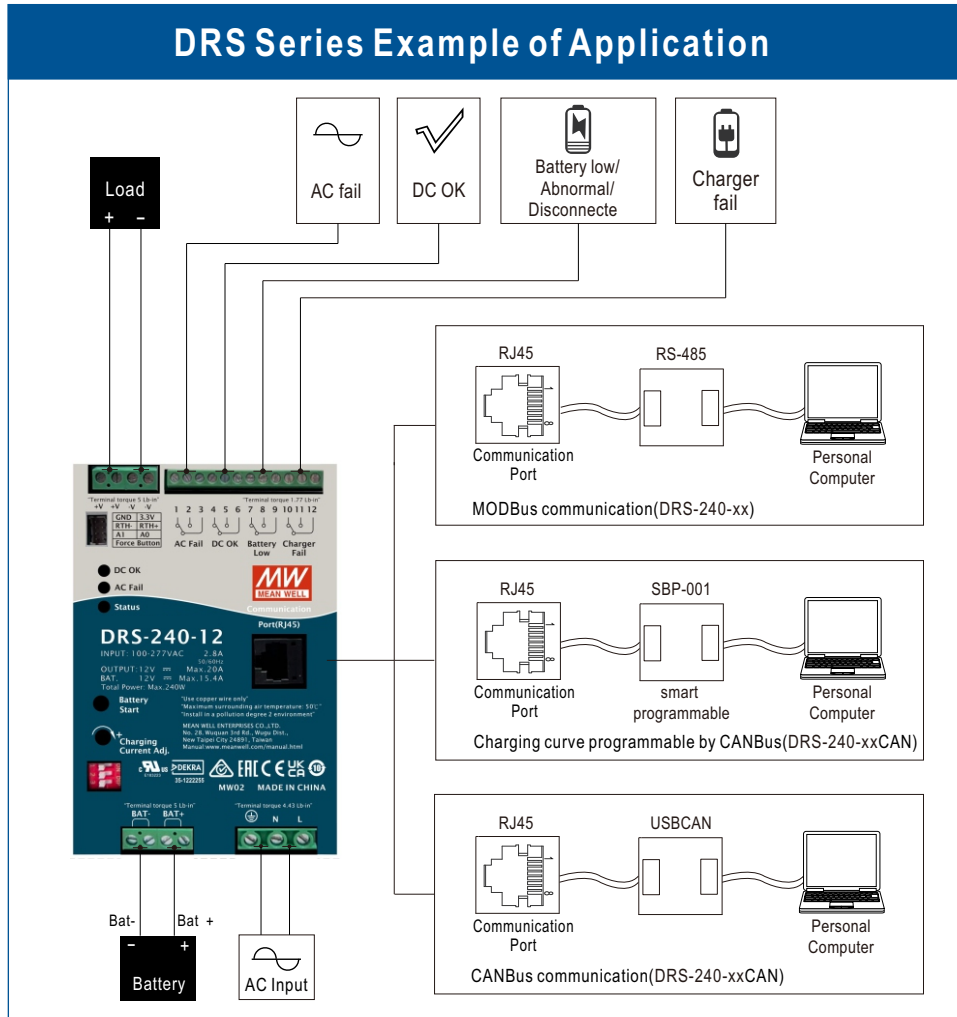


Fig 2.1 Suggested system connection

(2) Backup time

Backup time depends on:

- ✘ from the load current
- ✘ from the size of the batteries.

The following table is an example (battery capacity at C10 discharge rate).

| Battery Load | 10AH   | 20AH   | 50AH   | 100AH  | 200AH |
|--------------|--------|--------|--------|--------|-------|
| 1.5A         | 350min | 13h    | 33h    | 67h    | 133h  |
| 3A           | 125min | 350min | 17h    | 33h    | 67h   |
| 5A           | 60min  | 180min | 600min | 20h    | 40h   |
| 7.5A         | 35min  | 90min  | 350min | 13h    | 27h   |
| 10A          | 23min  | 60min  | 240min | 10h    | 20h   |
| 15A          | 13min  | 35min  | 125min | 350min | 13h   |

## ■ Mechanical Specification

### Terminal Pin No. Assignment (TB3)

| Pin No. | Assignment |
|---------|------------|
| 1,2     | +V         |
| 3,4     | -V         |

Terminal Pin No. Assignment (TB4)

| Pin No.  | Assignment                                |
|----------|-------------------------------------------|
| 1,2,3    | AC fail                                   |
| 4,5,6    | DC OK                                     |
| 7,8,9    | Battery low/<br>Abnormal/<br>Disconnected |
| 10,11,12 | Charger fail                              |

### Terminal Pin No. Assignment (TB2)

| Pin No. | Assignment |
|---------|------------|
| 1,2     | BAT.-      |
| 3,4     | BAT. +     |

Terminal Pin No. Assignment (TB1)

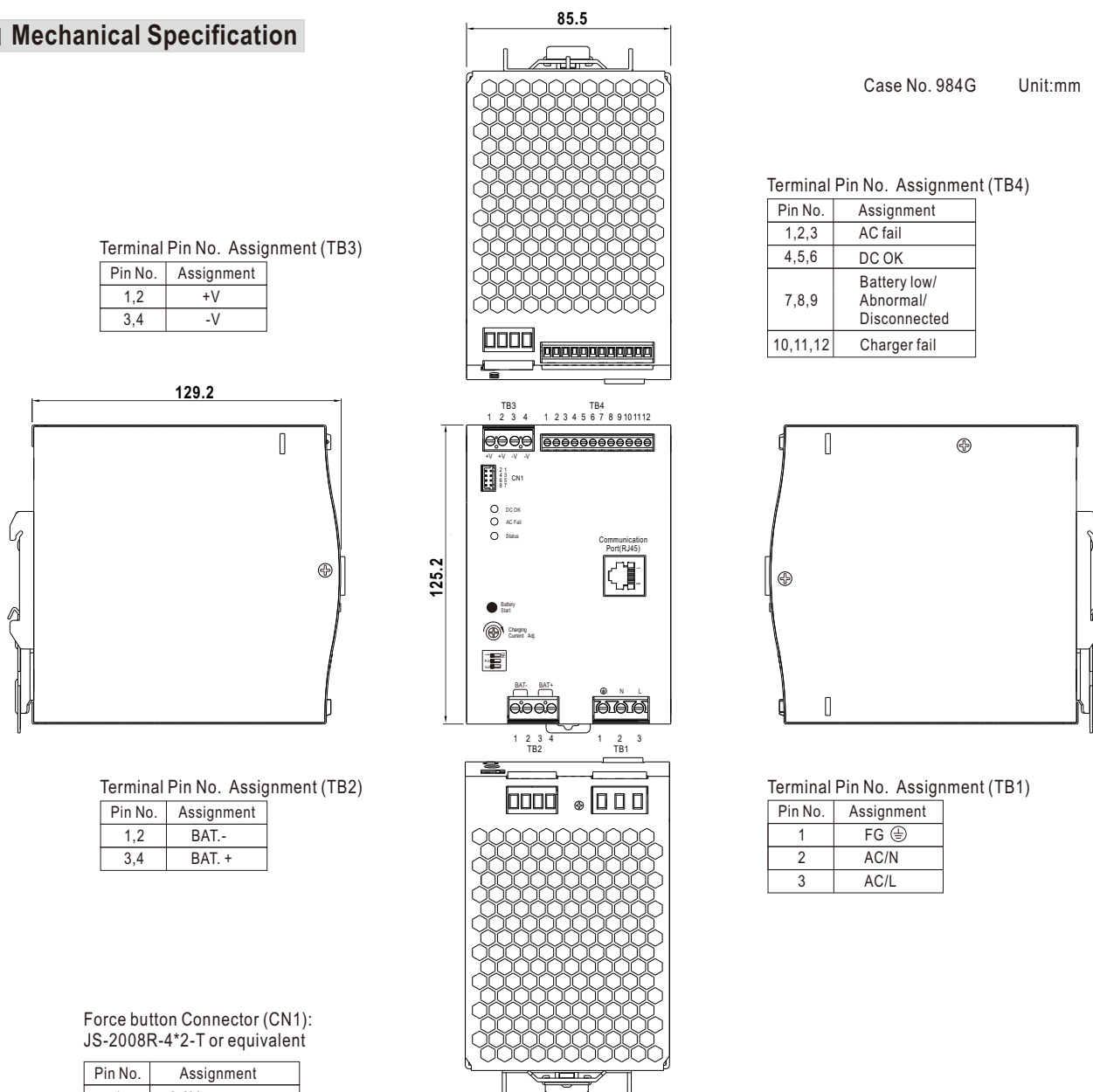
| Pin No. | Assignment                                                                               |
|---------|------------------------------------------------------------------------------------------|
| 1       | FG  |
| 2       | AC/N                                                                                     |
| 3       | AC/L                                                                                     |

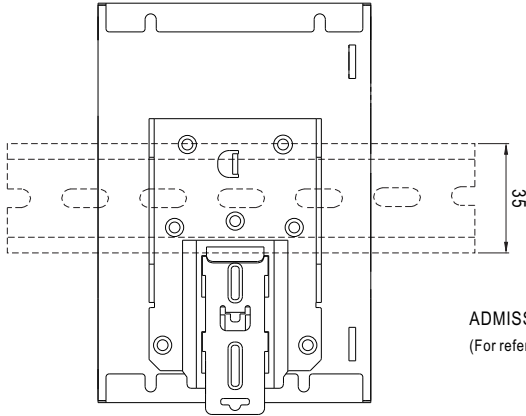
Force button Connector (CN1):  
JS-2008R-4\*2-T or equivalent

| Pin No. | Assignment                         |
|---------|------------------------------------|
| 1       | 3.3V                               |
| 2       | GND                                |
| 3       | RTH+                               |
| 4       | RTH-                               |
| 5       | A0                                 |
| 6       | A1                                 |
| 7,8     | Open: Normal<br>Short: Force start |

### Terminal Pin No. Assignment (RJ45)

| Pin No.   | Function | Description                                                                                     |
|-----------|----------|-------------------------------------------------------------------------------------------------|
| 1,2,3,4,5 | NC       | Retain for future use.                                                                          |
| 6         | D-/DB    | For MODBus model:Serial Date used in the MODBus interface.                                      |
|           | CANH     | For CANBus model:Date line used in the CANBus interface.                                        |
| 7         | D+/DA    | For MODBus model:Serial Clock used in the MODBus interface.                                     |
|           | CANL     | For CANBus model:Date line used in the CANBus interface.                                        |
| 8         | GND-AUX  | Auxillary voltage output GND. The signal return is isolated from the output terminals(+V & -V). |



**■ Installation Instruction**

Back View

This series fits DIN rail TS35/7.5 or TS35/15.  
For installation details, please refer to the Instruction manual.

ADMISSIBLE DIN rail: TS35/7.5 OR TS35/15  
(For reference only. Not included with unit.)

**■ Installation Manual**

Please refer to : <http://www.meanwell.com/manual.html>