



User's Manual



## Features

- 250 ~ 1500Vdc 6:1 ultra-wide input range
- Withstand 1700Vdc surge input for 10 seconds
- 63mm slim width
- 4KVac I/O high isolation(Reinforced isolation)
- Protections: Short circuit / Overload / Over voltage / Over temperature  
DC input under voltage / DC input reverse polarity
- Fanless design, cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- -40~+80°C ultra-wide operating temperature ( > +50°C derating)
- Over voltage category II
- Operating altitude up to 5000 meters
- DC OK relay contact
- DC output voltage adjustable(12~15V, 24~29V, 30~36V, 48~58V)
- 3 years warranty

## Applications

- Photovoltaic power generation
- Renewable Energy System
- High voltage frequency conversion
- Industrial control system
- Semiconductor fabrication equipment
- Electro-mechanical apparatus
- DC bus centralized application
- Energy storage system(ESS)
- Charging pile
- Third rail

## GTIN CODE

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

## Description

DDRH-120 series is a 250 ~ 1500Vdc high reliable ultra-high input DIN rail type DC-DC converter which can supply stable working voltage for the load. It is suitable to be mounted on TS-35/7.5 or 15 rails. Main features are as following: easy to install DIN rail type, narrow width(63mm) in slim design, -40~+80°C wide range operating temperature, 4KVac high isolation voltage, operation at 5000m altitude, high efficiency, low ripple & noise, complete protections and so on.

DDRH-120 is compliant with BS EN/EN61000-6-2 standard regarding immunity for industrial environments. It is suitable for industrial automation, surveillance, telecommunication and can be widely deployed in the applications of new energy generation such as solar power, and windmill power generation, for instances, photovoltaic power systems, high voltage inverting , DC bus centralized application, ESS, charging pile, railway and so forth.

## Model Encoding

**DDRH - 120 - 24**

Output voltage(12V/24V/32V/48V)

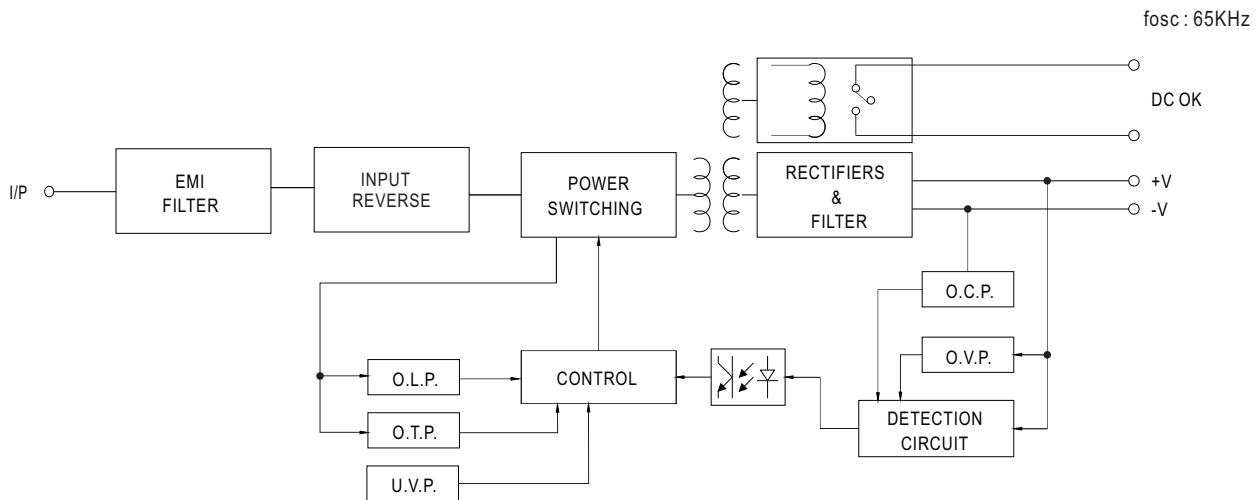
Rated wattage

Series name

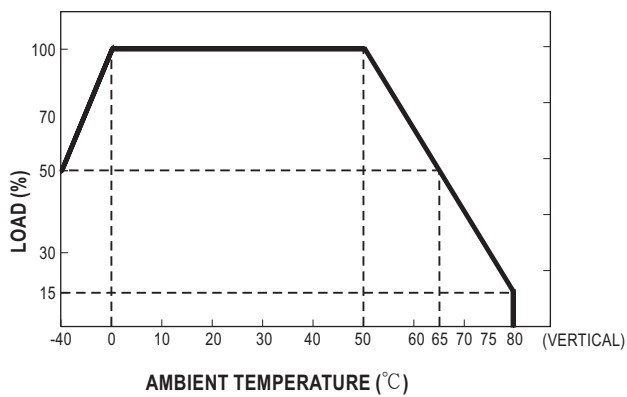
**SPECIFICATION**

| MODEL                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | DDRH-120-12                                                                            |                                                                                                                                                                                                                                        | DDRH-120-24                                                                                       |                        | DDRH-120-32 |              | DDRH-120-48                                        |              |  |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------|-------------|--------------|----------------------------------------------------|--------------|--|
| OUTPUT                   | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                        | 12V                                                                                                                                                                                                                                    |                                                                                                   | 24V                    |             | 32V          |                                                    | 48V          |  |
|                          | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                        | 8.4A                                                                                                                                                                                                                                   |                                                                                                   | 5A                     |             | 3.75A        |                                                    | 2.5A         |  |
|                          | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                        | 0 ~ 8.4A                                                                                                                                                                                                                               |                                                                                                   | 0 ~ 5A                 |             | 0 ~ 3.75A    |                                                    | 0 ~ 2.5A     |  |
|                          | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                        | 100.8W                                                                                                                                                                                                                                 |                                                                                                   | 120W                   |             | 120W         |                                                    | 120W         |  |
|                          | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                        | 120mVp-p                                                                                                                                                                                                                               |                                                                                                   | 240mVp-p               |             | 240mVp-p     |                                                    | 300mVp-p     |  |
|                          | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                        | 12 ~ 15V                                                                                                                                                                                                                               |                                                                                                   | 24 ~ 29V               |             | 30 ~ 36V     |                                                    | 48 ~ 58V     |  |
|                          | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                        | ± 1.5%                                                                                                                                                                                                                                 |                                                                                                   | ± 1.0%                 |             | ± 1.0%       |                                                    | ± 1.0%       |  |
|                          | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | ± 0.5%                                                                                                                                                                                                                                 |                                                                                                   | ± 0.5%                 |             | ± 0.5%       |                                                    | ± 0.5%       |  |
|                          | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | ± 1.5%                                                                                                                                                                                                                                 |                                                                                                   | ± 1.5%                 |             | ± 1.0%       |                                                    | ± 1.0%       |  |
|                          | EXTERNAL CAPACITANCE LOAD (Max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                        | 4000 $\mu$ F                                                                                                                                                                                                                           |                                                                                                   | 2500 $\mu$ F           |             | 2000 $\mu$ F |                                                    | 1000 $\mu$ F |  |
| INPUT                    | VOLTAGE RANGE <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                        | 250 ~ 1500Vdc                                                                                                                                                                                                                          |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 300Vdc                                                                                 | 88%                                                                                                                                                                                                                                    |                                                                                                   | 89%                    |             | 90%          |                                                    | 91%          |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 800Vdc                                                                                 | 87%                                                                                                                                                                                                                                    |                                                                                                   | 90%                    |             | 91%          |                                                    | 91%          |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1500Vdc                                                                                | 84%                                                                                                                                                                                                                                    |                                                                                                   | 86%                    |             | 87%          |                                                    | 87%          |  |
|                          | INRUSH CURRENT (max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                        | COLD START    300A/1500Vdc    200A/800Vdc    70A/250Vdc                                                                                                                                                                                |                                                                                                   |                        |             |              |                                                    |              |  |
| EXTERNAL INPUT FUSE      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 4A/1500VDC, required(Please refer to page 4 for more details)                          |                                                                                                                                                                                                                                        |                                                                                                   |                        |             |              |                                                    |              |  |
| PROTECTION               | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                        | 105 ~ 135% rated output power                                                                                                                                                                                                          |                                                                                                   |                        |             |              |                                                    |              |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | Protection type : Hiccup mode when output voltage<55%, recovers automatically after condition is removed;<br>Constant current limiting, recovers automatically after fault condition is removed within 55% ~ 100% rated output voltage |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                        | 16.5 ~ 21V                                                                                                                                                                                                                             |                                                                                                   | 33 ~ 42V               |             | 40 ~ 48V     |                                                    | 62 ~ 70V     |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | Protection type : Hiccup mode, recovers automatically after fault condition is removed                                                                                                                                                 |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                        | Protection type : Hiccup mode, recovers automatically after fault condition is removed                                                                                                                                                 |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | DC INPUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | REVERSE POLARITY                                                                       |                                                                                                                                                                                                                                        | By internal Bridge Diode, <b>no damage</b> , recovers automatically after fault condition removed |                        |             |              |                                                    |              |  |
| UNDER VOLTAGE LOCKOUT    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Under voltage protection range:200 ~ 230Vdc , Under voltage release range:230 ~ 245Vdc |                                                                                                                                                                                                                                        |                                                                                                   |                        |             |              |                                                    |              |  |
| FUNCTION                 | DC OK SIGNAL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                        | Relay contact rating(max.) : 30V / 1A resistive                                                                                                                                                                                        |                                                                                                   |                        |             |              |                                                    |              |  |
| ENVIRONMENT              | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                        | -40 ~ +80℃ (Refer to "Derating Curve")                                                                                                                                                                                                 |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                        | 20 ~ 90% RH non-condensing                                                                                                                                                                                                             |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                        | -40 ~ +80℃, 10 ~ 95% RH non-condensing                                                                                                                                                                                                 |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                        | ± 0.03%/℃ (0 ~ 50℃ )                                                                                                                                                                                                                   |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                        | Component: 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting clip: Compliance to IEC60068-2-6                                                                                                                     |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | OPERATING ALTITUDE <small>Note.5</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                        | 5000m                                                                                                                                                                                                                                  |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | OVER VOLTAGE CATEGORY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                        | OVC II 2000m; According to EN62109-1                                                                                                                                                                                                   |                                                                                                   |                        |             |              |                                                    |              |  |
| SAFETY & EMC<br>(Note.7) | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                        | IEC62109-1, BS EN/EN62109-1, EAC TP TC 004 approved; Design refer to UL1741(By request)                                                                                                                                                |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                        | I/P-O/P:4KVAC    I/P-FG :2KVAC    O/P-FG :2KVAC    O/P-DC OK:0.5KVAC                                                                                                                                                                   |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        | I/P-O/P, 100M Ohms / 500VDC / 25℃ / 70% RH                                                                                                                                                                                             |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                        | Parameter                                                                                                                                                                                                                              |                                                                                                   | Standard               |             |              | Test Level / Note                                  |              |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | Conducted                                                                                                                                                                                                                              |                                                                                                   | BS EN/EN55032(CISPR32) |             |              | Class A                                            |              |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | Radiated                                                                                                                                                                                                                               |                                                                                                   | BS EN/EN55032(CISPR32) |             |              | Class A                                            |              |  |
|                          | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                        | BS EN/EN55035, BS EN/EN61000-6-2                                                                                                                                                                                                       |                                                                                                   |                        |             |              |                                                    |              |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | Parameter                                                                                                                                                                                                                              |                                                                                                   | Standard               |             |              | Test Level /Note                                   |              |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | ESD                                                                                                                                                                                                                                    |                                                                                                   | BS EN/EN61000-4-2      |             |              | Level 3, 8KV air; Level 2, 4KV contact, criteria A |              |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | Radiated Susceptibility                                                                                                                                                                                                                |                                                                                                   | BS EN/EN61000-4-3      |             |              | Level 3, 10V, criteria A                           |              |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | EFT/Burest                                                                                                                                                                                                                             |                                                                                                   | BS EN/EN61000-4-4      |             |              | Level 3, 2KV, criteria A                           |              |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | Surge                                                                                                                                                                                                                                  |                                                                                                   | BS EN/EN61000-4-5      |             |              | Level 4, 2KV/Vin+ ~ Vin-, 4KV/Vin ~ FG, criteria A |              |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | Conducted                                                                                                                                                                                                                              |                                                                                                   | BS EN/EN61000-4-6      |             |              | Level 3, 10V, criteria A                           |              |  |
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                        | Magnetic Field                                                                                                                                                                                                                         |                                                                                                   | BS EN/EN61000-4-8      |             |              | Level 4, 30A, criteria A                           |              |  |
| OTHERS                   | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        | 257.2 hrs min.    MIL-HDBK-217F (25℃);    1596.3 hrs min.    Telcordia TR/SR-332 (Bellcore) (25℃ )                                                                                                                                     |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                        | 63*125.2*115mm (W*H*D)                                                                                                                                                                                                                 |                                                                                                   |                        |             |              |                                                    |              |  |
|                          | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                        | 0.845Kg; 12pcs/12.6Kg/1.02CUFT                                                                                                                                                                                                         |                                                                                                   |                        |             |              |                                                    |              |  |
| NOTE                     | <div>1. All parameters NOT specially mentioned are measured at 800Vdc input, rated load and 25℃ of ambient temperature.</div> <div>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1<math>\mu</math>f &amp; 47<math>\mu</math>f parallel capacitor.</div> <div>3. Tolerance : includes set up tolerance, line regulation and load regulation.</div> <div>4. Derating may be needed under low input voltage. Please check the derating curve for more details.</div> <div>5. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).</div> <div>6. Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.</div> <div>7. The power supply is considered a component which will be installed into a final equipment. 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="http://www.meanwell.com">http://www.meanwell.com</a>)</div> <div>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></div> |                                                                                        |                                                                                                                                                                                                                                        |                                                                                                   |                        |             |              |                                                    |              |  |

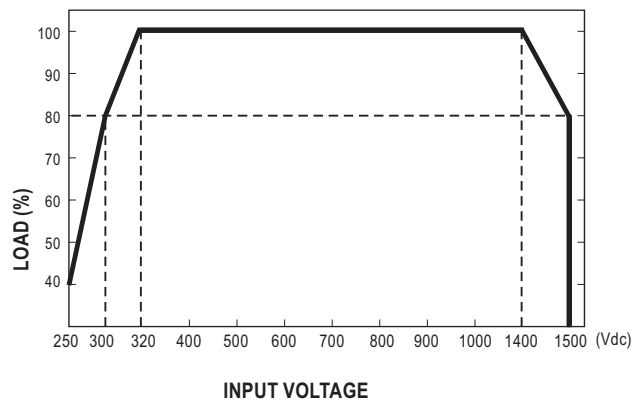
### Block Diagram



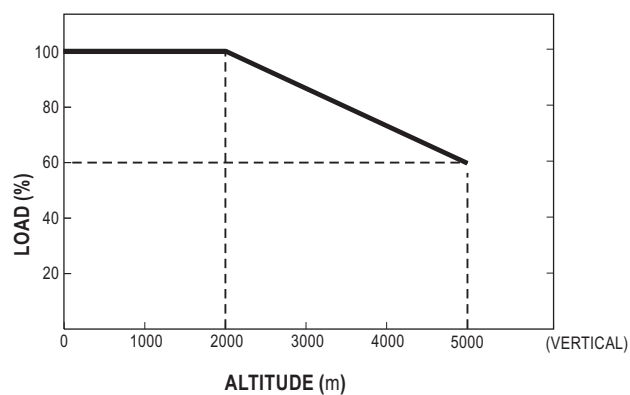
### Derating Curve



### Static Characteristics



### Altitude Curve



Note: Multiply by the regular power limit factor

### DC OK Relay Contact

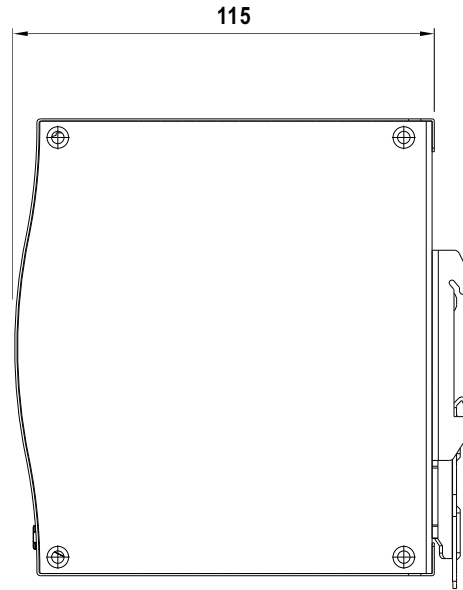
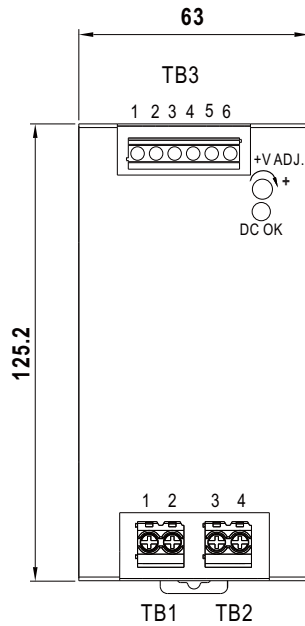
|                        |                          |
|------------------------|--------------------------|
| Contact Close          | PSU turns ON / DC OK.    |
| Contact Open           | PSU turns OFF / DC Fail. |
| Contact Ratings (max.) | 30V/1A resistive load.   |

## Mechanical Specification

Case No. Unit:mm

Terminal Pin No. Assignment (TB3)

| Pin No. | Assignment          |
|---------|---------------------|
| 1,2     | DC OK Relay Contact |
| 3,4     | -Vo                 |
| 5,6     | +Vo                 |



Terminal Pin No. Assignment (TB1, TB2)

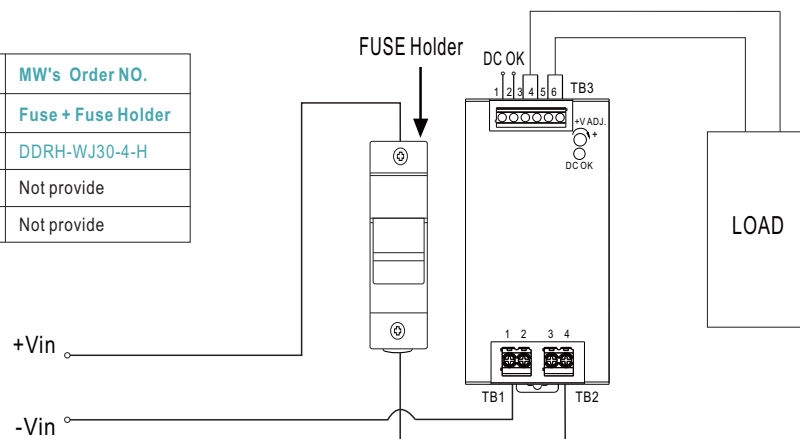
| Pin No. | Assignment |
|---------|------------|
| 1,2     | -Vin       |
| 3,4     | +Vin       |

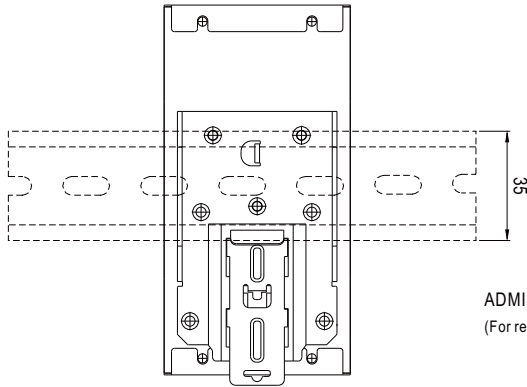
## External FUSE wiring instruction

External FUSE is required. FUSE specification : 4A/1500Vdc.

Suggested model:

| Fuse Brand | Manufacturer Part NO. |             | MW's Order NO.     |
|------------|-----------------------|-------------|--------------------|
|            | Fuse                  | Fuse Holder | Fuse + Fuse Holder |
| WalterFuse | WJ30-4                | WJ30-H      | DDRH-WJ30-4-H      |
| Littelfuse | SPXV-4A               | LFPXV/LPXV  | Not provide        |
| Bussmann   | PV-4A10F85L           | CHPV15L85   | Not provide        |



**■ Installation Instruction**

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>