



### Caratteristica M

- Larghezza di soli 17,5 mm (1SU)
- Campo di ingresso ultra ampio 4:1
- Temperatura di esercizio compresa tra -40 e +85° C Nessun carico minimo richiesto
- Uscita DC regolabile (T 10%)
- Raffreddamento per convezione ad aria libera
- Può essere installato su guida DIN TS-35/7,5 o 15 Protezioni:
  - Cortocircuito / Sovraccarico / Sovraccarico di tensione /
  - Inversione di polarità in ingresso /
  - Protezione da sottotensione in ingresso
- Isolamento I/O 4KVdc (isolamento rinforzato)
- 3 anni di garanzia

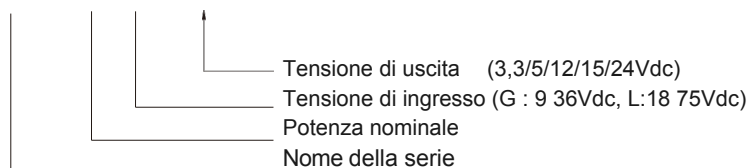
### Descrizione del prodotto

La serie DDR-15 è un convertitore DC- DC da 15W su guida DIN con caratteristiche principali quali la facilità di installazione su guida DIN, la larghezza ultra sottile (17,5 mm), la tensione di ingresso ultra ampia 4: 1, la temperatura di funzionamento ampia -40 +85° C, l'isolamento I/O a 4KVdc, la tensione di uscita regolabile (+ 10%) e le funzioni di protezione complete... ecc.

Questa serie dispone di due opzioni di ingresso: 9-36V /18 75V e varie opzioni di uscita: 3,3V / 5V / 12V / 15V / 24V e può essere utilizzata per il controllo industriale, il controllo di sicurezza, il sistema di comunicazione e altri campi. Le applicazioni più adatte sono il regolatore buck/boost DC, l'aumento del livello di isolamento del sistema e la compensazione della caduta di tensione lungo il cavo...ecc.

### Codifica del modello

DDR - 15 G - 24



### M Applicazioni

- Sistema di controllo industriale
- Apparecchiature per la produzione di semiconduttori
- Automazione di fabbrica
- Elettromeccanica Rete wireless
- Sistema di telecomunicazione o datacom



## 15W DIN Rail Type DC-DC Converter

## DDR-15 series

## SPECIFICATION

| MODEL                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | DDR-15G-3.3                                                                                                             | DDR-15G-5                          | DDR-15G-12   | DDR-15G-15                                          | DDR-15G-24  |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------|-----------------------------------------------------|-------------|
| OUTPUT                                  | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 3.3V                                                                                                                    | 5V                                 | 12V          | 15V                                                 | 24V         |
|                                         | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 3.5A                                                                                                                    | 3A                                 | 125A         | 1A                                                  | 0.63A       |
|                                         | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0 ~ 3.5A                                                                                                                | 0 ~ 3A                             | 0 ~ 1.25A    | 0 ~ 1A                                              | 0 ~ 0.63A   |
|                                         | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11.6W                                                                                                                   | 15W                                | 15W          | 15W                                                 | 15W         |
|                                         | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50mVp-p                                                                                                                 | 50mVp-p                            | 60mVp-p      | 75mVp-p                                             |             |
|                                         | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3.0 ~ 3.6V                                                                                                              | 4.5 ~ 5.5V                         | 9 ~ 13.2V    | 13.5 ~ 16.5V                                        | 21.6 ~ 28V  |
|                                         | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ±2.0%                                                                                                                   | ±2.0%                              | ±2.0%        | ±2.0%                                               |             |
|                                         | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ±0.5%                                                                                                                   | ±0.5%                              | ±0.5%        | ±0.5%                                               | ±0.5%       |
|                                         | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ±1.5%                                                                                                                   | ±1%                                | ±0.5%        | ±0.5%                                               |             |
|                                         | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 120ms, 85ms at full load                                                                                                |                                    |              |                                                     |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | G-type: 8ms@24Vdc input                                                                                                 |                                    |              |                                                     |             |
|                                         | EXTERNAL CAPACITANCE LOAD (Max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3300 $\mu$ F                                                                                                            | 3300 $\mu$ F                       | 1200 $\mu$ F | 1200 $\mu$ F                                        | 680 $\mu$ F |
| INPUT                                   | <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 9 ~ 36Vdc                                                                                                               |                                    |              |                                                     |             |
|                                         | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 84%                                                                                                                     | 84%                                | 85%          | 85%                                                 | 86%         |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0.8A /24Vdc                                                                                                             |                                    |              |                                                     |             |
|                                         | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 5A /24Vdc                                                                                                               |                                    |              |                                                     |             |
| PROTECTION                              | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 110 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |                                    |              |                                                     |             |
|                                         | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3.8~ 4.7V                                                                                                               | 5.75~ 7V                           | 13.8~ 16.2V  | 17.25 ~ 20.25V                                      | 28.8~ 32.4V |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Protection type : Shut down o/p voltage, re-power on to recover                                                         |                                    |              |                                                     |             |
|                                         | REVERSE POLARITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | By internal MOSFET, no damage, recovers automatically after fault condition removed                                     |                                    |              |                                                     |             |
|                                         | UNDER VOLTAGE LOCKOUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Power ON $\geq$ 9v , OFF $\leq$ 8.5v                                                                                    |                                    |              |                                                     |             |
| ENVIRONMENT                             | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | -40 ~ +85°C (Refer to "Derating Curve")                                                                                 |                                    |              |                                                     |             |
|                                         | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 5 ~ 95% RH non-condensing                                                                                               |                                    |              |                                                     |             |
|                                         | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -40 ~ +85°C, 5 ~ 95% RH non-condensing                                                                                  |                                    |              |                                                     |             |
|                                         | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | $\pm 0.03\%/^{\circ}\text{C}$ (0 ~ 60°C )                                                                               |                                    |              |                                                     |             |
|                                         | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6            |                                    |              |                                                     |             |
|                                         | OPERATING ALTITUDE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2000 meters                                                                                                             |                                    |              |                                                     |             |
| SAFETY & EMC<br><small>(Note 5)</small> | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                         |                                    |              |                                                     |             |
|                                         | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | I/P-O/P:4KVdc                                                                                                           |                                    |              |                                                     |             |
|                                         | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | I/P-O/P>100M Ohms / 500Vdc / 25°C / 70% RH                                                                              |                                    |              |                                                     |             |
|                                         | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Parameter                                                                                                               | Standard                           |              | Test Level/ Note                                    |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Conducted                                                                                                               | EN55032                            |              | Class B                                             |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Radiated                                                                                                                | EN55032                            |              | Class B                                             |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Voltage Flicker                                                                                                         | EN61000-3-3                        |              | ----                                                |             |
|                                         | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | EN55024 , EN61000-6-2(EN50082-2)                                                                                        |                                    |              |                                                     |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Parameter                                                                                                               | Standard                           |              | Test Level / Note                                   |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | ESD                                                                                                                     | EN61000-4-2                        |              | Level 3, 8KV air ; Level 3, 6KV contact; criteria A |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Radiated                                                                                                                | EN61000-4-3                        |              | Level 3, 10V/m ; criteria A                         |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | EFT / Burst                                                                                                             | EN61000-4-4                        |              | Level 3, 2KV ; criteria A                           |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Surge                                                                                                                   | EN61000-4-5                        |              | Level 3, 1KV/Line-Line ; criteria A                 |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Conducted                                                                                                               | EN61000-4-6                        |              | Level 3, 10V ; criteria A                           |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Magnetic Field                                                                                                          | EN61000-4-8                        |              | Level 4, 30A/m ; criteria A                         |             |
|                                         | OTHERS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | MTBF                                                                                                                    | 907K hrs min. MIL-HDBK-217F (25°C) |              |                                                     |             |
| DIMENSION                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                         |                                    |              |                                                     |             |
| PACKING                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 68g; 160pcs/12Kg/1.19CUFT                                                                                               |                                    |              |                                                     |             |
| NOTE                                    | <div>1. All parameters NOT specially mentioned are measured at 24VDC input, rated load and 25°C 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 power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the 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>6. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</div> |                                                                                                                         |                                    |              |                                                     |             |



# 15W DIN Rail Type DC-DC Converter

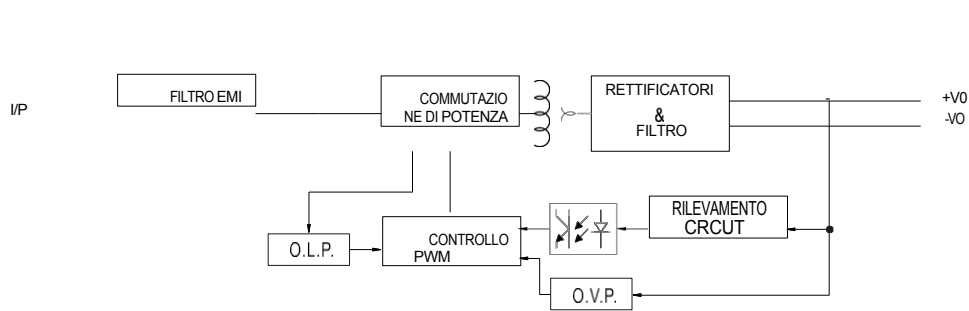
# DDR-15 series

## SPECIFICATION

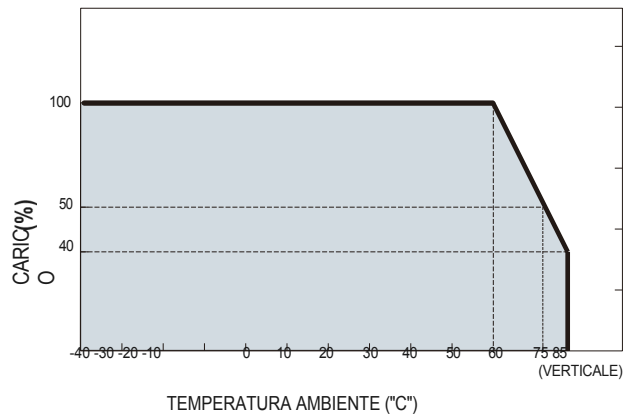
| MODEL                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | DDR-15L-3.3                                                                                                  | DDR-15L-5    | DDR-15L-12                  | DDR-15L-15                                          | DDR-15L-24  |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------|-----------------------------|-----------------------------------------------------|-------------|
| OUTPUT                                  | DC VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 3.3V                                                                                                         |              |                             |                                                     |             |
|                                         | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 4.5A                                                                                                         | 3A           | 1.25A                       | 1A                                                  | 0.63A       |
|                                         | CURRENT RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0 ~ 4.5A                                                                                                     |              |                             |                                                     |             |
|                                         | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 15W                                                                                                          | 15W          | 15W                         | 15W                                                 | 15W         |
|                                         | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 50mVp-p                                                                                                      |              |                             |                                                     |             |
|                                         | VOLTAGE ADJ. RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 3.0 ~ 3.6V                                                                                                   | 4.5 ~ 5.5V   | 9 ~ 13.2V                   | 13.5 ~ 16.5V                                        | 21.6 ~ 28V  |
|                                         | VOLTAGE TOLERANCE <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ±2.0%                                                                                                        |              |                             |                                                     |             |
|                                         | LINE REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±0.5%                                                                                                        | ±0.5%        | ±0.5%                       | ±0.5%                                               | ±0.5%       |
|                                         | LOAD REGULATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ±1.5%                                                                                                        |              |                             |                                                     |             |
|                                         | SETUP, RISE TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 120ms, 85ms at full load                                                                                     |              |                             |                                                     |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | L-type: 16ms@48Vdc input                                                                                     |              |                             |                                                     |             |
|                                         | EXTERNAL CAPACITANCE LOAD (Max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 3300 $\mu$ F                                                                                                 | 3300 $\mu$ F | 1200 $\mu$ F                | 1200 $\mu$ F                                        | 680 $\mu$ F |
| INPUT                                   | <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 18 ~ 75Vdc                                                                                                   |              |                             |                                                     |             |
|                                         | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 84%                                                                                                          | 85%          | 86%                         | 86%                                                 | 87%         |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0.4A /48Vdc                                                                                                  |              |                             |                                                     |             |
|                                         | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 15A /48Vdc                                                                                                   |              |                             |                                                     |             |
| PROTECTION                              | OVERLOAD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 110 ~ 150% rated output power                                                                                |              |                             |                                                     |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Protection type : Hiccup mode, recovers automatically after fault condition is removed                       |              |                             |                                                     |             |
|                                         | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 3.84.7V                                                                                                      | 5.75 ~ 7V    | 13.8 ~ 16.2V                | 17.25~ 20.25V                                       | 28.8~ 32.4V |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Protection type : Shut down o/p voltage, re-power on to recover                                              |              |                             |                                                     |             |
|                                         | REVERSE POLARITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | By internal MOSFET, no damage, recovers automatically after fault condition removed                          |              |                             |                                                     |             |
|                                         | UNDER VOLTAGE LOCKOUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Power ON $\geq$ 18V , OFF $\leq$ 17V                                                                         |              |                             |                                                     |             |
| ENVIRONMENT                             | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -40 ~ +85℃ (Refer to "Derating Curve")                                                                       |              |                             |                                                     |             |
|                                         | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 5 ~ 95% RH non-condensing                                                                                    |              |                             |                                                     |             |
|                                         | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -40 ~ +85℃, 5 ~ 95% RH non-condensing                                                                        |              |                             |                                                     |             |
|                                         | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ±0.03%/℃ (0 ~ 60℃ )                                                                                          |              |                             |                                                     |             |
|                                         | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6 |              |                             |                                                     |             |
|                                         | OPERATING ALTITUDE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2000 meters                                                                                                  |              |                             |                                                     |             |
| SAFETY & EMC<br><small>(Note 5)</small> | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | IEC 62368-1 (LVD) ,AS/NZS 62368.1 approved; Design refer to UL508                                            |              |                             |                                                     |             |
|                                         | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | I/P-O/P:4KVdc                                                                                                |              |                             |                                                     |             |
|                                         | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | I/P-O/P>100M Ohms / 500Vdc / 25℃ / 70% RH                                                                    |              |                             |                                                     |             |
|                                         | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Parameter                                                                                                    | Standard     |                             | Test Level/Note                                     |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Conducted                                                                                                    | EN55032      |                             | Class B                                             |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Radiated                                                                                                     | EN55032      |                             | Class B                                             |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Voltage Flicker                                                                                              | EN61000-3-3  |                             | ----                                                |             |
|                                         | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | EN55024 , EN61000-6-2(EN50082-2)                                                                             |              |                             |                                                     |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Parameter                                                                                                    | Standard     |                             | Test Level / Note                                   |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ESD                                                                                                          | EN61000-4-2  |                             | Level 3, 8KV air ; Level 3, 6KV contact; criteria A |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Radiated                                                                                                     | EN61000-4-3  |                             | Level 3, 10V/m ; criteria A                         |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | EFT / Burst                                                                                                  | EN61000-4-4  |                             | Level 3, 2KV ; criteria A                           |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Surge                                                                                                        | EN61000-4-5  |                             | Level 3, 1KV/Line-Line ; criteria A                 |             |
|                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Conducted                                                                                                    | EN61000-4-6  |                             | Level 3, 10V ; criteria A                           |             |
| Magnetic Field                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | EN61000-4-8                                                                                                  |              | Level 4, 30A/m ; criteria A |                                                     |             |
| OTHERS                                  | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 907K hrs min. MIL-HDBK-217F (25℃)                                                                            |              |                             |                                                     |             |
|                                         | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                              |              |                             |                                                     |             |
|                                         | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 68g; 160pcs/12Kg/1.19CUFT                                                                                    |              |                             |                                                     |             |
| NOTE                                    | 1. All parameters NOT specially mentioned are measured at 48VDC input, rated load and 25℃ of ambient temperature<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 $\mu$ f & 47 $\mu$ f parallel capacitor<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. Derating may be needed under low input voltage. Please check the derating curve for more details.<br>5. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the 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> )<br>6. 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). |                                                                                                              |              |                             |                                                     |             |



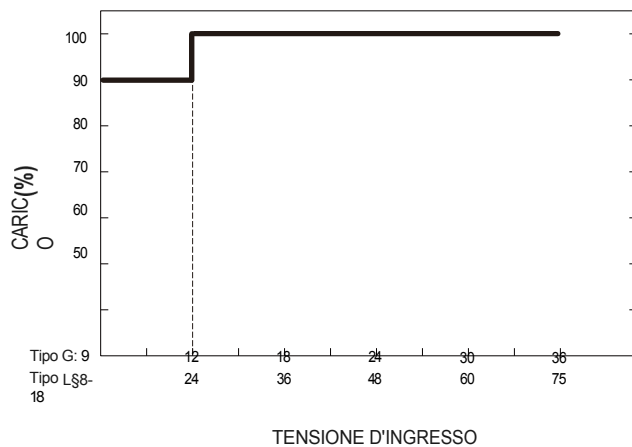
Schema a blocchi B



B Curva di declassamento



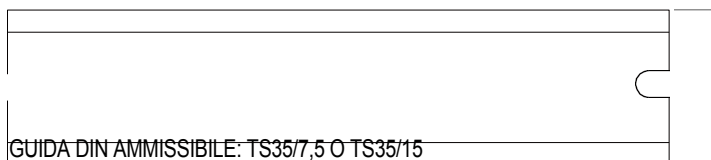
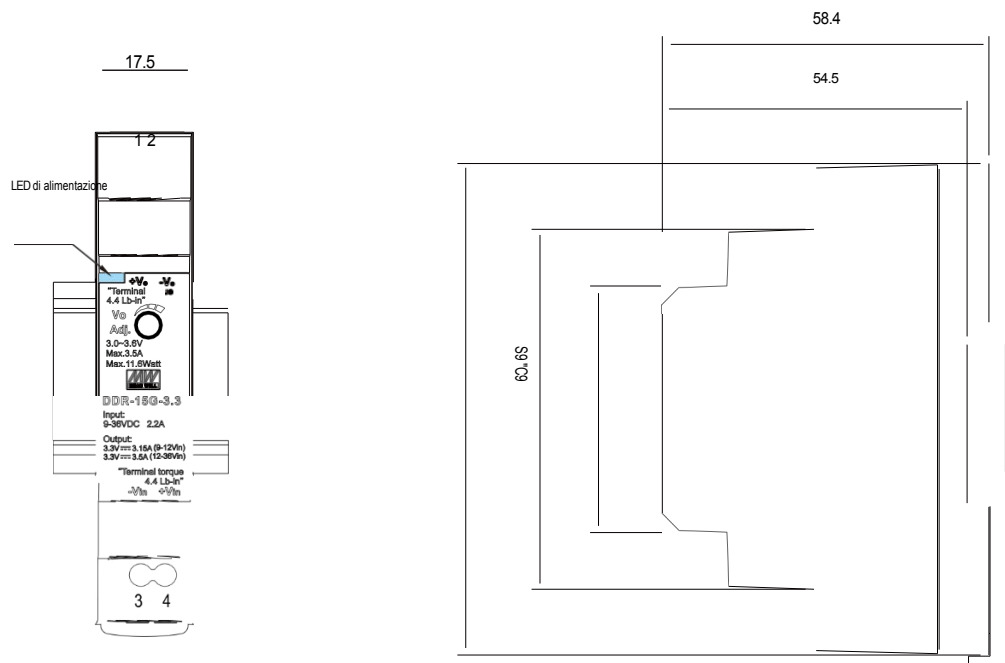
B Declassamento dell'uscita VS tensione d'ingresso





## B Specifiche meccaniche

(Unità: mm, tolleranza+ 0,5 mm)



Assegnazione dei pin dei morsetti

| Numero di pin | Assegnazione     |
|---------------|------------------|
| 1             | Uscita CC *Vo    |
| 2             | Uscita CC -Vo    |
| 3             | Ingresso CC -Vin |
| 4             | Ingresso DC +Vin |

## B Manuale di installazione

Fare riferimento a: <http://www.meanwell.com/manual.html>

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