

## Features

- Efficiency up to 85%
- 1500VDC Isolation
- Singl/Double output
- Continuous short circuit protection
- Over load protection
- Wide input voltage range
- Wide temperature -40 to 85
- Low ripple and noise



## Model Selection Guide

| Order Code    | Vin(V)  |                | Output |        | Recommend capacitive(uF) | Efficiency(%) (Typ) |
|---------------|---------|----------------|--------|--------|--------------------------|---------------------|
|               | Nominal | Range          | Vo(V)  | Io(mA) |                          |                     |
| DD25-12S05    | 12      | 9-18           | 5      | 5000   | 470                      | 83                  |
| DD25-12S12    |         |                | 12     | 2083   | 470                      | 86                  |
| DD25-12S15    |         |                | 15     | 1667   | 330                      | 85                  |
| DD25-12S24    |         |                | 24     | 1042   | 220                      | 85                  |
| DD25-12D05    |         |                | ±5     | ±2500  | 220                      | 83                  |
| DD25-12D12    |         |                | ±12    | ±1042  | 220                      | 84                  |
| DD25-12D15    |         |                | ±15    | ±833   | 220                      | 85                  |
| DD(F)25-24S05 | 24      | 18-36 (F)9-36  | 5      | 5000   | 470                      | 83                  |
| DD(F)25-24S12 |         |                | 12     | 2083   | 470                      | 85                  |
| DD(F)25-24S15 |         |                | 15     | 1667   | 330                      | 86                  |
| DD(F)25-24S24 |         |                | 24     | 1042   | 220                      | 86                  |
| DD(F)25-24D05 |         |                | ±5     | ±2500  | 220                      | 83                  |
| DD(F)25-24D12 |         |                | ±12    | ±1042  | 220                      | 85                  |
| DD(F)25-24D15 |         |                | ±15    | ±833   | 220                      | 86                  |
| DD(F)25-48S05 | 48      | 36-72 (F)18-72 | 5      | 5000   | 470                      | 83                  |
| DD(F)25-48S12 |         |                | 12     | 2083   | 470                      | 84                  |
| DD(F)25-48S15 |         |                | 15     | 1667   | 330                      | 85                  |
| DD(F)25-48S24 |         |                | 24     | 1042   | 220                      | 86                  |
| DD(F)25-48D05 |         |                | ±5     | ±2500  | 220                      | 83                  |
| DD(F)25-48D12 |         |                | ±12    | ±1042  | 220                      | 84                  |
| DD(F)25-48D15 |         |                | ±15    | ±833   | 220                      | 85                  |
| DD25-110S05   | 110     | 70-160         | 5      | 5000   | 470                      | 83                  |
| DD25-110S12   |         |                | 12     | 2083   | 470                      | 84                  |
| DD25-110S15   |         |                | 15     | 1667   | 330                      | 84                  |
| DD25-110S24   |         |                | 24     | 1042   | 220                      | 86                  |
| DD25-110D05   |         |                | ±5     | ±2500  | 220                      | 83                  |
| DD25-110D12   |         |                | ±12    | ±1042  | 220                      | 86                  |

## Input Characteristics

| Parameter                         | Condition         | Min                | Typ | Max | Units |
|-----------------------------------|-------------------|--------------------|-----|-----|-------|
| Input Surge Voltage (1 sec. Max.) | 12V Input Models  | -0.7               | --  | 25  | VDC   |
|                                   | 24V Input Models  | -0.7               | --  | 50  |       |
|                                   | 48V Input Models  | -0.7               | --  | 90  |       |
|                                   | 110V Input Models | -0.7               | --  | 190 |       |
| Input Filter Type                 | All Models        | Internal Capacitor |     |     |       |

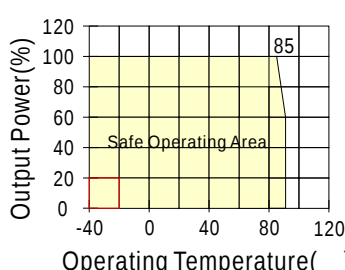
## Output Characteristics

| Parameter                | Condition               | Min                            | Typ  | Max  | Units |
|--------------------------|-------------------------|--------------------------------|------|------|-------|
| Output Voltage Accuracy  | +Vo                     | --                             | 1%   | --   | %     |
|                          | -Vo                     | --                             | 2%   | 3%   | %     |
| Load regulation          | 10% ~ 100% load         | --                             | ±0.5 | ±1   | %     |
| Line regulation          | Vin(Min~Max)            | ±0.1                           | --   | ±0.5 | %     |
| Ripple and noise         | BW=DC to 20MHz          | --                             | 50   | 100  | mVp-p |
| Switching frequency      | Full load,nominal input | --                             | 300  | 400  | KHz   |
| Transient Recovery Time  | 25% Load Step Change    | --                             | --   | 500  | uS    |
| Short circuit Protection |                         | Continuous, Automatic Recovery |      |      |       |

## General Characteristics

| Parameter             | Condition           | Min   | Typ | Max  | Units   |
|-----------------------|---------------------|-------|-----|------|---------|
| Operating Temperature | All output types    | -40   | --  | +85  |         |
| Storage               |                     | -55   | --  | +125 |         |
| Storage humidity      |                     | --    | --  | +95  | %       |
| Cooling               | Free air convection | --    | --  | --   |         |
| Isolation voltage     | 2mA ≤ 1minute       | 1000  | --  | --   | VDC     |
| Isolation resistance  | 500VDC              | 1000  | --  | --   | MΩ      |
| MTBF                  | 2 × 10 <sup>5</sup> |       |     |      | K hours |
| Case material         |                     | Metal |     |      |         |

## Temperature Derating Graph Curve

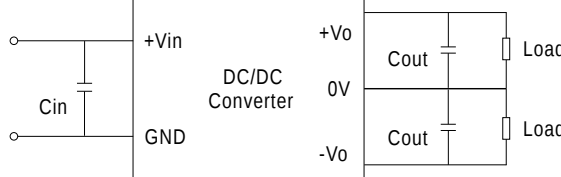
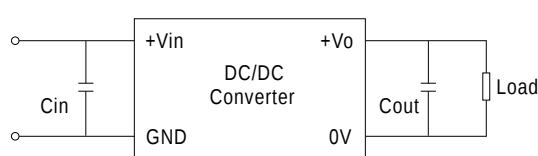


## Design & Feature Considerations

### 1. Input/Output Ripple Reduction

Reduce output ripple, it is recommended to use capacitors at the input/output.

It is recommended to use 10uF~100uF capacitors at the input; 47~220uF capacitors at the output.



### 2. Overload Protection

The products provide protection against overload, the unit is equipped with internal current limiting circuitry.

### 3. Remote On/Off

To turn the power module off

Connect REM and -Vin, 0V < Vrem < 1V, Irem < 1mA;

To turn the power module on

1) Connect REM and +Vin, 30V > Vrem > 5V;

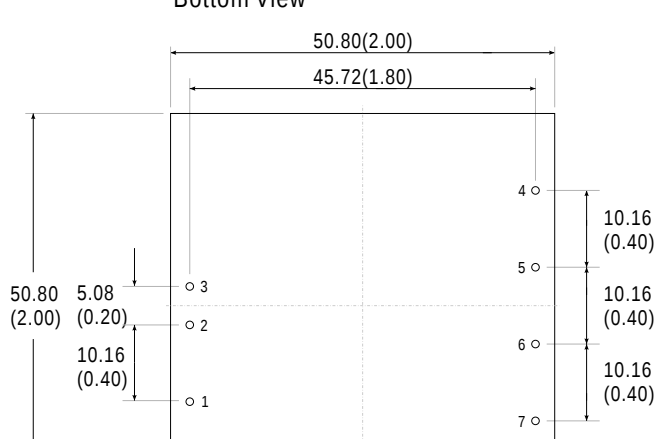
2) REM pin is no connected.

## Note

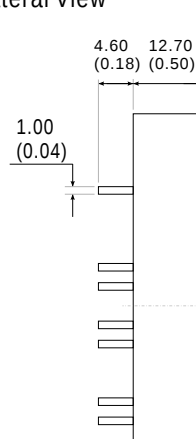
1. All the specifications typical at Ta=+25 resistive load, nominal input voltage and rated output current unless otherwise noted.
2. Operation under no-load conditions will not damage these modules; however they may not meet all specifications listed.
3. Ripple & Noise measurement bandwidth is 0-20MHz.
4. Other input and output voltage may be available, please
5. All DC/DC converters should be externally fused at the front end for protection.
5. Specifications subject to change without notice

## Mechanical Dimension & Pin Connections

Bottom View



Lateral View



Note:  
Unit:mm(inch)

| Pin    | 1   | 2    | 3    | 4   | 5   | 6   | 7    |
|--------|-----|------|------|-----|-----|-----|------|
| Single | REM | -Vin | +Vin | NP  | +Vo | -Vo | TRIM |
| Double | REM | -Vin | +Vin | +Vo | COM | -Vo | TRIM |