


### Compact 240W 48V DIN RAIL Power Supply With Wide Input Range and Single Output

| UNIT CODE    | DESCRIPTION   |
|--------------|---|
| C-WDR 240-48 | Wide Input Range 240 Watt, 48 Volt, Single Output<br>Compact DIN RAIL Power Supply with PFC |

| SPECIFICATIONS  |                        |   |
|---|------------------------|---|
| AC Input  | Output                 | Approvals   |
| <b>180 ~ 550VAC</b><br>Single phase 230VAC or any two phases from a 330~550VAC three-phase power system | <b>+48VDC @ 0 ~ 5A</b> |  |

### Features at a Glance:

Single and 2-Phase wide input range 180~550VAC

Built-in active PFC - complies w/ EN61000-3-2

High reliability, compact and quiet

High efficiency (91%) and low power dissipation

Slim (63mm), Installed on DIN rail TS35 / 7.5 or 15

Low temperature power-on (-30 °C)

Built-in: constant current limiting circuit  
& DC OK relay contact

Protections: Short circuit, Overload,  
Over voltage, Over temperature

LED indicator for power on

Cooling by natural (free air) convection

100% full load burn-in test

Safety standards: UL508 approved, IEC60950-1 CB  
approved by SIQ, design refer to GL

MTBF hours: 141.1Khrs *MIL-HDBK-217F (25°C)*

Case: 979B

Weight: 2.33 Lbs. (1.06 Kgs)

Dimensions: 2.48" W x 4.9" H x 4.46" D  
63 x 125.2 x 113.5mm (W\*H\*D)

3 year warranty



C-WDR240 is a 240W AC/DC compact industrial DIN rail power supply, that features a wide input range for both single and two phase power systems. With a 180 to 550VAC wide input range, C-WDR-240 can be used in general power system with single phase 230VAC input or can capture any two phases from a 330~550VAC three-phase power system.

Other standard functions include DC OK relay contact alarm signal output, front panel LED indicator, front panel DC voltage adjustment, as well as protection for short-circuit, overload, over voltage, and over temperature. WDR-240 series has certificates for compliance with UL/CB/CE and also meet the EMC requirements of heavy industry immunity level (EN61000-6-2).

[Release & Application Notes](#)

| Pricing | 1 ~ 9 | \$ 292 |
|---------|-------|--------|
|         | 10+   | \$ 285 |
|         | 25+   | \$ 275 |

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240W Single Output Industrial DIN RAIL Power Supply

## WDR-240 series



### Features :

- Single and two phase wide input range 180~550VAC
- Built-in active PFC circuit compliance to EN61000-3-2
- High efficiency 91% and low power dissipation
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508(industrial control equipment)approved
- EN61000-6-2(EN50082-2) industrial immunity level
- Built-in DC OK relay contact
- 100% full load burn-in test
- 3 years warranty



### SPECIFICATION

| MODEL                 |   | WDR-240-24  | WDR-240-48 |
|-----------------------|---|---|------------|
| OUTPUT                | DC VOLTAGE  | 24V   | 48V        |
|                       | RATED CURRENT   | 10A   | 5A         |
|                       | CURRENT RANGE   | 0 ~ 10A   | 0 ~ 5A     |
|                       | RATED POWER   | 240W  | 240W       |
|                       | RIPPLE & NOISE (max.) Note.2  | 150mVp-p  | 150mVp-p   |
|                       | VOLTAGE ADJ. RANGE  | 24 ~ 28V  | 48 ~ 55V   |
|                       | VOLTAGE TOLERANCE Note.3  | ±1.0%   | ±1.0%      |
|                       | LINE REGULATION   | ±0.5%   | ±0.5%      |
|                       | LOAD REGULATION   | ±1.0%   | ±1.0%      |
|                       | SETUP, RISE TIME  | 800ms, 150ms/400VAC    1500ms, 150ms/230VAC at full load  |            |
| HOLD UP TIME (Typ.)   | 18ms / 400VAC    18ms / 230VAC at full load   |   |            |
| INPUT                 | VOLTAGE RANGE Note.6  | 180 ~ 550VAC    254 ~ 780VDC  |            |
|                       | FREQUENCY RANGE   | 47 ~ 63Hz   |            |
|                       | POWER FACTOR (Typ.)   | PF ≥ 0.84/400VAC    PF ≥ 0.84/230VAC  |            |
|                       | EFFICIENCY (Typ.)   | 91%   |            |
|                       | AC CURRENT (Typ.)   | 1A/400VAC    2A/230VAC  |            |
|                       | INRUSH CURRENT (Typ.)   | COLD START 50A  |            |
|                       | LEAKAGE CURRENT   | <3.5mA / 530VAC   |            |
| PROTECTION            | OVERLOAD  | 105 ~ 130% rated output power<br>Protection type : Constant current limiting, unit will shut down after 3 sec. , auto-recovery after 1 minute if the fault condition is removed |            |
|                       | OVER VOLTAGE  | 29 ~ 33V  | 56 ~ 65V   |
|                       | OVER TEMPERATURE  | 90°C ±5°C (TSW) detect on heatsink of power switch<br>Protection type : Shut down o/p voltage, recovers automatically after temperature goes down                               |            |
| FUNCTION              | DC OK REALY CONTACT RATINGS (max.)  | 60Vdc/0.3A, 30Vdc/1A, 30Vac/0.5A resistive load   |            |
| ENVIRONMENT           | WORKING TEMP. Note.5  | -30 ~ +70°C (Refer to "Derating Curve")   |            |
|                       | WORKING HUMIDITY  | 20 ~ 95% RH non-condensing  |            |
|                       | STORAGE TEMP., HUMIDITY   | -40 ~ +85°C, 10 ~ 95% RH  |            |
|                       | TEMP. COEFFICIENT   | ±0.03%/°C (0 ~ 50°C)  |            |
|                       | VIBRATION   | Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6  |            |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS  | UL508 approved, IEC60950-1 CB approved by SIQ, design refer to GL   |            |
|                       | WITHSTAND VOLTAGE   | I/P-O/P:3KVAC    I/P-FG:2KVAC    O/P-FG:0.5KVAC    O/P-DC OK:0.5KVAC  |            |
|                       | ISOLATION RESISTANCE  | I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH   |            |
|                       | EMC EMISSION  | Compliance to EN55022 (CISPR22), EN61204-3 Class B, EN61000-3-2,-3  |            |
|                       | EMC IMMUNITY  | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A approved  |            |
| OTHERS                | MTBF  | 141.1K hrs min.    MIL-HDBK-217F (25°C)   |            |
|                       | DIMENSION   | 63*125.2*113.5mm (W*H*D)  |            |
|                       | PACKING   | 1.06Kg; 12pcs/13.7Kg/1.06CUFT   |            |
| NOTE                  | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</li> <li>5. Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.</li> <li>6. Derating may be needed under low input voltage. Please check the derating curve for more details.</li> </ol> |   |            |

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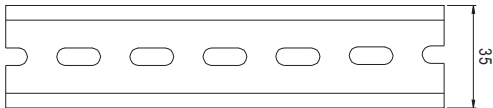
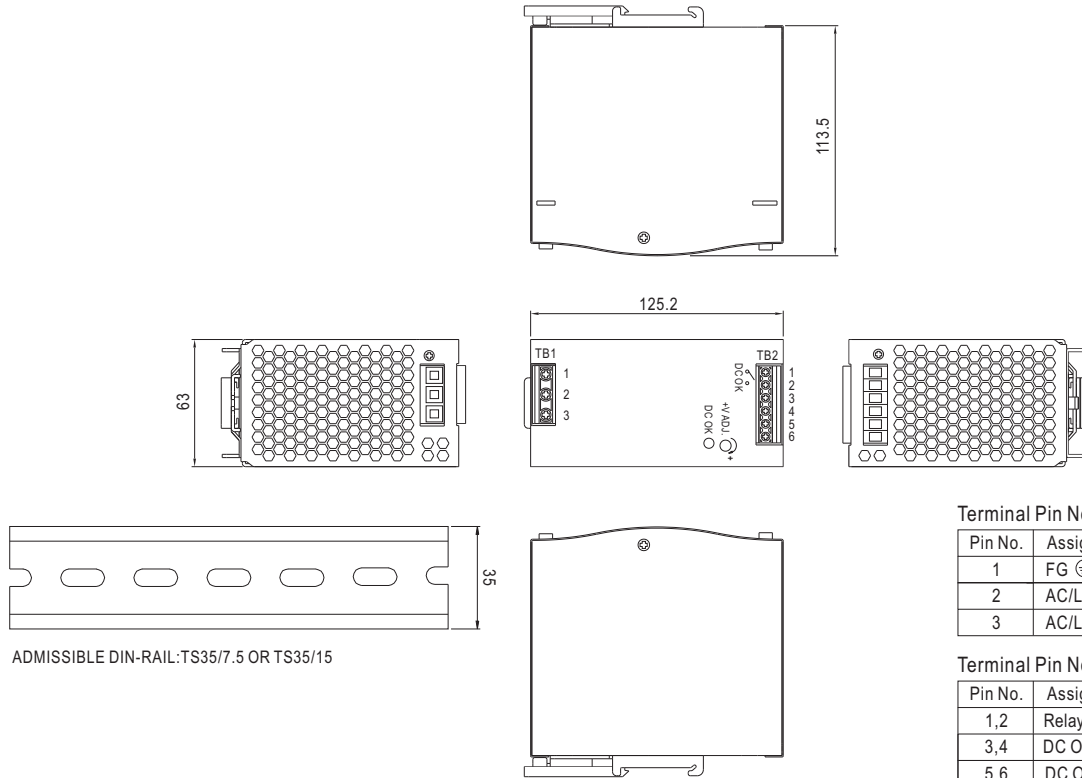


240W Single Output Industrial DIN RAIL Power Supply

## WDR-240 series

### Mechanical Specification

Case No. 979B Unit:mm



ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15

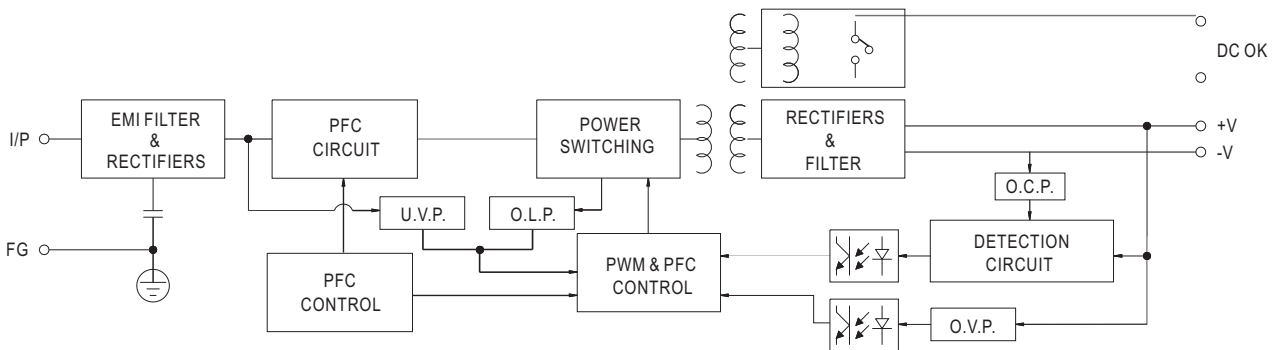
#### Terminal Pin No. Assignment (TB1)

| Pin No. | Assignment |
|---------|------------|
| 1       | FG ⊕       |
| 2       | AC/L2      |
| 3       | AC/L1      |

#### Terminal Pin No. Assignment (TB2)

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

### Block Diagram



### DC OK Relay Contact

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

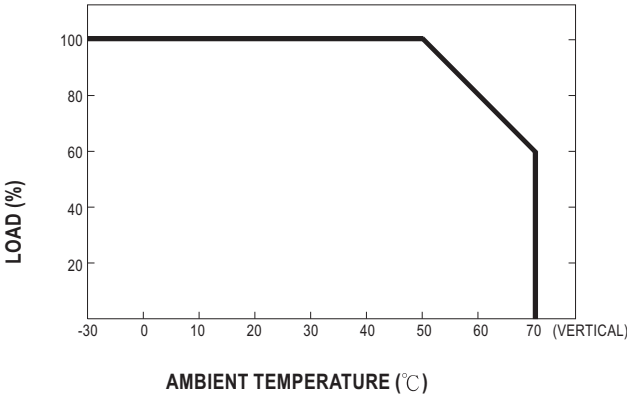
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## WDR-240 series

■ Derating Curve



■ Output derating VS input voltage

