



240W Slim Three Phase Industrial DIN Rail with PFC Function

TDR-240 series



■ Features

- Three-Phase 340 ~ 550VAC wide range input (Dual phase operation possible)
- 63mm slim width
- Built-in passive PFC function compliance to BS EN/EN61000-3-2
- High efficiency 92% and low power dissipation
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Full power between -30~+60°C
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15
- UL61010(industrial control equipment)approved
- BS EN/EN61000-6-2(BS EN/EN50082-2) industrial immunity level
- DC OK relay contact
- 3 years warranty

■ Applications

- Industrial control system
- Semiconductor fabrication equipment
- Factory automation
- Electro-mechanical apparatus

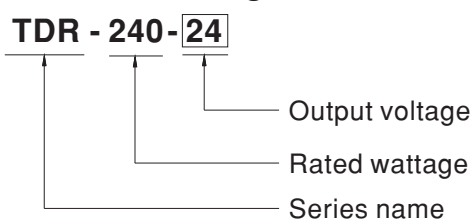
■ GTIN CODE

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

■ Description

TDR-240 is one economical slim 240W Din rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 63mm in width, which allows space saving inside the cabinets. The entire series adopts the full range AC input from 3 ϕ 340VAC to 550VAC (Dual Phase operation possible) and conforms to BS EN/EN61000-3-2, the norm the European Union regulates for harmonic current. TDR-240 is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 92 %, the entire series can operate at the ambient temperature between -30°C and 70°C under air convection. It is equipped with constant current mode for over-load protection, fitting various inductive or capacitive applications. The complete protection functions and relevant certificates for industrial control apparatus (UL61010-1, UL61010-2-201, BS EN/EN61558-1, BS EN/EN61558-2-16, EAC TP TC 004 approved, and etc.) make TDR-240 a very competitive power supply solution for industrial applications.

■ Model Encoding





SPECIFICATION

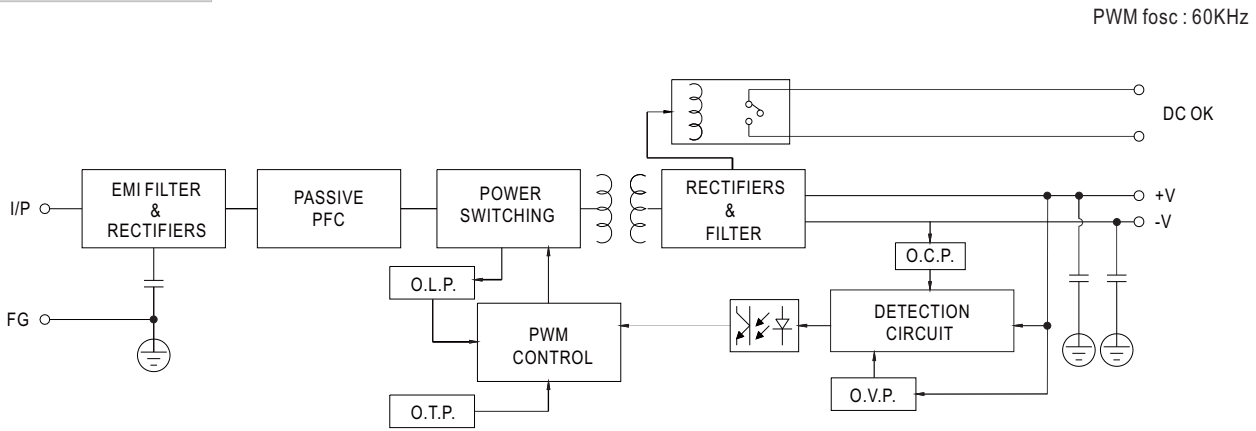
| MODEL | | TDR-240-24 | TDR-240-48 | |
|--------------------------------|---|---|--|-------------------|
| OUTPUT | DC VOLTAGE | 24V | 48V | |
| | RATED CURRENT | 10A | 5A | |
| | CURRENT RANGE | 0 ~ 10A | 0 ~ 5A | |
| | RATED POWER | 240W | 240W | |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 120mVp-p | |
| | 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 | 2000ms, 60ms/400VAC 1500ms, 60ms/500VAC at full load | | |
| HOLD UP TIME (Typ.) | 20ms / 400VAC 40ms / 500VAC at full load | | | |
| INPUT | VOLTAGE RANGE Note.4 | Three-Phase 340 ~ 550VAC (Dual phase operation possible in connecting L1,L3,FG or L2,L3,FG) or 480 ~ 780VDC | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | |
| | POWER FACTOR (Typ.) | PF ≥ 0.53/400VAC PF ≥ 0.52/500VAC at full load | | |
| | EFFICIENCY (Typ.) | 92% | 92% | |
| | AC CURRENT (Typ.) | 0.69A/400VAC 0.6A/500VAC | | |
| | INRUSH CURRENT (Typ.) | COLD START 50A | | |
| | LEAKAGE CURRENT | <2mA / 530VAC | | |
| PROTECTION | OVERLOAD | 105 ~ 130% rated output power Protection type : Constant current limiting, unit will hiccup after 3 sec. | | |
| | OVER VOLTAGE | 30 ~ 36V | 56 ~ 65V | |
| | | Protection type : Hiccup mode, recovers automatically after fault condition is removed. | | |
| | OVER TEMPERATURE | 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 non-condensing | | |
| | TEMP. COEFFICIENT | ±0.05%/°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 Note.6 | 5000 meters | | |
| | OVER VOLTAGE CATEGORY | III ; According to EN61558, EN50178, EN60664-1, EN62477-1, EN60204-1; altitude up to 2000 meters | | |
| SAFETY & EMC (Note 7) | SAFETY STANDARDS | UL61010-1, UL61010-2-201, BS EN/EN61558-1, BS EN/EN61558-2-16, BIS IS13252(Part1)(only for 24V) , EAC TP TC 004 approved, design refer to AS/NZS61558-1/-2-16 | | |
| | WITHSTAND VOLTAGE | I/P-O/P:4.87KVAC I/P-FG:2.4KVAC 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 | Parameter | Standard | Test Level / Note |
| | | Conducted | BS EN/EN55032(CISPR32)/BS EN/EN61204-3 | Class B |
| | | Radiated | BS EN/EN55032(CISPR32)/BS EN/EN61204-3 | Class B |
| | | Harmonic Current | BS EN/EN61000-3-2 | Class A |
| | | Voltage Flicker | BS EN/EN61000-3-3 | ----- |
| | EMC IMMUNITY | BS EN/EN55035 , BS EN/EN61204-3 | | |
| | | Parameter | Standard | Test Level / Note |
| ESD | | BS EN/EN61000-4-2 | Level 4, 15KV air ; Level 4, 8KV contact | |
| Radiated Field | | BS EN/EN61000-4-3 | Level 3 | |
| EFT / Burst | | BS EN/EN61000-4-4 | Level 3 | |
| Surge | | BS EN/EN61000-4-5 | Level 4, 2KV / Line-Line, Level 4, 4KV/ Line-Earth | |
| Conducted | | BS EN/EN61000-4-6 | Level 3 | |
| Magnetic Field | | BS EN/EN61000-4-8 | Level 4 | |
| Voltage Dips and Interruptions | BS EN/EN61000-4-11 | >95% dip 0.5 periods, 30% dip 25 periods > 95% interruptions 250 periods | | |
| OTHERS | MTBF | 1534.9K hrs min. Telcordia SR-332(Bellcore); 215.6K hrs min. MIL-HDBK-217F (25°C) | | |
| | DIMENSION | 63*125.2*113.5mm (W*H*D) | | |
| | PACKING | 1Kg ; 12pcs/13Kg/1.22CUFT | | |
| NOTE | <p>1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Dual phase operation is allowed under certain derating to output load. Please refer to derating curves for details.</p> <p>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.</p> <p>6. The ambient temperature derating of 3.5°C/1000m is needed for operating altitude higher than 2000m(6500ft).</p> <p>7. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com)</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> | | | |



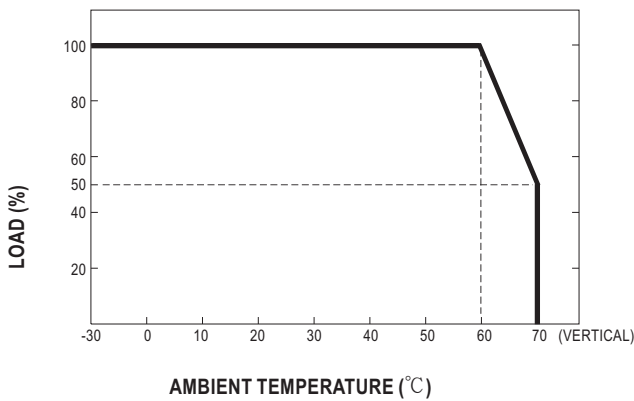
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TDR-240 series

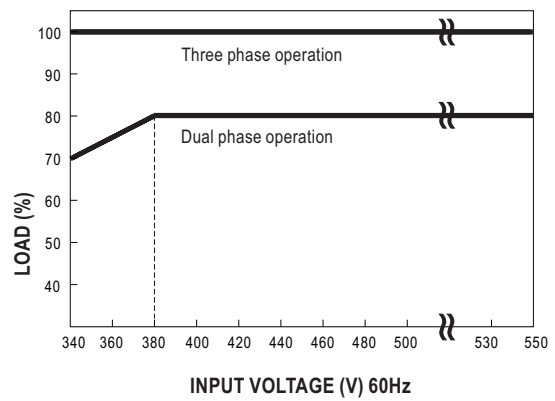
■ BLOCK DIAGRAM



■ DERATING CURVE



■ OUTPUT DERATING VS INPUT VOLTAGE



Note : When the dual phase input voltage is between 340~380Vac and ambient temperature is between -10°C~-30°C, the power supply may experience hiccup at cold start. The power supply will start up normally after 5~10 seconds.

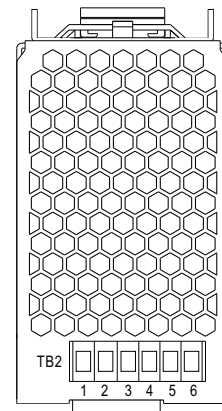
■ DC OK RELAY CONTACT

| | |
|------------------------|--------------------------------------|
| Contact Close | PSU turns on / DC OK. |
| Contact Open | PSU turns off / DC Fail. |
| Contact Ratings (max.) | 30VDC/1A, 30VAC/0.5A resistive load. |

Terminal Pin No. Assignment (TB2)

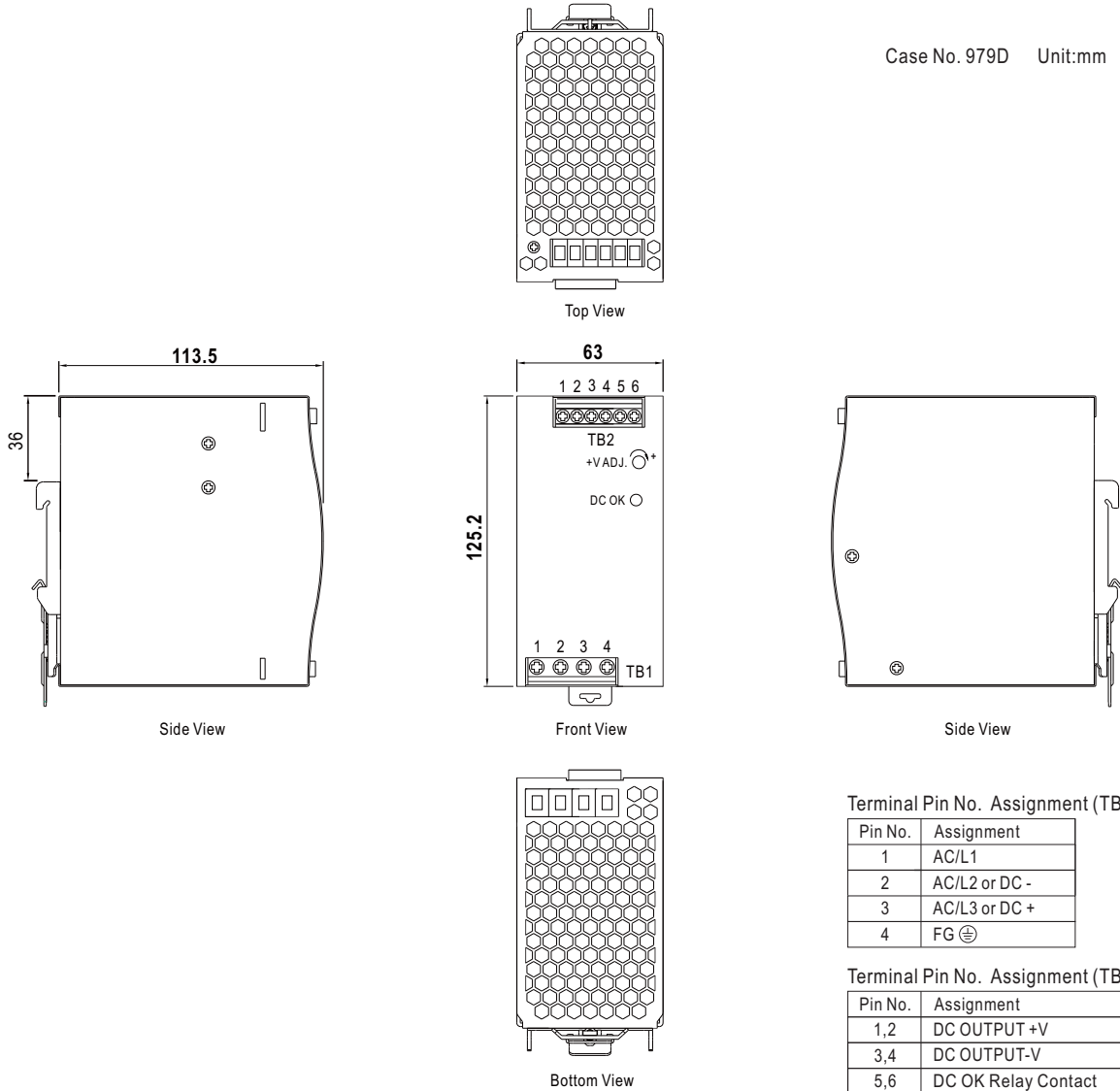
| Pin No. | Assignment |
|---------|---------------------|
| 5,6 | DC OK Relay Contact |

※ Please contact MEAN WELL for more details.

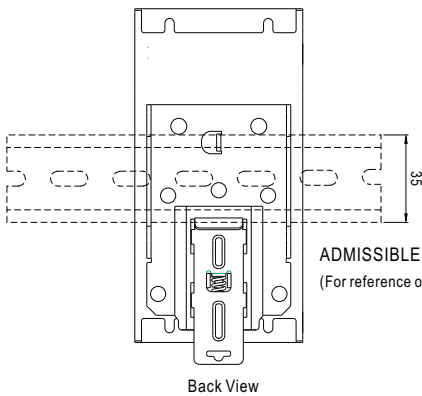


MECHANICAL SPECIFICATION

Case No. 979D Unit:mm



Installation Instruction



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

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

Installation Manual

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