



■ Features

- 180 ~ 550Vac ultra wide input for 1-phase or 2-phase
- 32mm slim width
- 4.7KVac I/O high isolation(Reinforced isolation)
- 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
- -30~+85°C ultra-wide operating temperature (>+60°C derating)
- DC OK relay contact
- DC output voltage adjustable(+20%)
- 3 years warranty

■ Applications

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

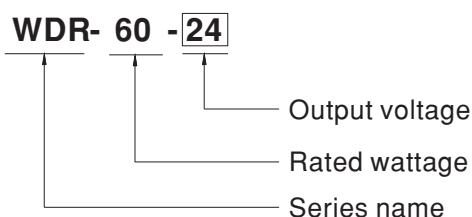
■ GTIN CODE

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

■ Description

WDR-60 series is a 60W DIN rail power supply with ultra-wide AC input range. It is suitable to be mounted on TS-35/7.5 or TS-35/15 rails. Main features are as following: it can accept 180~550Vac ultra-wide input voltage range for single phase or 2-phase system, easy to install DIN rail type, narrow width (32mm) in slim design, -30~+85°C wide range operating temp, 4.7KVAC high isolation voltage, operation at 2000m altitude, adjustable output voltage (+20% max.), high efficiency, low ripple & noise, complete protections and so on. WDR-60 is compliant with BS EN/EN-61000-6-2 standard regarding immunity for industrial environments. It suitable for industrial automation, surveillance, telecommunication and more applications.

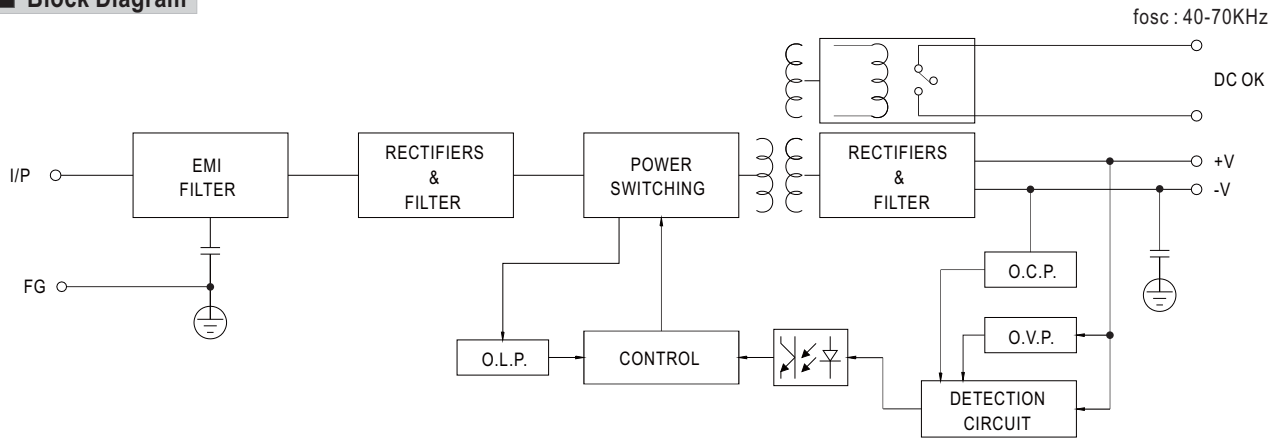
■ Model Encoding



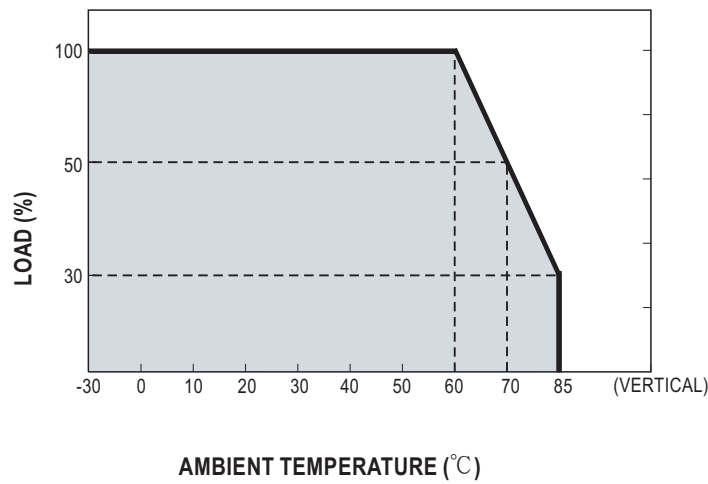
SPECIFICATION

| MODEL | | WDR-60-5 | WDR-60-12 | WDR-60-24 | WDR-60-48 | |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|----------------------------------------------------|-------------------|--|
| OUTPUT | DC VOLTAGE | 5V | 12V | 24V | 48V | |
| | RATED CURRENT | 10A | 5A | 2.5A | 1.25A | |
| | CURRENT RANGE | 0 ~ 10A | 0 ~ 5A | 0 ~ 2.5A | 0 ~ 1.25A | |
| | RATED POWER | 50W | 60W | 60W | 60W | |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 120mVp-p | 150mVp-p | 200mVp-p | |
| | VOLTAGE ADJ. RANGE | 5 ~ 6V | 12 ~ 15V | 24 ~ 29V | 48 ~ 57V | |
| | VOLTAGE TOLERANCE Note.3 | ±2% | ±1.5% | ±1.0% | ±1.0% | |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% | |
| | LOAD REGULATION | ±1.5% | ±0.5% | ±0.5% | ±0.5% | |
| SETUP, RISE, HOLD UP TIME | 1000ms, 70ms, 20ms/400Vac 2000ms, 70ms, 10ms/230Vac at full load | | | | | |
| INPUT | VOLTAGE RANGE Note.4 | 180 ~ 550Vac or 254 ~ 780Vdc | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | |
| | EFFICIENCY (Typ.) | 83.5% / 400Vac | 86.5% / 400Vac | 89% / 400Vac | 90.5% / 400Vac | |
| | AC CURRENT | 0.4A/400Vac 0.7A/230Vac | | | | |
| | INRUSH CURRENT (max.) | COLD START 50A/400Vac 30A/230Vac | | | | |
| LEAKAGE CURRENT | <2mA / 530Vac | | | | | |
| PROTECTION | OVERLOAD | 105 ~ 135% rated output power Hiccup mode when output voltage <50%, recovers automatically after fault condition is removed Constant current limiting within 50% ~ 100% rated output voltage, recovers automatically after fault condition is removed | | | | |
| | OVER VOLTAGE | 6.2 ~ 7.2V | 16 ~ 18V | 31 ~ 37V | 58 ~ 60.5V | |
| | OVER TEMPERATURE | Protection type : Shut down o/p voltage, re-power on to recover | | | | |
| FUNCTION | DC OK SIGNAL | Relay contact rating(max.) : 30V / 1A resistive | | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +85°C (Refer to "Derating Curve") | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | |
| | STORAGE TEMP. | -40 ~ +85°C | | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 60°C) | | | | |
| | VIBRATION | Component: 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting clip: Compliance to IEC60068-2-6 | | | | |
| | OPERATING ALTITUDE Note.5 | 2000 meters | | | | |
| SAFETY & EMC (Note 7) | OVER VOLTAGE CATEGORY | II ; According to EN61558, EN50178, EN60664-1, EN62477-1, EN60204-1; altitude up to 2000 meters | | | | |
| | SAFETY STANDARDS | UL61010, BS EN/EN61558-2-16, AS/NZS 62368.1, EAC TP TC 004 approved; design refer to GL and BS EN/EN60204-1(By request) | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:4.7KVAC I/P-FG:2.5KVAC 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) | | Class B | |
| | | Radiated | BS EN/EN55032(CISPR32) | | 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/EN61000-6-2, BS EN/EN61204-3 | | | | |
| Parameter | | Standard | | Test Level / Note | | |
| ESD | | BS EN/EN61000-4-2 | | Level 3, 8KV air; Level 2, 4KV contact, criteria A | | |
| Radiated Susceptibility | | BS EN/EN61000-4-3 | | Level 3, 10V/m, criteria A | | |
| EFT Bursts | | BS EN/EN61000-4-4 | | Level 3, 2KV/5KHz, criteria A | | |
| Surge | | BS EN/EN61000-4-5 | | Level 4, 2KV/Line-Line, 4KV/Line-Earth, criteria A | | |
| Conducted | | BS EN/EN61000-4-6 | | Level 3, 10V, criteria A | | |
| Magnetic Field | | BS EN/EN61000-4-8 | | Level 4, 30A/m, criteria A | | |
| Voltage Dips and interruptions | BS EN/EN61000-4-11 | | >95% dip 0. 5 periods, 30% dip 25 periods, >95% interruptions 250 periods | | | |
| OTHERS | MTBF | 1900.1K hrs min. Telcordia SR-332 (Bellcore) ; 313.7K hrs min. MIL-HDBK-217F (25°C) | | | | |
| | DIMENSION | 32*125.2*102mm (W*H*D) | | | | |
| | PACKING | 0.5Kg; 28pcs/15.2Kg/1.24CUFT | | | | |
| 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 0.1µF & 47µF parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Derating may be needed under low input voltage. Please check the derating curve for more details.</p> <p>5. 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).</p> <p>6. Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.</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 https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf)</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> | | | | | |

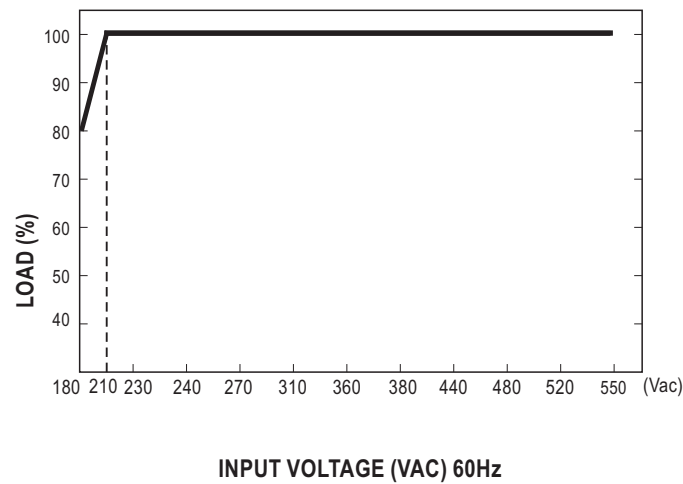
Block Diagram



Derating Curve



Static Characteristics



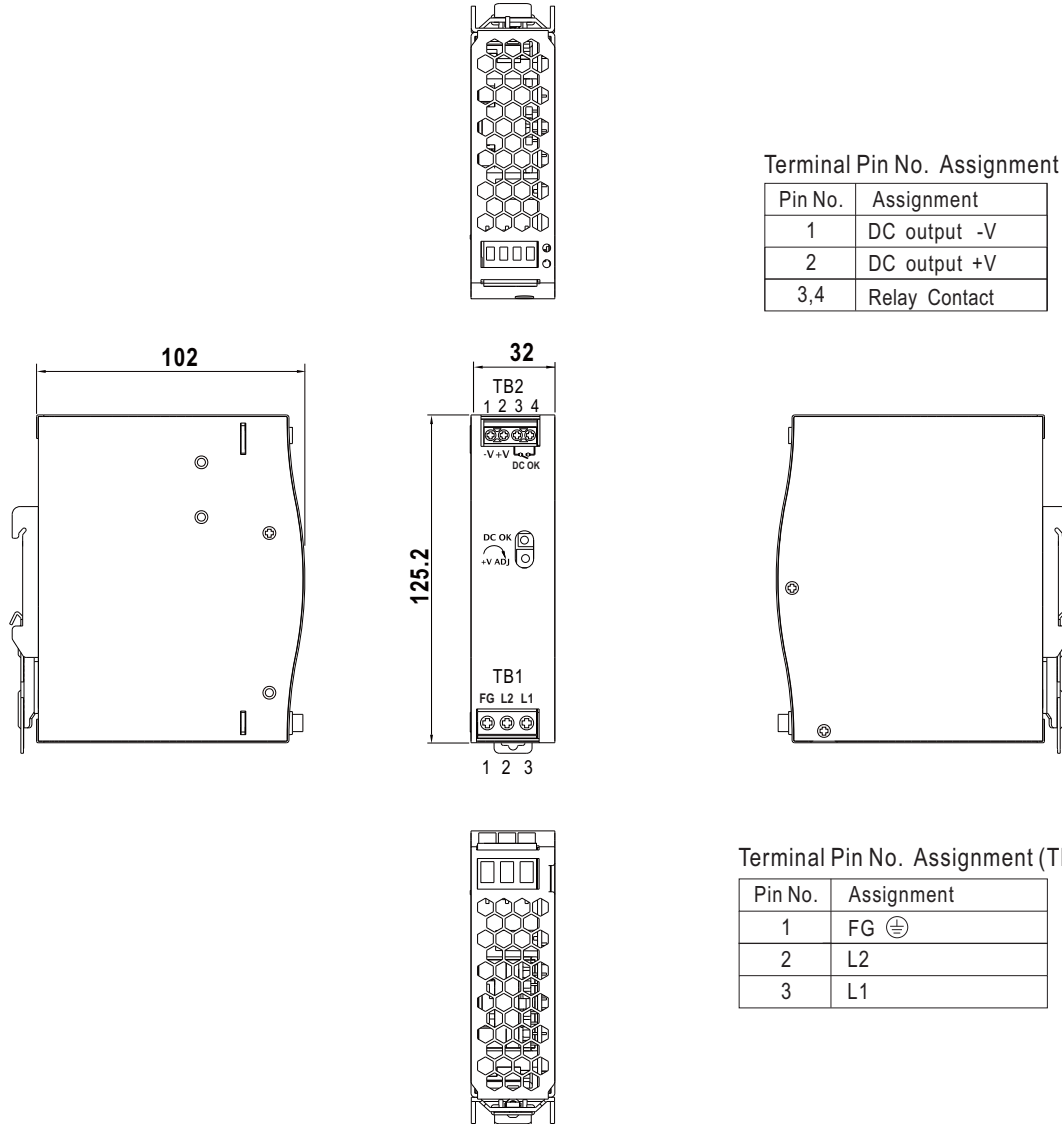
DC OK Relay Contact

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

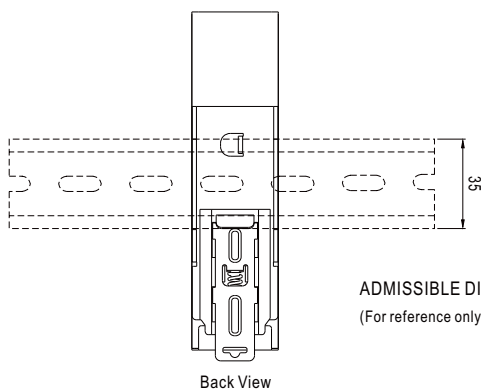
Mechanical Specification

(Unit: mm , tolerance ± 1 mm)

Case No.221E



Installation Instruction



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

Installation Manual

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