



60W Ultra Wide Input Industrial DIN Rail Power Supply

**WDR-60** series



## ■ 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

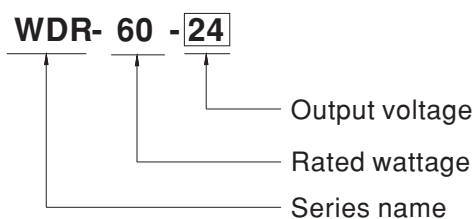
## ■ GTIN CODE

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 is suitable for industrial automation, surveillance, telecommunication and more applications.

## ■ Model Encoding

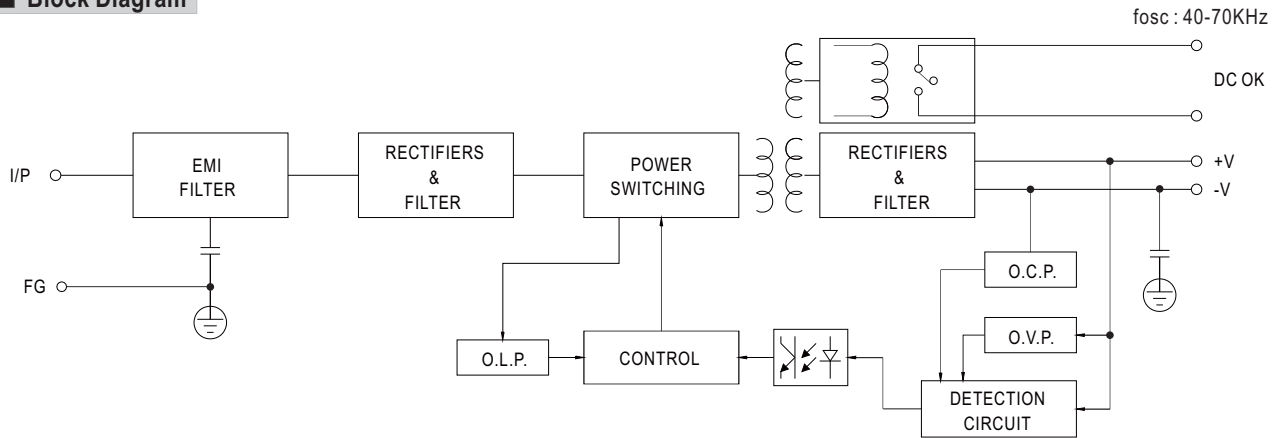




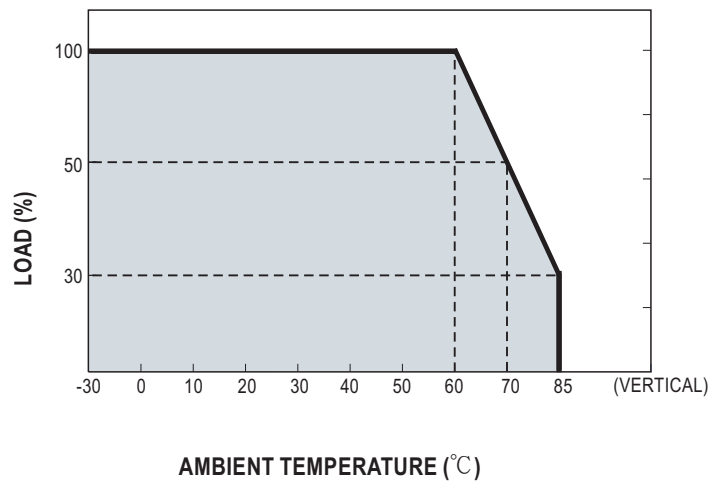
## SPECIFICATION

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/EN55024, 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	0.45Kg; 28pcs/13.6Kg/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 &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.</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 <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>					

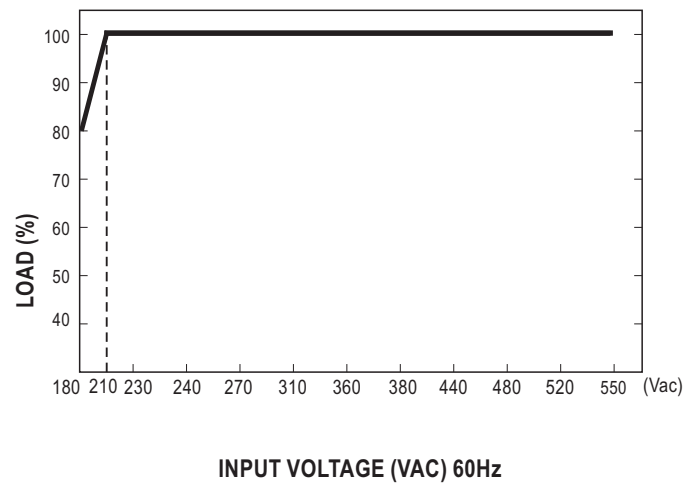
■ **Block Diagram**



■ **Derating Curve**



■ **Static Characteristics**



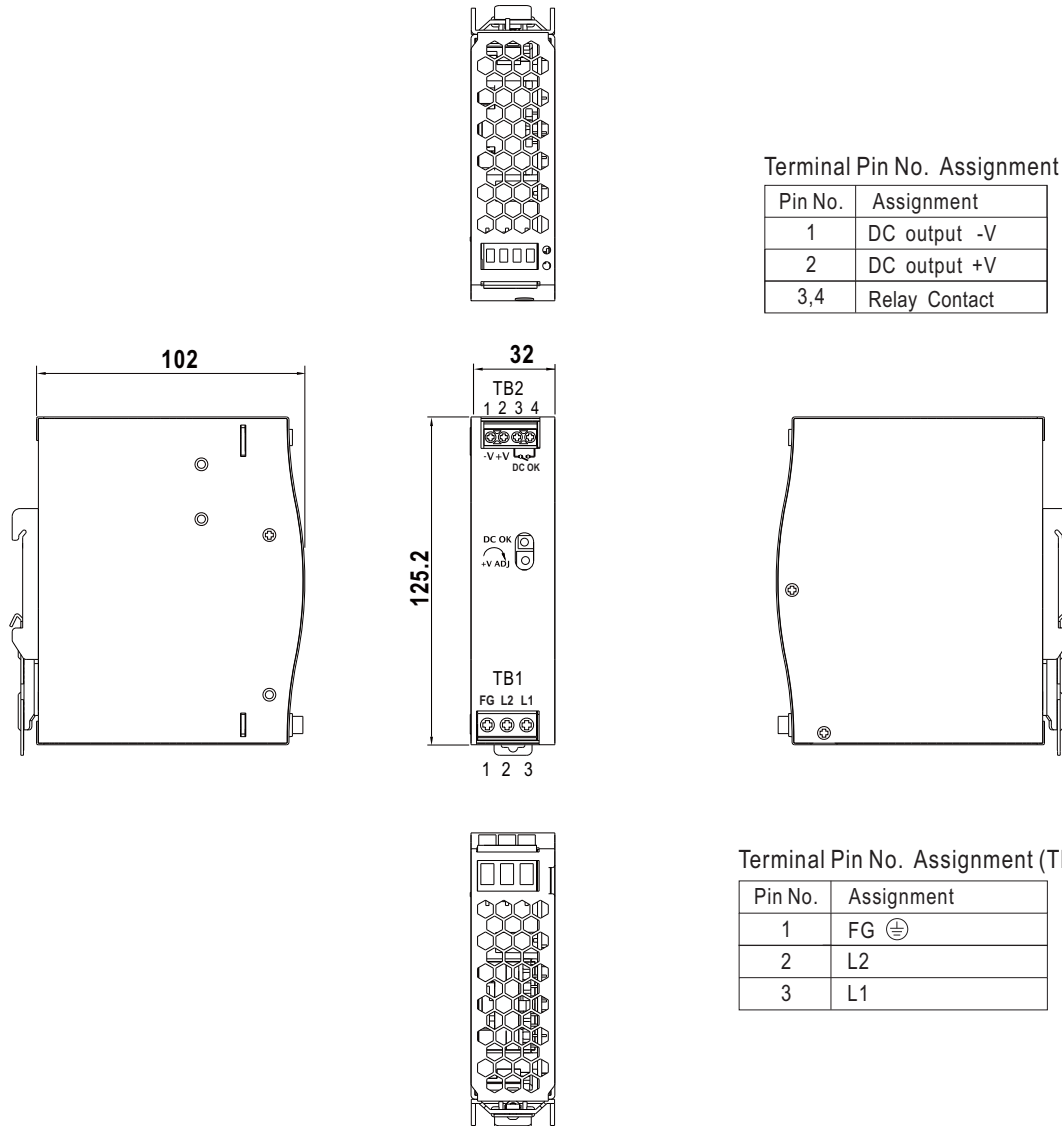
■ **DC OK Relay Contact**

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

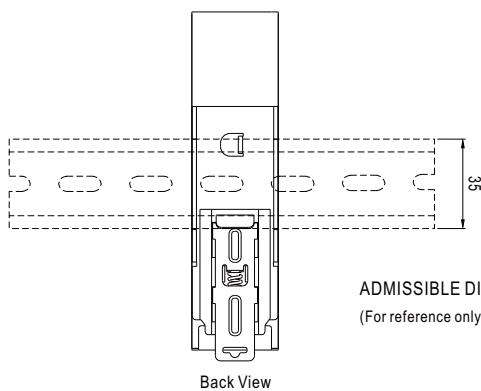


■ Mechanical Specification

Case No.221E Unit:mm



■ 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>