

■ Features

- 180~264Vac input with PFC
- Global certificates in multi-fields (ITE 62368-1, Industrial 61558-1/-2-16, 61010)
- 96mm slim width
- High efficiency up to 95.5% and no load power dissipation < 3.6W
- Built-in constant current limiting circuit
- Current sharing up to 3840W (3+1) for parallel use
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Fanless design, cooling by free air convection
- Over voltage category III (OVC III)
- -40~+70°C wide range operation temperature (>+50°C derating)
- Operating altitude up to 5000 meters
- Built-in DC OK relay contact
- Can be installed on DIN rail TS-35/7.5 or 15
- 3 years warranty

■ Applications

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

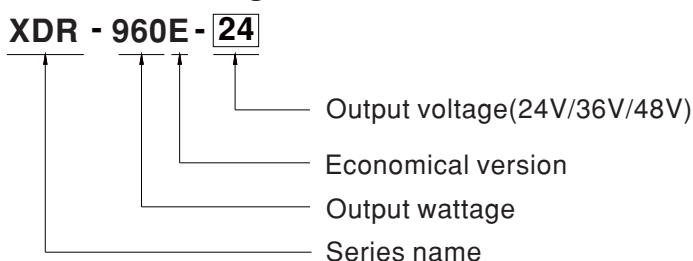
■ GTIN CODE

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

■ Description

The XDR-960E series is a 960W AC/DC economical ultra slim industrial DIN rail power. Key features of this series include a narrow 96mm casing, optimizing system installation space. It boasts a maximum efficiency of 95.5% and a low standby power consumption < 3.6W for energy savings and carbon reduction. It has built-in constant current, fanless design, a wide operating temperature range of -40 to +70°C (up to +50°C at full load); OVCIII compliance; parallel function capability up to 3840W; built-in DC OK signal. With comprehensive protection functions, complete safety certifications, and a 3-years warranty, the XDR-960E series is a compact, high-performance, and highly reliable DIN rail power supply.

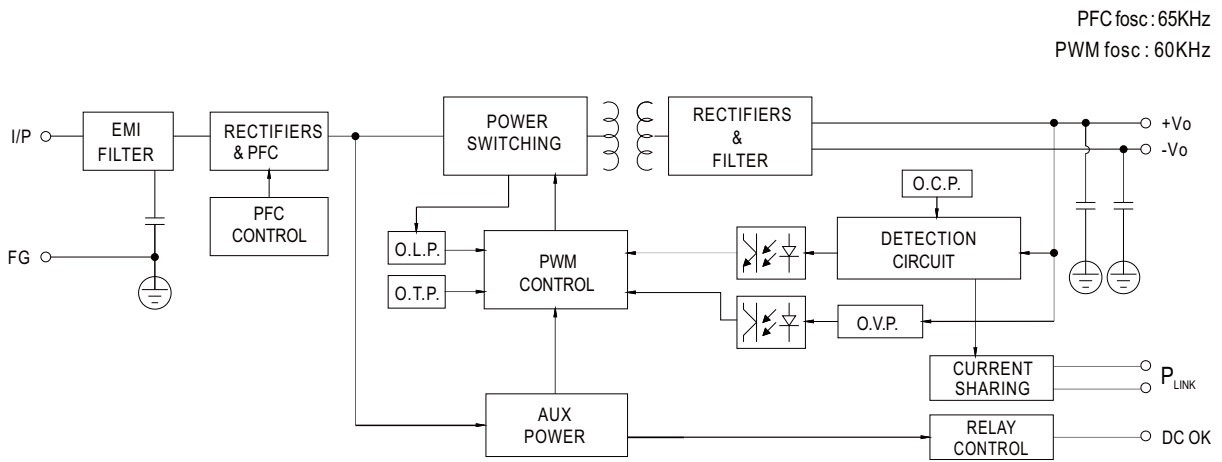
■ Model Encoding



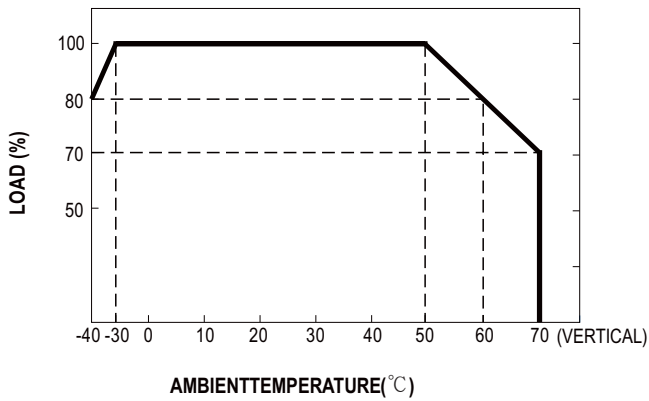
SPECIFICATION

MODEL		XDR-960E-24	XDR-960E-36	XDR-960E-48	
OUTPUT	DC VOLTAGE	24V	36V	48V	
	RATED CURRENT	40A	26.6A	20A	
	CURRENT RANGE	0 ~ 40A	0 ~ 26.6A	0 ~ 20A	
	RATED POWER	960W	957.6W	960W	
	RIPPLE & NOISE (max.) <small>Note.2</small>	120mVp-p	150mVp-p	150mVp-p	
	VOLTAGE ADJ. RANGE	24 ~ 29V	36 ~ 42V	48 ~ 55V	
	VOLTAGE TOLERANCE <small>Note.3</small>	±1.0%	±1.0%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	
	SETUP, RISE TIME	500ms, 50ms/230Vac at full load			
	HOLD UP TIME (Typ.)	15ms/230Vac at full load			
INPUT	AC VOLTAGE RANGE	180 ~ 264Vac			
	DC VOLTAGE RANGE	254.5 ~ 370Vdc			
	NO LOAD POWER CONSUMPTION (Typ.)	2.7W @ 230Vac	3.6W @ 230Vac		
	FREQUENCY RANGE	47 ~ 63Hz			
	POWDR FACTOR (Typ.)	PF>0.95/230Vac at full load			
	EFFICIENCY (Typ.)	94.5%	95%	95.5%	
	AC CURRENT (Typ.)	4.5A/230Vac			
	INRUSH CURRENT (Typ.)	COLD START 30A/230Vac			
	LEAKAGE CURRENT	<3.5mA / 240Vac			
	PROTECTION	OVERLOAD	105~130% rated output power Hiccup mode when output voltage <30%, recovers automatically after fault condition is removed Constant current limiting without shutdown within 30%~100% rated output voltage, recovers automatically after fault condition is removed		
OVER VOLTAGE		30 ~ 34V	43 ~ 50V	56 ~ 65V	
OVER TEMPERATURE		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down			
FUNCTION	PARALLEL(Droop Mode)	Up to 3840W or (3+1) units;Please refer to Function Manual for more details			
	DC OK RELAY CONTACT	Relay Contact Ratings (max.):30Vdc/1A, 30Vac/0.5A resistive load			
ENVIRONMENT	WORKING TEMP.	-40 ~ +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	±0.03%/°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 6)	SAFETY STANDARDS	UL61010; TUV BS EN/EN62368-1, BS EN/EN61558-1/-2-16, BS EN/EN61010; CB IEC62368-1, IEC61558-1, IEC61010; RCM AS/NZS 62368-1, AS/NZS 61558-1/-2-16; BSMI CNS 15598-1; CCC GB4943.1; EAC TPTC004 approved; KC KC62368-1 and BIS IS13252 (Part 1):2010 certified, no stock ,contact sale for inquires			
	OVER VOLTAGE CATEGORY <small>Note.4</small>	IEC/EN 61558-1/-2-16 (OVC III, altitude up to 2000m) IEC/EN/UL 61010 (OVC II, altitude up to 5000m) IEC/EN 62368-1 (OVC II, altitude up to 5000m)			
	SAFETY EXTRA-LOW VOLTAGE(SELV)	IEC/EN 61558-2-16 (SELV) IEC/EN/UL 61010-2-201 (SELV) IEC/EN 62368-1 (SELV / ES1)			
	WITHSTAND VOLTAGE	I/P-O/P: 4KVac I/P-FG: 2KVac O/P-FG: 1.5KVac 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 / CNS15936	
			Radiated	BS EN/EN55032 (CISPR32) / BS EN/EN61204-3 / CNS15936	
			Harmonic Current	BS EN/EN61000-3-2	
		Voltage Flicker	BS EN/EN61000-3-2		
BS EN/EN55035 , BS EN/EN61204-3, BS EN/EN61000-6-2(BS EN/EN50082-2)					
EMC IMMUNITY		Parameter	Standard	Test Level / Note	
			ESD	BS EN/EN61000-4-2	
	Radiated		BS EN/EN61000-4-3		
	EFT / Burst		BS EN/EN61000-4-4		
	Surge		BS EN/EN61000-4-5		
	Conducted		BS EN/EN61000-4-6		
Magnetic Field	BS EN/EN61000-4-8				
OTHERS	MTBF	K hrs min. Telcordia SR-332 (Bellcore); K hrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	96*125.2*132mm (W*H*D)			
	PACKING	Kg; pcs/Kg/CUFT			
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230Vac 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 0.1 μF & 47 μF parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. 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>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 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. (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>				

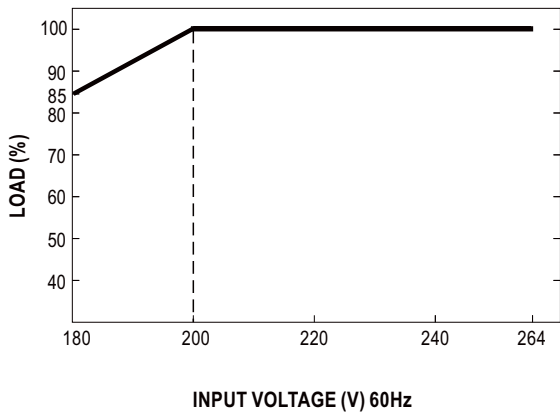
■ Block Diagram



■ Derating Curve



■ Static Characteristics

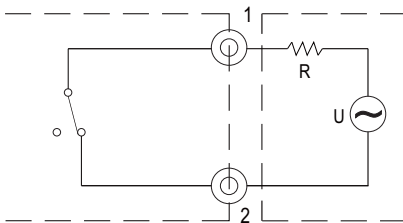


■ **Function Manual**

Pin No.	Function	Description
1,2	DC OK Relay Contact	Contact Close: PSU turns ON/DC_OK Contact Open: PSU turns OFF/DC_fail
3,4	Paraller Use Link(P _{LINK})	P _{LINK} should be short to enable droop parallel use.(Default disable)

1.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.



External voltage source (U) and resistor (R)
(The max. Sink is 30Vdc/1A ,30Vac/0.5A)

Internal circuit of DC_OK, via relay contact

2.Parallel Use

XDR-960E has the built-in **droop mode current sharing** function and can be connected in parallel, up to 4 units, to provide higher output power as exhibited below :

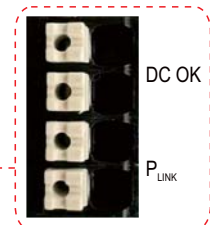
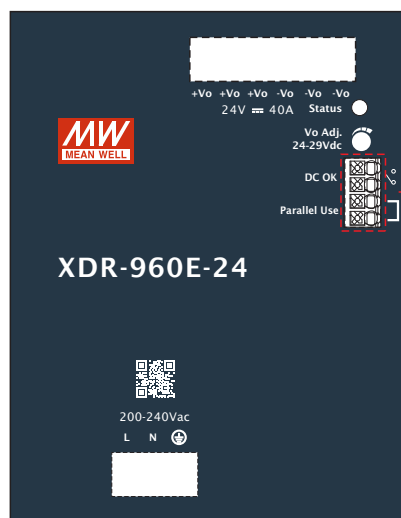
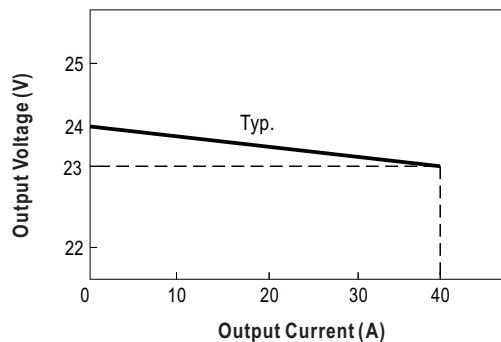
- (1) Difference of output voltages among parallel units should be less than 0.1V.
- (2) The total output current must not exceed the value determined by the following equation (Output current at parallel operation)=(The rated current per unit) x (Number of unit) x 0.9.
- (3) In parallel operation 4 units is the maximum, please consult the manufacture for other applications.
- (4) The power supplies should be paralleled using short and large diameter wiring and then connected to the load.
- (5) When in parallel operation, the minimum output load should be greater than 7% of total output load. (Min. load >7% rated current per unit x number of unit)
- (6) In parallel connection, maybe only one unit (master) operate if the total output load is less than 7% of rated load condition.
The other PSUs (slaves) may go into standby mode and their output LEDs & relays will not turn on.
- (7) P_{LINK} lines should be shorted locally.
- (8) The "Parallel Use" mode regulates the output voltage in such a manner that the voltage at no load is approx. 4% higher than at normal load.

For example XDR-960E-24:

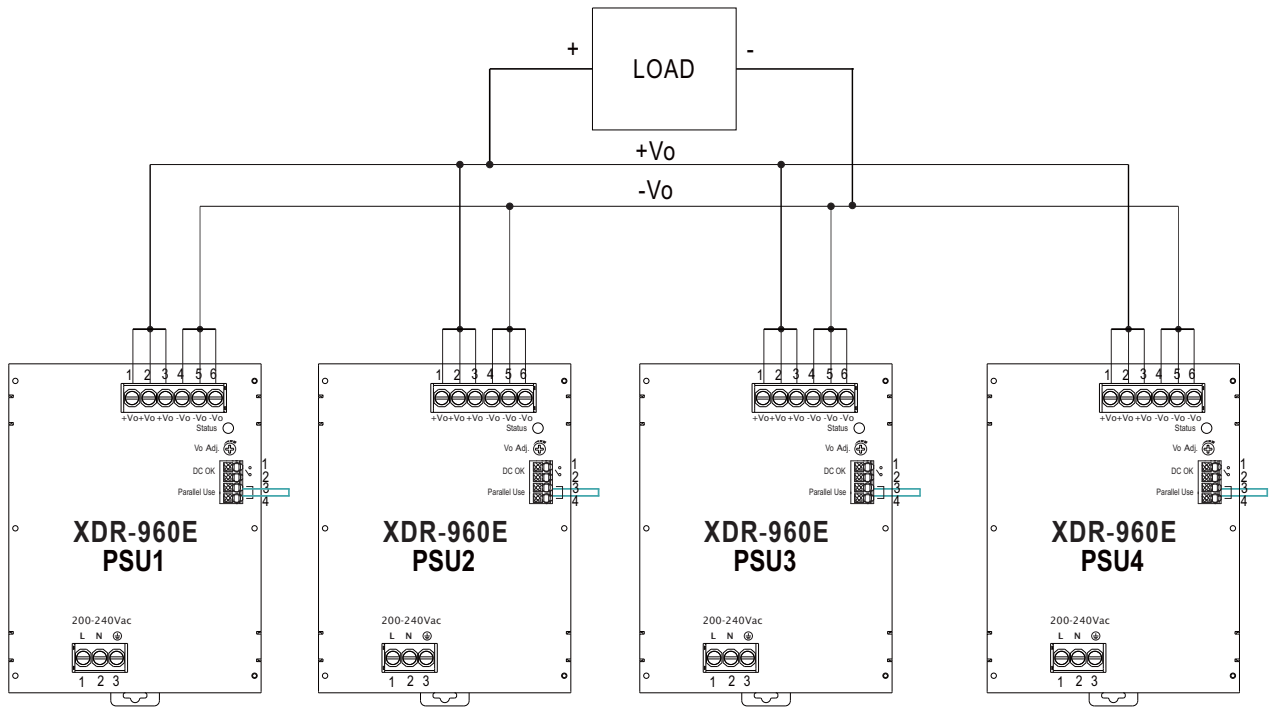
No load output voltage=24V

Normal load output current=40A

0~100% load output voltage=24V~23V



Enable : P_{LINK} should be short

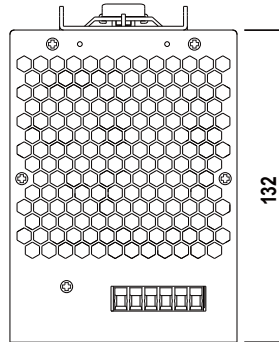


※ Please contact MEAN WELL for more details.

■ Mechanical Specification

(Unit:mm , Tolerance ±1mm)

Case No. 304

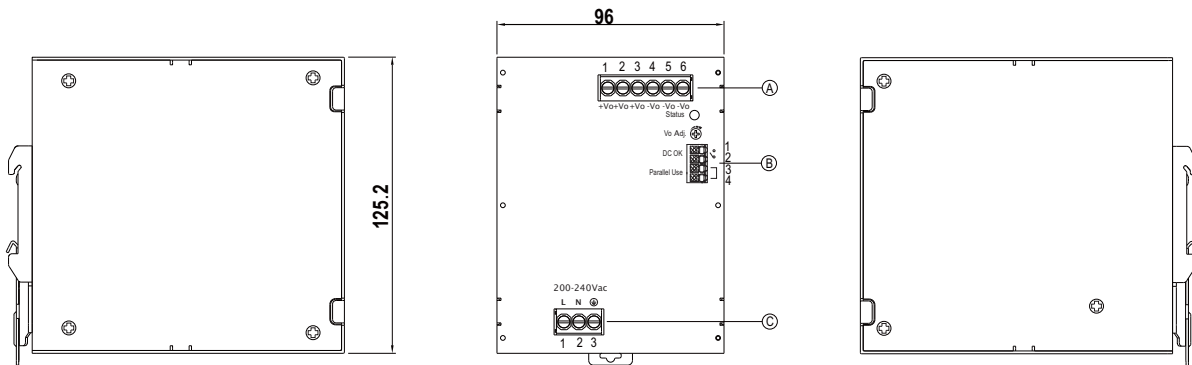


Ⓐ : Terminal Pin No.Assignment

Pin No.	Assignment
1,2,3	DC Output +Vo
4,5,6	DC Output -Vo

Ⓑ : Control Pin No.Assignment

Pin No.	Assignment
1,2	DC OK Relay Contact
3,4	Parallel Use Link(Current Sharing)



Ⓒ : Terminal Pin No.Assignment

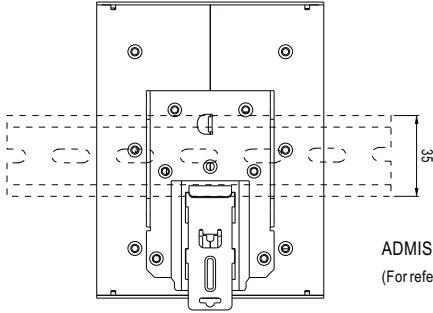
Pin No.	Assignment
1	AC/L or DC Input +Vin
2	AC/N or DC Input -Vin
3	FG (⊕)

■ Recommend Wiring

	AC Input T.B	DC Output T.B	Signal connector
Solid Wire	6mm ² max.	6mm ² max.	1.5mm ² max.
A.W.G	18~10 AWG	18~8 AWG	24~16 AWG
Screw Terminal Torque	9 Lb-In	9 Lb-In	/



■ 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>