

IEC62368-1  
IEC61558-1  
IEC61010  
AS/NES61558-1  
AS/NES62368-1  
(By request)  
KC62368-1  
(By request)



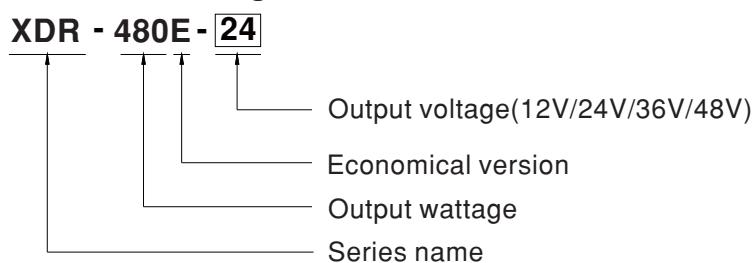
## ■ Features

- 85~264Vac input with PFC
- **Global certificates in multi-fields**  
(ITE 62368-1, Industrial 61558-1-2-16,61010)
- **48mm** slim width
- High efficiency up to **96%** and no load power dissipation<**1.2W**
- Built-in **constant current** limiting circuit
- Current sharing up to **1920W (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

## ■ Description

The XDR-480E series is a 480W AC/DC economical ultra slim industrial DIN rail power. Key features of this series include a narrow 48mm casing, optimizing system installation space, and an ultra-wide input range of 85~264Vac suitable for global use. It boasts a maximum efficiency of 96% and a low standby power consumption <1.2W 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 1920W; built-in DC OK signal. With comprehensive protection functions, complete safety certifications, and a 3-years warranty, the XDR-480E series is a compact, high-performance, and highly reliable DIN rail power supply.

## ■ Model Encoding



## ■ Applications

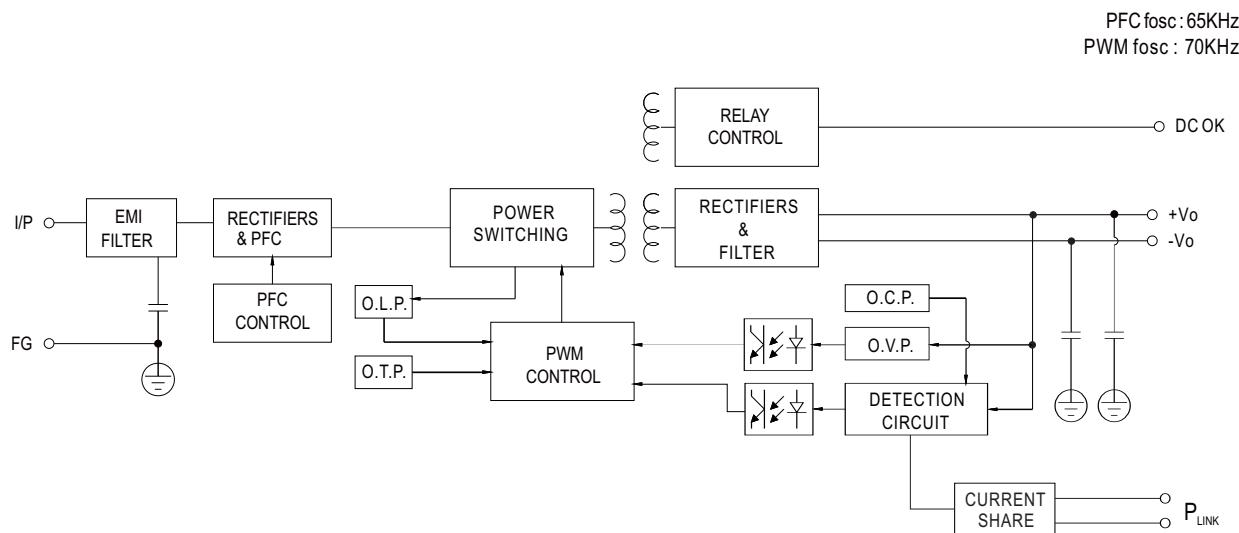
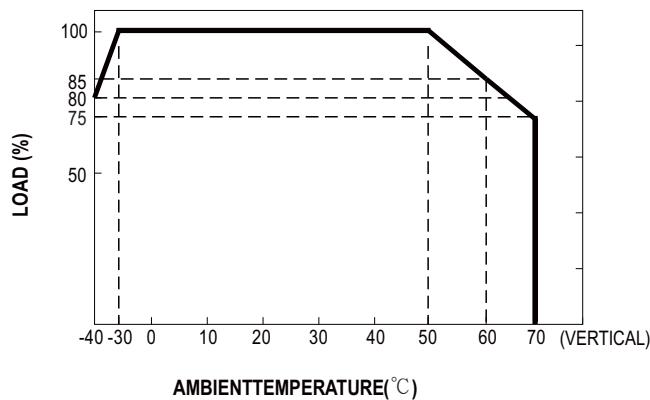
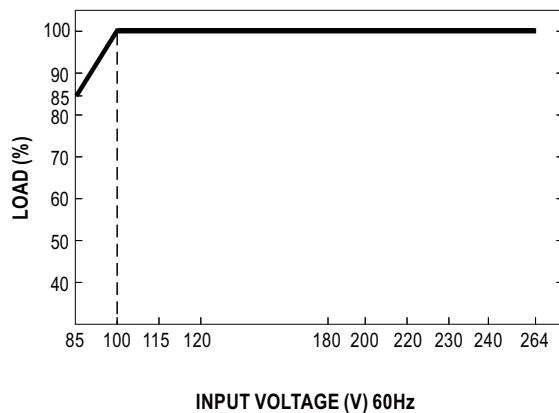
- Industrial control system
- Semiconductor fabrication equipment
- Factory automation
- Electro-mechanical apparatus
- Battery charger

## ■ GTIN CODE

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

## SPECIFICATION

MODEL	XDR-480E-12	XDR-480E-24	XDR-480E-36	XDR-480E-48			
OUTPUT	DC VOLTAGE	12V	24V	36V			
	RATED CURRENT	30A	20A	13.3A			
	CURRENT RANGE	0 ~ 30A	0 ~ 20A	0 ~ 13.3A			
	RATED POWER	360W	480W	478.8W			
	RIPPLE & NOISE (max.) Note.2	100mVp-p	120mVp-p	150mVp-p			
	VOLTAGE ADJ. RANGE	12 ~ 15V	24 ~ 29V	36 ~ 42V			
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%			
	LINE REGULATION	±0.5%	±0.5%	±0.5%			
	LOAD REGULATION	±1.0%	±1.0%	±1.0%			
	SETUP, RISE TIME	1500ms, 150ms/230Vac	3000ms, 150ms/115Vac at full load				
INPUT	HOLD UP TIME (Typ.)	15ms/230Vac	15ms/115Vac at full load				
	AC VOLTAGE RANGE	85 ~ 264Vac					
	DC VOLTAGE RANGE	120 ~ 370Vdc					
	NO LOAD POWER CONSUMPTION (Typ.)	1W @115Vac & 230Vac	1.2W @115Vac & 230Vac				
	FREQUENCY RANGE	47 ~ 63Hz					
	POWDR FACTOR (Typ.)	PF>0.95/230Vac	PF>0.98/115Vac at full load				
	EFFICIENCY (Typ.)	94%	95.5%	95.5%			
	AC CURRENT (Typ.)	6A/115Vac	3A/230Vac				
	INRUSH CURRENT (Typ.)	COLD START 15A/115Vac	30A/230Vac				
PROTECTION	LEAKAGE CURRENT	<1mA / 240Vac					
	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	Max. 18V	Max. 35V	Max. 50V			
	OVER TEMPERATURE	Protection type : Hiccup mode, recovers automatically after fault condition is removed.					
FUNCTION	PARALLEL (Droop Mode)	Up to 1920W Max (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 CNS15598-1; 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 Note.4	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	Class B			
		Radiated	BS EN/EN55032 (CISPR32) / BS EN/EN61204-3 / CNS15936	Class B			
		Harmonic Current	BS EN/EN61000-3-2	Class A			
	EMC IMMUNITY	Voltage Flicker	BS EN/EN61000-3-2	-----			
		BS EN/EN55035 , BS EN/EN61204-3, BS EN/EN61000-6-2(BS EN/EN50082-2)					
		Parameter	Standard	Test Level / Note			
		ESD	BS EN/EN61000-4-2	Level 3, 8KV air ; Level 3, 4KV contact; criteria A			
		Radiated	BS EN/EN61000-4-3	Level 3, 10V/m ; criteria A			
		EFT / Burst	BS EN/EN61000-4-4	Level 2, 2KV ; criteria A			
		Surge	BS EN/EN61000-4-5	Level 4, 2KV/Line-Line ;Level 4, 4KV/Line-Line-Chassis ;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			
OTHERS	MTBF	1482.0K hrs min. Telcordia SR-332 (Bellcore) ; 258.3K hrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	48*125.2*125mm (W*H*D)					
	PACKING	890g; 12pcs/13Kg/1.16CUFT					
NOTE	1. All parameters NOT specially mentioned are measured at 230Vac input, rated load and 25°C of ambient temperature. 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. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 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). 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. 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 <a href="https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com//Upload/PDF/EMI_statement_en.pdf</a> )						
	※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>						

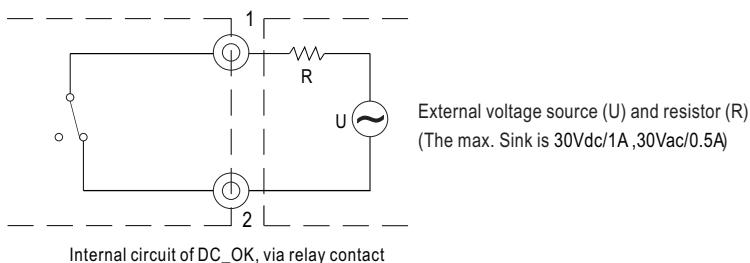
**Block Diagram**

**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.



### 2.Parallel Use

XDR-480E 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.

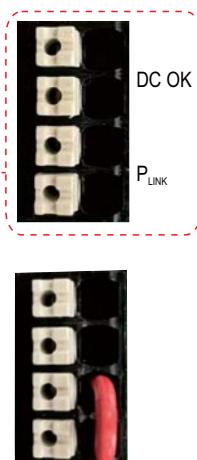
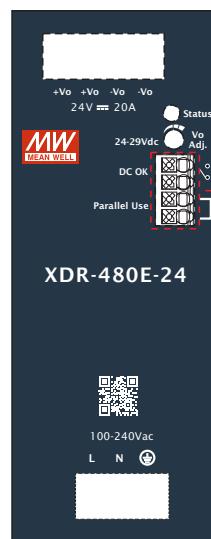
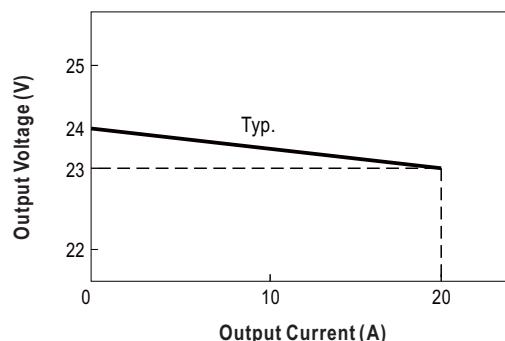
- (7) [P\\_LINK lines should be shorted locally](#).
- (8) In parallel operation, after overload or short circuit fault occurs, re-power on to recover.
- (9) The "Parallel Use" mode regulates the output voltage in such a manner that the rated load is approx. 4% lower than the no-load voltage (12V:approx.7%).

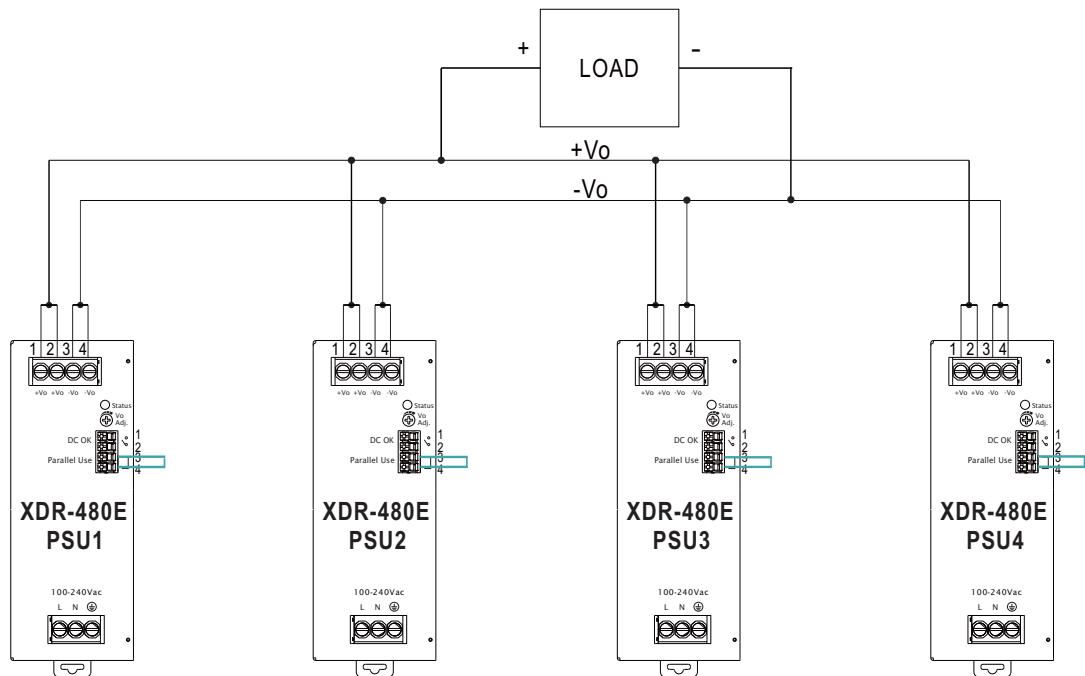
For example XDR-480E-24:

No load output voltage=24V

Normal load output current=20A

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



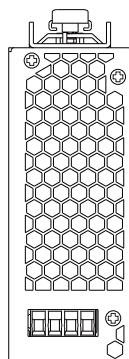


※ Please contact MEAN WELL for more details.

**Mechanical Specification**

 (Unit:mm , Tolerance  $\pm 1$ mm)

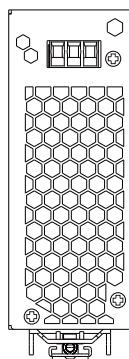
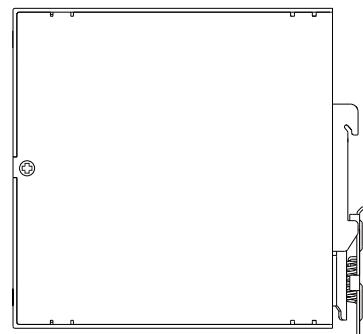
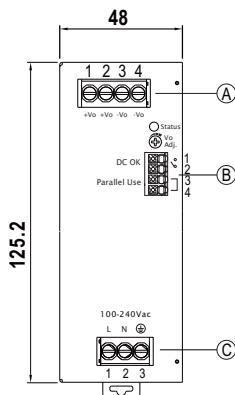
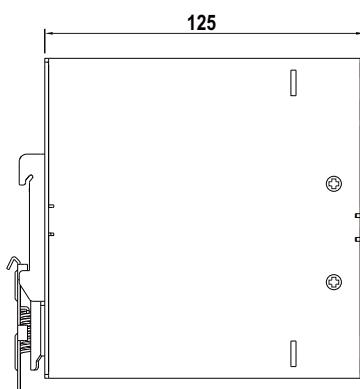
Case No.303


**(A) : Terminal Pin No.Assignment**

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

**(B) : Control Pin No.Assignment**

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


**(C) : Terminal Pin No.Assignment**

Pin No.	Assignment
1	AC/L or DC Input +Vin
2	AC/N or DC Input -Vin
3	FG $\ominus$

**Recommend Wiring**

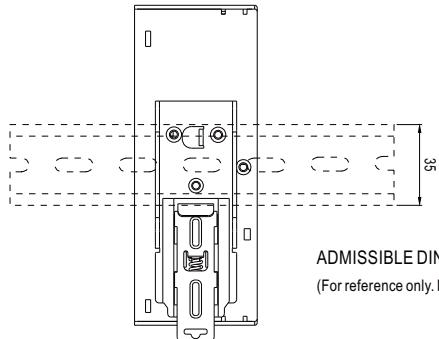
	AC Input T.B	DC Output T.B	Signal connector
Solid Wire	6mm <sup>2</sup> max.	6mm <sup>2</sup> max.	1.5mm <sup>2</sup> max.
A.W.G	18~10 AWG	18~8 AWG	24~16 AWG
Screw Terminal Torque	9 Lb-In	9 Lb-In	/



480W AC/DC Economical Ultra Slim Industrial DIN Rail Power

**XDR-480E** series

### ■ Installation Instruction



This series fits DIN rail TS35/7.5 or TS35/15.

For installation details, please refer to the Instruction manual.

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>