

X0488 Power Supply

NEPEAN Power is a proven leader in the supply and manufacture of quality engineered solutions, products and technologies. Established in 1994, through the commitment of our dedicated team we have become a supplier of choice.



X0488 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 40mm in width, which allows space saving inside the cabinets. The entire series adopts the full range AC input from 90VAC to 264VAC and conforms to EN61000-3-2.

X0488 is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 89%, the entire series can operate at the ambient temperature between -20°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 (UL508, TUV EN60950-1, etc.) make X0488 a very competitive power supply solution for industrial applications.

Specification

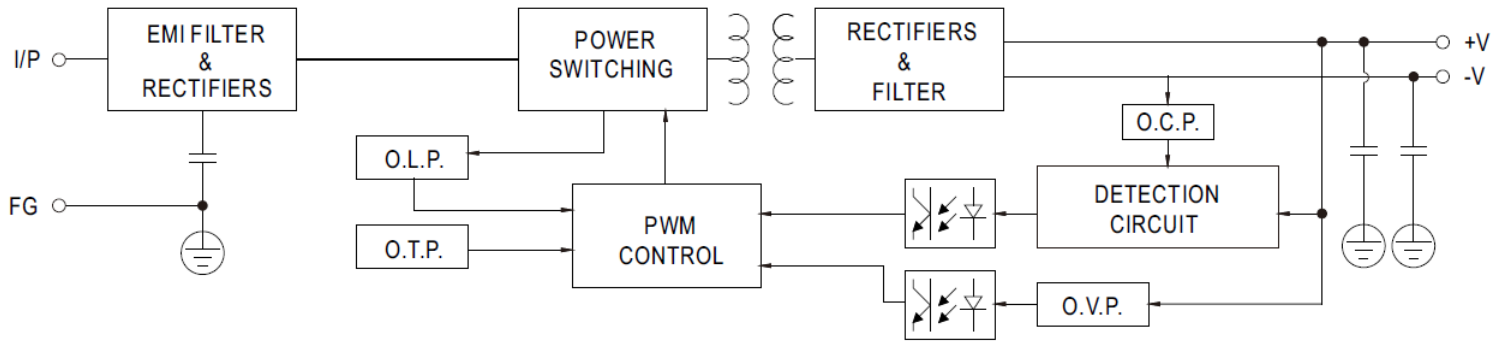
Features

- Universal AC input/full range
- 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
- UL 508 (industrial control equipment) approved
- BS EN61000-6-2 (BS EN50082-2) industrial immunity level
- 100% full load burn-in test

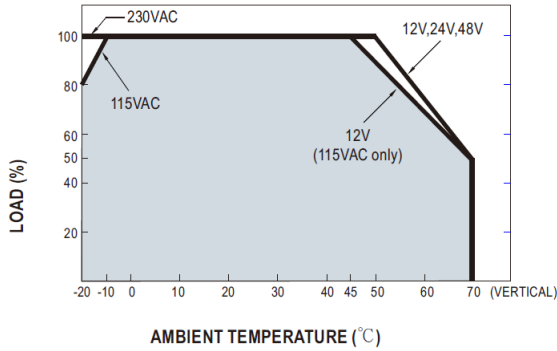
Output	DC Voltage	24V		
	Rated Current	5A		
	Current Range	0 ~ 5A		
	Rated Power	120W		
	Ripple & Noise (max.)	(Note.2)	120mVp-p	
	Voltage Adj. Range	24 ~ 28V		
	Voltage Tolerance	(Note.3)	±1.0%	
	Line Regulation	±0.5%		
	Load Regulation	±1.0%		
	Setup, Rise Time	1200ms, 60ms/230VAC	2500ms, 60ms/115VAC at full load	
Hold Up Time (Typ.)	16ms/230VAC	10ms/115VAC at full load		
Input	Voltage Range	(Note.6)	90 ~ 264VAC	127 ~ 370VDC [DC Input operation possible by connecting AC/L(+), AC/N(-)]
	Frequency Range	47 ~ 63Hz		
	Efficiency (Typ.)	88%		
	AC Current (Typ.)	2.5A/115VAC	1.3A/230VAC	
	Inrush Current (Typ.)	20A/115VAC	35A/230VAC	
	Leakage Current	<1mA/240VAC		
	Overload	105 ~ 130% rated output power		
Protection	Overload	Protection type: Constant current limiting, recovers automatically after fault condition is removed		
	Over Voltage	29 ~ 33V		
	Over Temperature	Shut down o/p voltage, re-power on to recover		
	Working Temp.	-20 ~ +70°C (Refer to "Derating Curve")		
Environment	Working Humidity	20 ~ 95% RH non-condensing		
	Storage Temp., Humidity	-40 ~ +85°C, 10 ~ 95% RH		
	Temp. Coefficient	±0.03%/°C (0 ~ 50°C)		
	Vibration	Component: 10 ~ 500Hz, 2G 10min./1 cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6		
Safety & EMC	Safety Standards	UL508, TUV BS EN62368-1, EAC TP TC 004 approved (meet BS EN/EN60204-1)		
	Withstand Voltage	I/P-O/P:3KVAC	I/P-FG:2KVAC	O/P-FG:0.5KVAC
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25°C / 70% RH		
	(Note.4) EMC Emission	Compliance to BS EN55022 (CISPR22), BS EN/EN61204-3 Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020		
	EMC Immunity	Compliance to BS EN/EN61000-4-2, 3, 4, 5, 6, 8, 11, BS EN/EN55024, BS EN/EN61000-6-2 (EN50082-2) (BS EN/EN50082-2), BS EN61204-3, heavy industry level, criteria A, EAC TP TC 020		
Others	MTBF	456.3K hrs min.	MIL-HDBK-217F (25°C)	
	Dimension	40 x 125.2 x 113.5mm (W x H x D)		
	Packing	06Kg; 20pcs/13Kg/1.16CUFT		
Note	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C ambient temperature.			
	2. Ripple and noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.			
	3. Tolerance: includes set up tolerance, line regulation and load regulation.			
	4. Derating may be needed under low input voltage. Please check the derating curve for more details.			
	5. Installation clearances: 40mm on top, 20mm on 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 is still meets EMC directives.			
	7. 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).			

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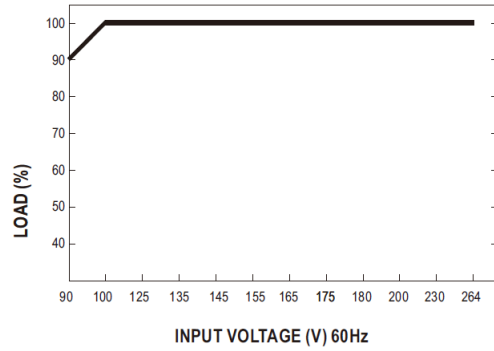
Block Diagram



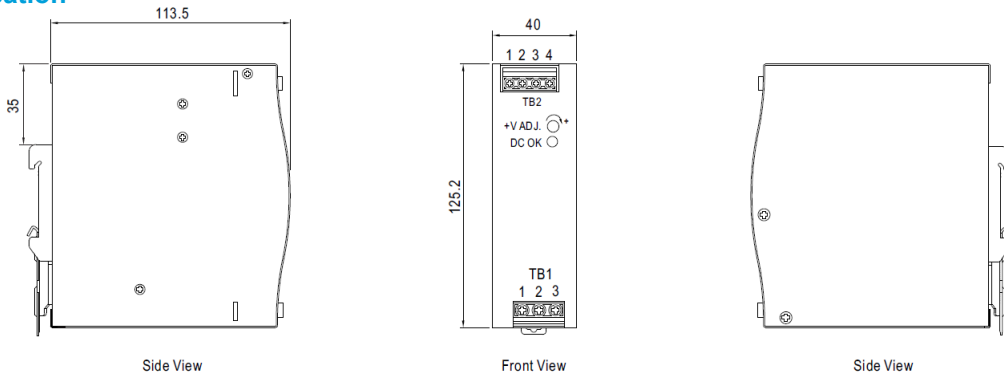
Derating Curve



Output Derating VS Input Voltage



Mechanical Specification



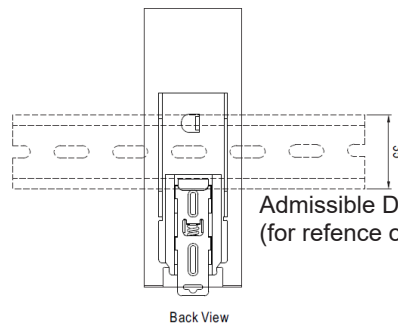
Terminal Pin No. Assignment (TB1)

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

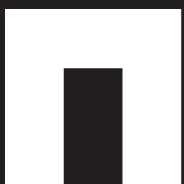
Terminal Pin No. Assignment (TB2)

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

Installation Instruction



Admissible Din-Rail: TS35/7.5 or TS35/15 (for reference only. Not included with unit)



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