



X0391 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.

X0391 is one economical slim 120W 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 adapts the full range AC input from 90VAC to 264VAC and conforms to EN61000-3-2.

X0391 is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 88.5%, the entire series can operate at the ambient temperature between -20°C and 60°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 make X0391 a very competitive power supply solution for industrial applications.

Features

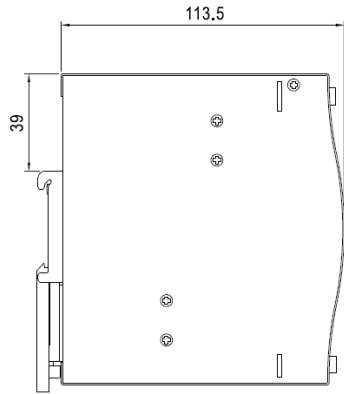
- Universal AC input/full range
- Protections: Short circuit/overload/over voltage/over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (Industrial control equipment) approved
- EN61000-6-2 (EN50082-2) industrial immunity level
- 100% full load burn-in test



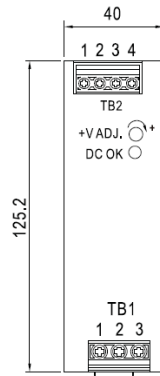
Specification

Output	DC Voltage	12V			
	Rated Current	10A			
	Current Range	0 ~ 10A			
	Rated Power	120W			
	Ripple & Noise (max.)	(Note.2)	100mVp-p		
	Voltage Adj. Range	12 ~ 14V			
	Voltage Tolerance	(Note.3)	±2.0%		
	Line Regulation	±0.5%			
	Load Regulation	±1.0%			
	Setup, Rise Time	1200ms, 60ms/230VAC	2500ms, 60ms/115VAC at full load		
Input	Hold Up Time (Typ.)	16ms/230VAC	10ms/115VAC at full load		
	Voltage Range	(Note.6)	90 ~ 264VAC	127 ~ 370VDC	
	Frequency Range	47 ~ 63Hz			
	Efficiency (Typ.)	85%			
	AC Current (Typ.)	2.25A/115VAC	1.3A/230VAC		
	Inrush Current (Typ.)	20A/115VAC	35A/230VAC		
	Leakage Current	<1mA/240VAC			
	Protection	Overload	105 ~ 130% rated output power		
		Over Voltage	Protection type: Constant current limiting, recovers automatically after fault correction is removed 14 ~ 17V		
		Over Temperature	Shut down o/p voltage, re-power on to recover		
Working Temp.		-20 ~ +60°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)			
Safety & EMC	Vibration	Component: 10 ~ 500Hz, 2G 10min./1 cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6			
	Safety Standards	UL508, TUV EN60950-1 approved			
	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 EN55022 (CISPR22) Class A, EN61000-3-2, -3		
EMC Immunity		Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, EN61000-6-2 (EN50082-2), heavy industry level, criteria A			
Others	MTBF	474.6K hrs min.	MIL-HDBK-217F (25°C)		
	Dimension	40 x 125.2 x 113.5mm (W x H x D)			
	Packing	0.6Kg; 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. 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.				
	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. Derating may be needed under low input voltage. Please check the derating curve for more details.				

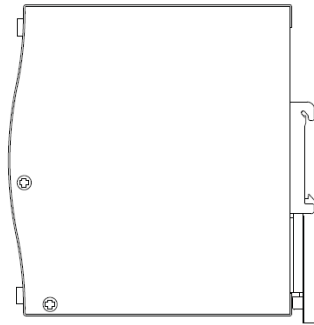
Power Supply - X0391



Side View



Front View



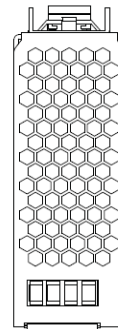
Side View

Terminal Pin No. Assignment (TB1)

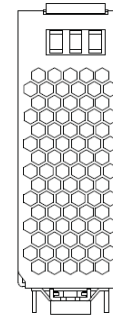
Pin No.	Assignment
1	FG \oplus
2	AC/N or DC-
3	AC/L or DC+

Terminal Pin No. Assignment (TB2)

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

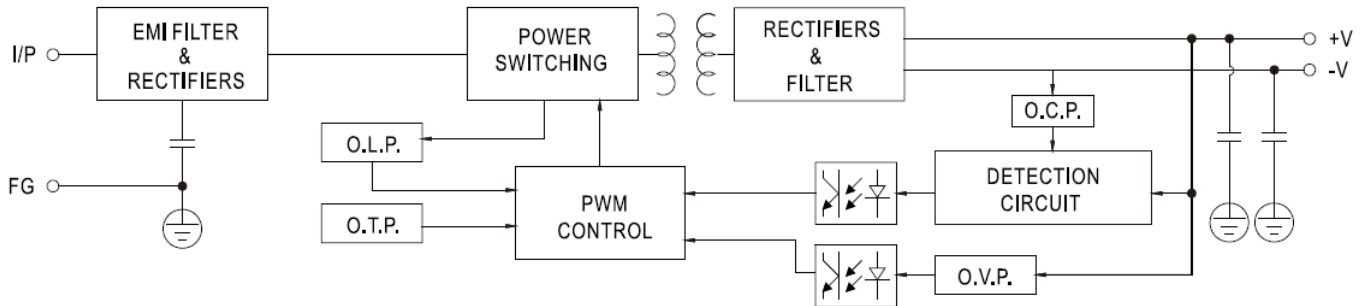


Top View

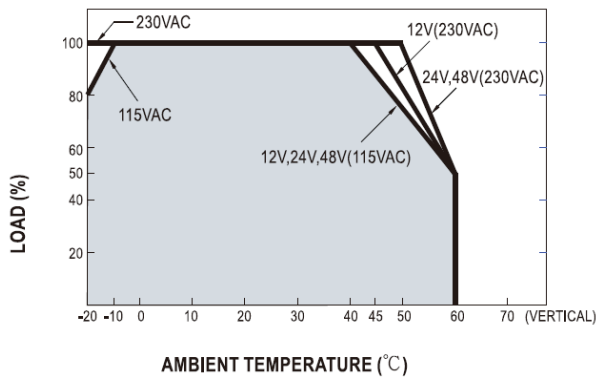


Bottom View

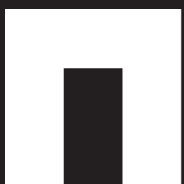
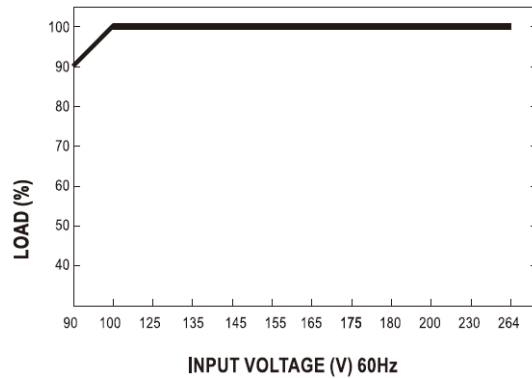
Block Diagram



Derating Curve



Static Characteristics



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