



# 120W Single Output Industrial DIN RAIL Power Supply

# WDR-120 series



### ■ Features :

- Single and two phase wide input range 180 ~ 550VAC
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Built-in constant current limiting circuit
- Can be installed on DIN rail TS-35/7.5 or 15
- UL508(industrial control equipment)approved
- EN61000-6-2(EN50082-2) industrial immunity level
- 100% full load burn-in test
- Built-in DC OK relay contact
- 3 years warranty

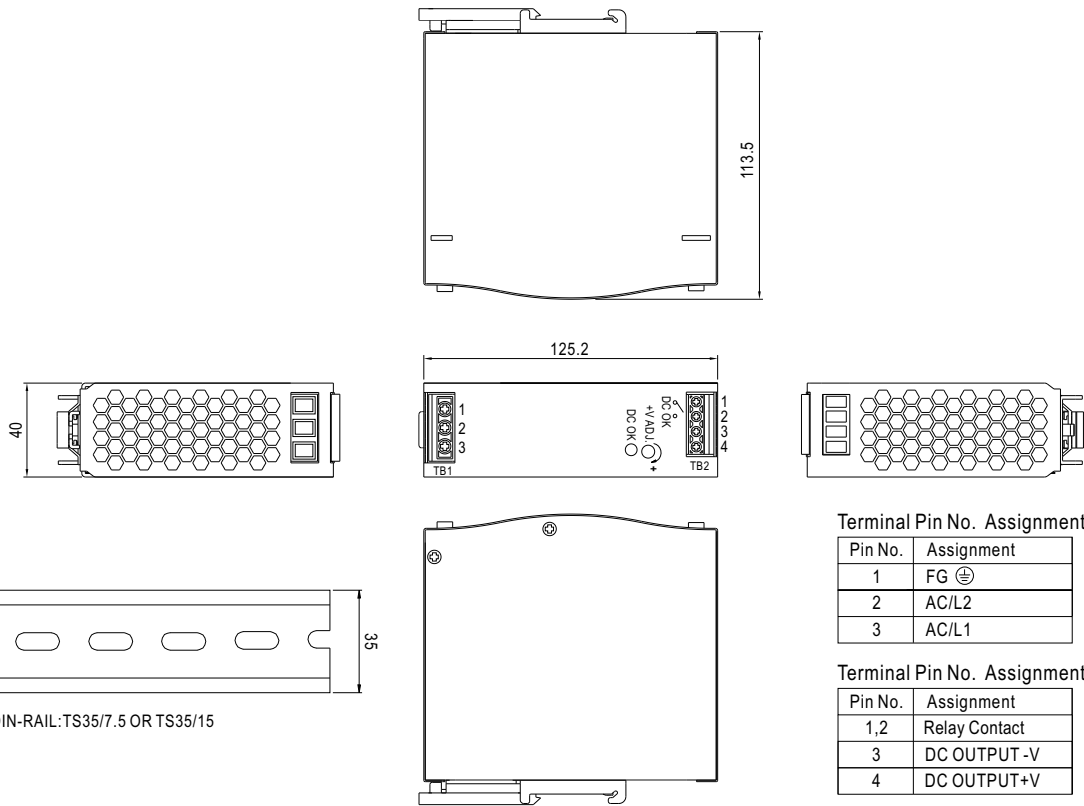


### SPECIFICATION

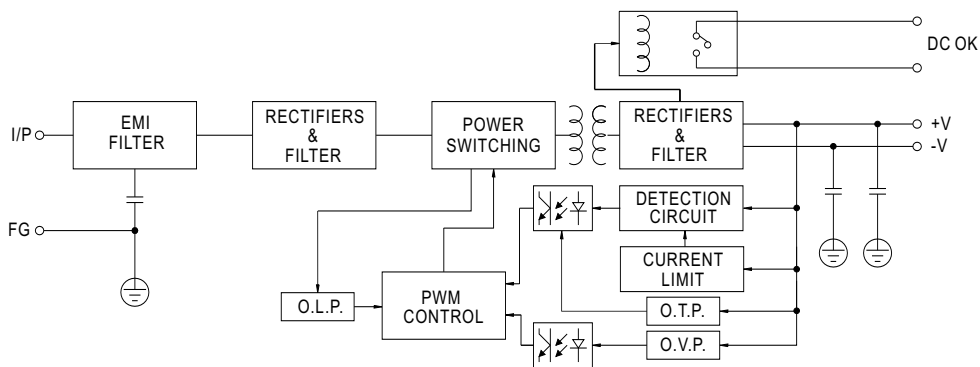
MODEL	WDR-120-12	WDR-120-24	WDR-120-48	
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	10A	5A	2.5A
	CURRENT RANGE	0 ~ 10A	0 ~ 5A	0 ~ 2.5A
	RATED POWER	120W	120W	120W
	RIPPLE & NOISE (max.) Note.2	120mVp-p	120mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 15V	24 ~ 29V	48 ~ 58V
	VOLTAGE TOLERANCE Note.3	±1.5%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±0.5%	±0.5%	±0.5%
SETUP, RISE, HOLD UP TIME	2000ms, 70ms, 50ms/400VAC      2000ms, 70ms, 10ms/230VAC at full load			
INPUT	VOLTAGE RANGE	180 ~ 550VAC      254 ~ 780VDC		
	FREQUENCY RANGE	47 ~ 63Hz		
	EFFICIENCY (Typ.)	89.5% / 400V	91% / 400V	92% / 400V
	AC CURRENT	0.55A/400VAC      1.2A/230VAC		
	INRUSH CURRENT (max.)	COLD START 50A		
	LEAKAGE CURRENT	<3.5mA / 530VAC		
PROTECTION	OVERLOAD	105 ~ 130% rated output power Protection type : Constant current limiting, recovers automatically after fault condition is removed		
	OVER VOLTAGE	16 ~ 18V	31 ~ 37V	60 ~ 67V
	OVER TEMPERATURE	105°C±5°C(12V),110°C±5°C(24V) (TSW1) detect on heatsink of power transistor ; 100°C±5°C(48V) (TSW1) detect on heatsink of power diode Protection type : Shut down o/p voltage, recovers automatically after temperature goes down		
FUNCTION	DC OK SIGNAL	Relay contact rating(max.) : 30V / 1A resistive		
ENVIRONMENT	WORKING TEMP.	-25 ~ +70°C (Refer to output load derating curve)		
	WORKING HUMIDITY	20 ~ 90% 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./1cycle, 60min. each along X, Y, Z axes; Mounting clip: Compliance to IEC60068-2-6		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508 approved, IEC60950-1 CB approved by SIQ, design refer to GL		
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC    I/P-FG:1.5KVAC    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		
	EMI CONDUCTION & RADIATION	Compliance to EN55011 (CISPR11), EN55022 (CISPR22), EN61204-3 Class B		
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, ENV50204, EN61204-3, EN61000-6-2 (EN50082-2), heavy industry level, criteria A		
OTHERS	MTBF	268Khrs min.    MIL-HDBK-217F (25°C)		
	DIMENSION	40*125.2*113.5mm (W*H*D)		
	PACKING	0.65Kg; 20pcs/14Kg/1.16CUFT		
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>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.</li> <li>5. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quick may lead to increase of the set up time.</li> </ol>			

### Mechanical Specification

Case No.992B Unit:mm



### Block Diagram

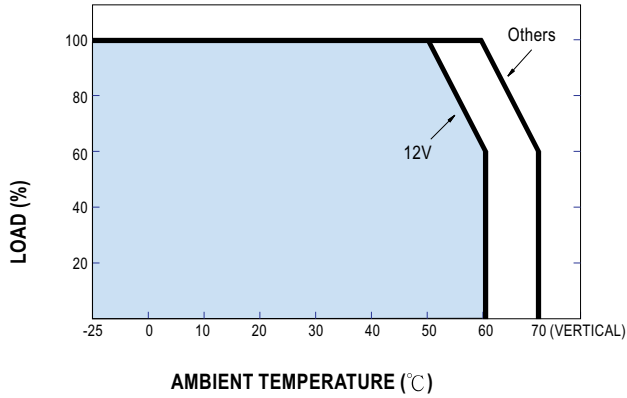


### DC OK Relay Contact

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



### Derating Curve



### Static Characteristics

