

# Schaltnetzteil 12VDC bis 48VDC-120W

# power supply 12VDC up to 48VDC-120W



### ■ Features :

- AC input range selectable by switch
- Protections: Short circuit/Over load/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
- LED indicator for power on
- 100% full load burn-in test
- Fixed switching frequency at 55KHz
- 3 years warranty



### SPECIFICATION

MODEL	DR-120-12	DR-120-24	DR-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	80mVp-p	80mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 14V	24 ~ 28V	48 ~ 53V
	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, HOLD TIME	500ms, 70ms, 30ms/230VAC      500ms, 70ms, 30ms/115VAC at full load			
INPUT	VOLTAGE RANGE	88 ~ 132VAC/176 ~ 264VAC by switch	254 ~ 370VDC	
	FREQUENCY RANGE	47 ~ 63Hz		
	EFFICIENCY (Typ.)	80%	84%	85%
	AC CURRENT	2.8A/115VAC      1.7A/230VAC		
	INRUSH CURRENT (max.)	COLD START 30A/115VAC      60A/230VAC		
LEAKAGE CURRENT	<3.5mA / 240VAC			
PROTECTION	OVER LOAD	105 ~ 150% of rate load Protection type : Constant current limiting, recovers automatically after fault condition is removed		
	OVER VOLTAGE	15 ~ 16.5V	29 ~ 33V	58 ~ 65V
	OVER TEMPERATURE	85°C ±5°C (TSW1)	90°C ±5°C (TSW1)	90°C ±5°C (TSW1)
	Protection type : Shut down o/p voltage, recovers automatically after temperature goes down			
ENVIRONMENT	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)		
	WORKING HUMIDITY	20 ~ 90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL508, UL60950-1, TUV EN60950 Approved		
	WITHSTAND VOLTAGE	I/P-O/P: 3KVAC    I/P-FG: 1.5KVAC    O/P-FG: 0.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500VDC		
	EMI CONDUCTION & RADIATION	Compliance to EN55011, EN55022 (CISPR22) Class B		
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3, Class A		
EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN50204, EN61000-6-2 (EN50082-2) Heavy industry level, criteria A			
OTHERS	MTBF	136.8Khrs min.    MIL-HDBK-217F (25°C)		
	DIMENSION	65.5*125.2*100mm (W*H*D)		
	PACKING	0.8Kg; 20pcs/16Kg/1.1CUFT		
NOTE	<ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC 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> </ol>			

# Schaltnetzteil

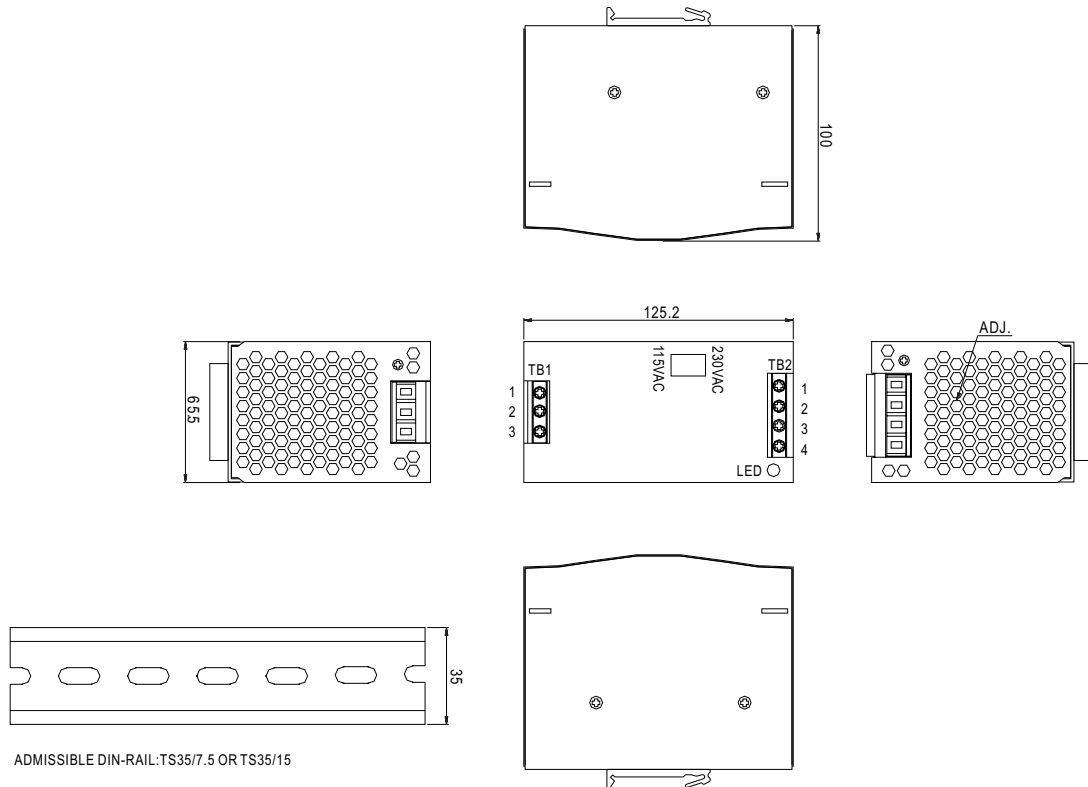
## 12VDC bis 48VDC-120W

# power supply

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### Mechanical Specification

Case No. 921 Unit:mm



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15

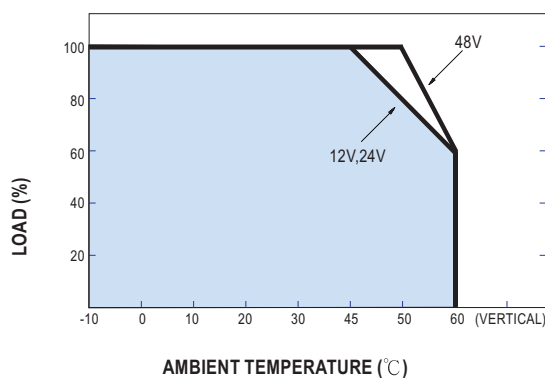
Terminal Pin. No Assignment (TB1)

Pin No.	Assignment
1	FG (⊕)
2	AC/N
3	AC/L

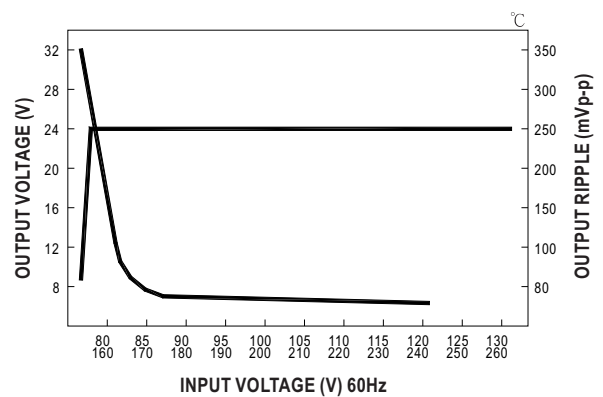
Terminal Pin. No Assignment (TB2)

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

### Output Derating



### Static Characteristics (24V)



# Schaltnetzteil

## 12VDC bis 48VDC-120W

# power supply

## 12VDC up to 48VDC-120W



### ■ 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

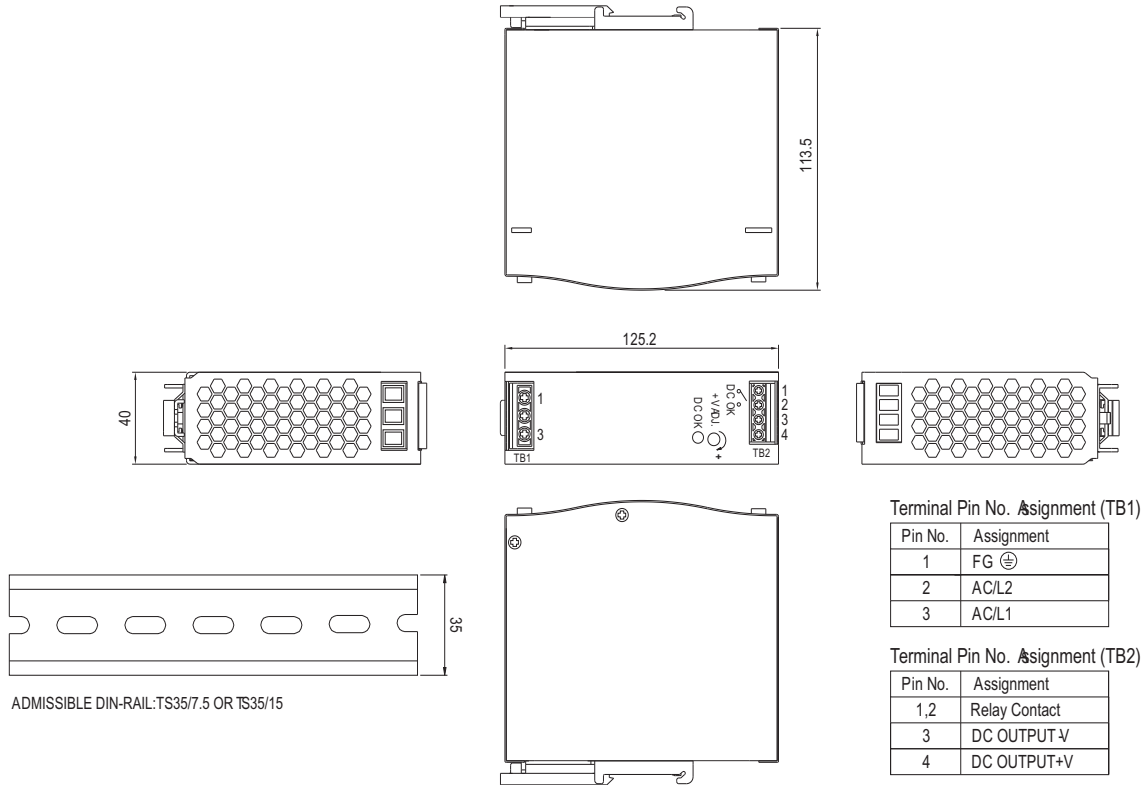
MODEL		WDR-120-12	WDR-120-24	WDR-120-48
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	10A	5A	2.5A
	CURRENT RANGE	0 ~ 10A	0 ~ 5 A	0 ~ 2.5A
	RATED POWER	120W	120 W	120W
	RIPPLE & NOISE (max.) Note.2	120mVp-p	120mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 15V	24 ~ 29V	48 ~ 58V
	VOLTAGE TOLERANCE Note.3	±1.5%	±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/230VA 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 STAR 50A		
LEAKAGE CURRENT	<3.5mA / 530 VAC			
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° (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 0,1~95% 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/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		
OTHERS	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		
	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 the set up time.</li> </ol>			

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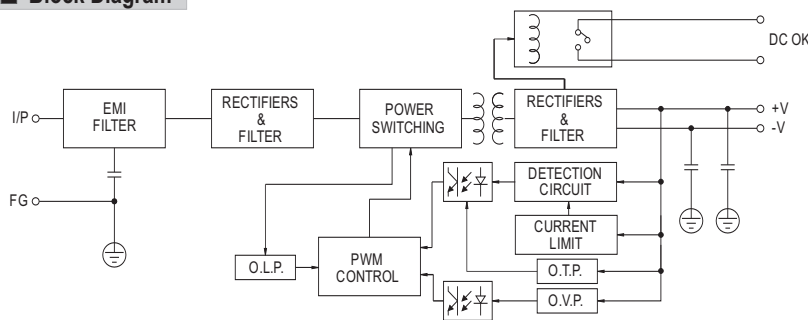
**power supply  
12VDC up to 48VDC-120W**

**Mechanical Specification**

Case No.992B Unit:mm



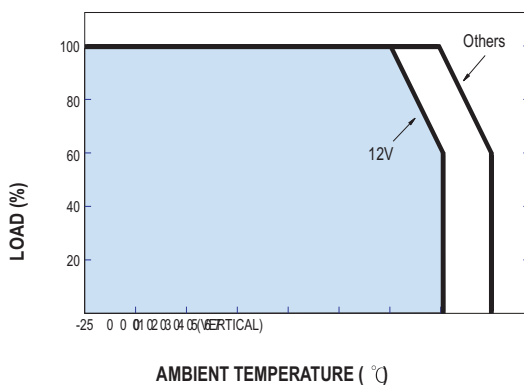
**Block Diagram**



**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**

