



E-Star Power Development Co., Ltd. (E-STAR)

1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City  
22069, Taiwan (R.O.C.)

Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

## 120W Din Rail power supply < EDR-120



### ■ 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
- 2 years warranty

### ■ Applications

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

### ■ Description

EDR-120 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 adopts the full range AC input from 90VAC to 264VAC and conforms to EN61000-3-2, the norm the European Union regulates for harmonic current.

EDR-120 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 (UL508, TUV EN62368-1, and etc.) make EDR-120 a very competitive power supply solution for industrial applications.

### ■ Model Encoding

EDR - 120 - 12

Output voltage

Output wattage

Series name



E-Star Power Development Co., Ltd. (E-STAR)  
1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City  
22069, Taiwan (R.O.C.)  
Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

### 120W Din Rail power supply < EDR-120

#### SPECIFICATION

MODEL		EDR-120-12		EDR-120-24	EDR-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.) <small>Note.2</small>	100mVp-p		120mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	12 ~ 14V		24 ~ 28V	48 ~ 55V
	VOLTAGE TOLERANCE <small>Note.3</small>	± 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	1200ms, 60ms/230VAC      2500ms, 60ms/115VAC at full load			
	HOLD UP TIME (Typ.)	16ms/230VAC      10ms/115VAC at full load			
INPUT	VOLTAGE RANGE <small>Note.6</small>	90 ~ 264VAC	127 ~ 370VDC	[DC input operation possible by connecting AC/L(+), AC/N(-)]	
	FREQUENCY RANGE	47 ~ 63Hz			
	EFFICIENCY (Typ.)	85%		87.5%	88.5%
	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 Protection type : Constant current limiting, recovers automatically after fault condition is removed			
	OVER VOLTAGE	14 ~ 17V		29 ~ 33V	56 ~ 65V
		Protection type : Shut down o/p voltage, re-power on to recover			
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover			
ENVIRONMENT	WORKING TEMP.	-20 ~ +60℃ (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 95% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH			
	TEMP. COEFFICIENT	± 0.03%/℃ (0 ~ 50℃ )			
	VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6			
SAFETY & EMC <small>(Note 4)</small>	SAFETY STANDARDS	UL508, TUV EN62368-1, EAC TP TC 004, BSMI CNS14336-1 approved;(meet 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℃ / 70% RH			
	EMC EMISSION	Compliance to EN55032 (CISPR32) Class A, EN61000-3-2,-3, EAC TP TC 020, CNS13438 Class A			
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), heavy industry level, criteria A, EAC TP TC 020			
OTHERS	MTBF	474.6K hrs min.      MIL-HDBK-217F (25℃)			
	DIMENSION	40*125.2*113.5mm (W*H*D)			
	PACKING	0.6Kg; 20pcs/13Kg/1.16CUFT			
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & 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. 7. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).				



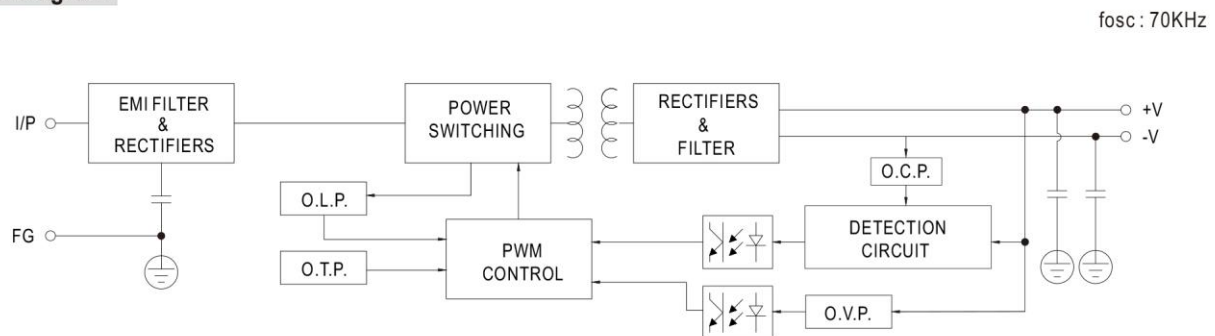
E-Star Power Development Co., Ltd. (E-STAR)

1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City  
22069, Taiwan (R.O.C.)

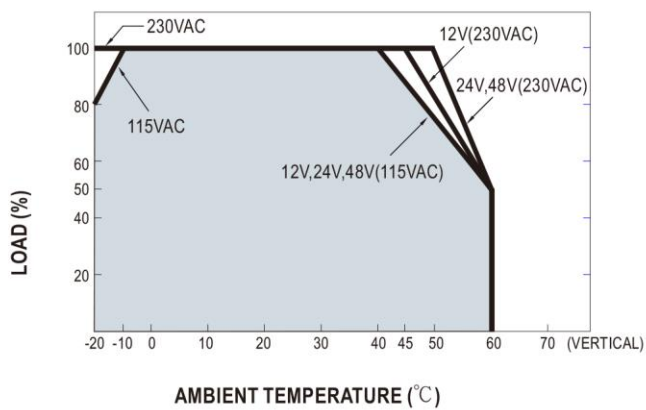
Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

## 120W Din Rail power supply < EDR-120

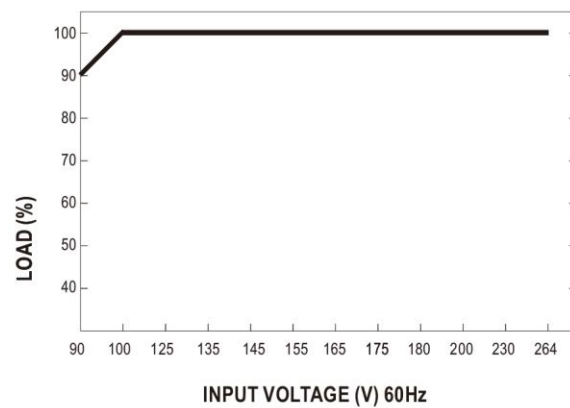
### ■ Block Diagram



### ■ Derating Curve



### ■ Static Characteristics





E-Star Power Development Co., Ltd. (E-STAR)

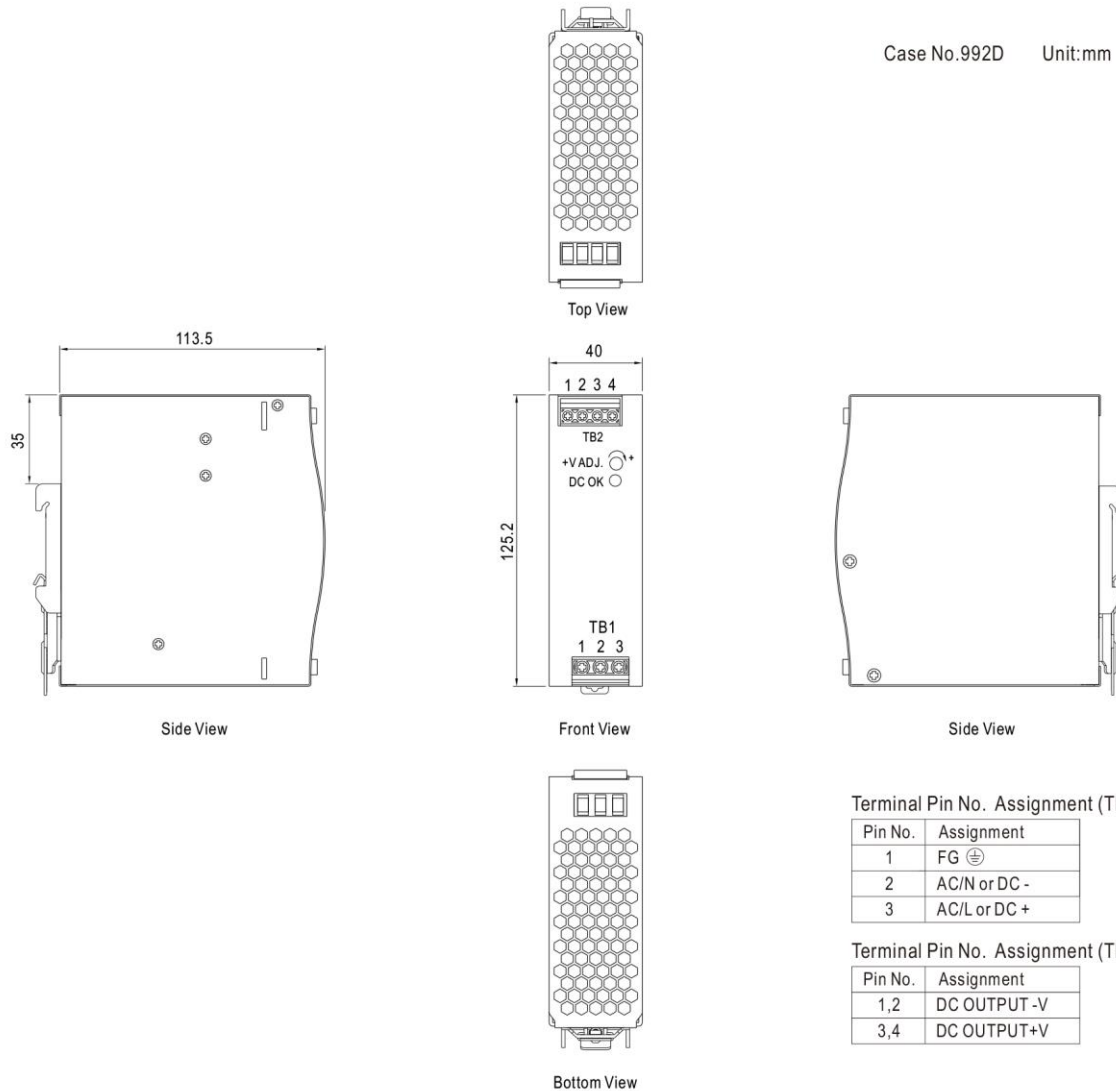
1F., No.40, Juren Ln., Sec. 2, Sanmin Rd., Banciao Dist., New Taipei City  
22069, Taiwan (R.O.C.)

Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

## 120W Din Rail power supply < EDR-120

### ■ Mechanical Specification

Case No.992D Unit:mm



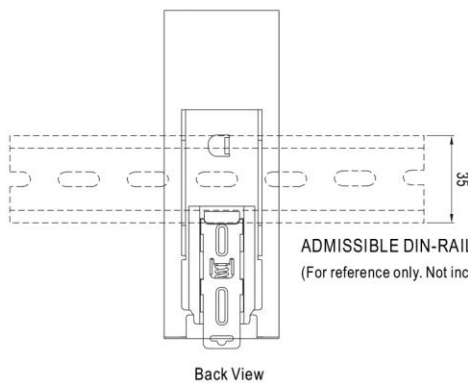
Terminal Pin No. Assignment (TB1)

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

### ■ Installation Instruction



ADMISSIBLE DIN-RAIL: TS35/7.5 OR TS35/15  
(For reference only. Not included with unit.)

This series fits DIN rail TS35/7.5 or TS35/15.  
For installation details, please refer to the Instruction manual.