DIN SERIES 120 WATT

SINGLE OUTPUT

AC/DC POWER SUPPLY
DIN RAIL MOUNTABLE

GENERAL SPECIFICATION

- COMPACT DESIGN
- HIGH EFFICIENCY UP TO 87%
- P.F.C. FUNCTION AVAILABLE **(OPTION)**
- PARALLEL MODELS AVAILABLE **(OPTION)**
- INPUT VOLTAGE 115/230VAC SELECTABLE

SELECTION CHART

DINz120---SX-F-P-CF

* **F with PFC function**
* **P with parallel function**
* **Z=A Screw Terminal**
* **Z=B Detachable Connector**

1) INPUT

Description	Min.	Max.	Condition
Rated Input Voltage(VAC)	115/230VAC(Selectable)		Io nom
Input voltage range AC IN(115 VAC Selected) AC IN(230 VAC Selected) DC IN(230 VDC Selected Only)	 93 86 210	 132 264 370	Ta min…Ta max, Io nom
Line Frequency(Hz)	47	63	Vi nom, Io nom
Inrush current(A) Vi :115VAC Vi : 230VAC		 24 48	Vi nom, Io nom
P. F. C. **(optional)**	0.7		Vi : 230VAC, Io nom

2) OUTPUT

MODEL NO.	OUTPUT VOLTAGE	OUTPUT CURRENT	EFFICIENCY (typ.)
DINz120-12SX-F-P-CF	+12VDC	10A	84%
DINz120-24SX-F-P-CF	+24VDC	5A	86%
DINz120-48SX-F-P-CF	+48VDC	2.5A	87%

ETA-USA
HIGH QUALITY SWITCHING POWER SUPPLIES
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Hold up time:(Vi nom, Io nom)	Vi=115 VAC	25mS, min.	
	Vi=230VAC	30mS, min.	
Output voltage accuracy (Vi nom, Io nom) (Adjusted before shipment)			-0~+1%
Voltage trim range:(Vi nom, Io nom)	12V model	11.4~14.5VDC	
(N/A foe parallel models. Output voltage is fixed in house. Cannot be trimmed by user)	24V models	22.5~30VDC	
	48V model	45~55VDC	
Minimum load(Vi nom)			5% min.
Line regulation (Io nom, Vi min ...Vi max)			±0.5% max.
Load regulation(Vi nom, Io min ...Io nom)		non-parallel models	±1% max.
		parallel models	±5% max.
Ripple and noise:(Vi nom, Io nom,BW = 20MHz)			50mV max.
Temperature coefficient (Vi nom, Io min)			±0.3%/°C
Switching frequency(Vi nom, Io nom)			80kHz, min.
DC ON indicator (Vi nom, Io nom)			
Threshold at start up	12V model	10~11VDC	
	24V models	21~22VDC	
	48V model	42~44VDC	
DC LOW indicator (Vi nom, Io nom)			
Threshold after start up	12V model	10~11.2VDC	
	24V models	20.5~22.5VDC	
	48V model	41~45VDC	
Isolation voltage(Input/Output)			3000VAC, min.
Isolation resistance: (Input / Output @ 500VDC,min.)			100MΩ,min.
Parallel opration	For parallel models only		3 unit, max.

3) ENVIRONMENT(Operating at Vi nom, Io nom):

Operating Temperature(70 to 100%)	-10°C to +50°C	
Derating(+51 to +71°C)	1.5% / °C, max.	
Storage Temperature	-25°C to +85°C	
Relative humidity	*20*~95 % R H	
Cooling	Free-air convection	
MTBF	According to MIL-HDBK-217F, GF40	200,000 Hrs, typ.

4) MECHANICAL DRAWING

Case Material……..…..…..... Metal

Dimensions(mm):

Screw terminal type……..…… L125 x W63.5 x D126

Detachable connector type…….. ..L142 x W63.5 x D126

5) CONTROL AND PROTECTION

Input fuse	T4A / 250VAC internal
Rated over load protection(Vi nom)	105% ~ 125%
Output short circuit(Vi nom, Io nom)	Current Limited
Over Voltage Protection(Vi nom, Io nom)	125~145%
Power Rdy (24V model only) (Threshold)	
Threshold voltage of contact closed(at start up)	21.1~23.1 VDC
Threshold voltage of contact open(after start up)	20.6~19.0 VDC
Electrical Isolation	500VDC, min.
Contact rating at 60VDC	0.3A, max.

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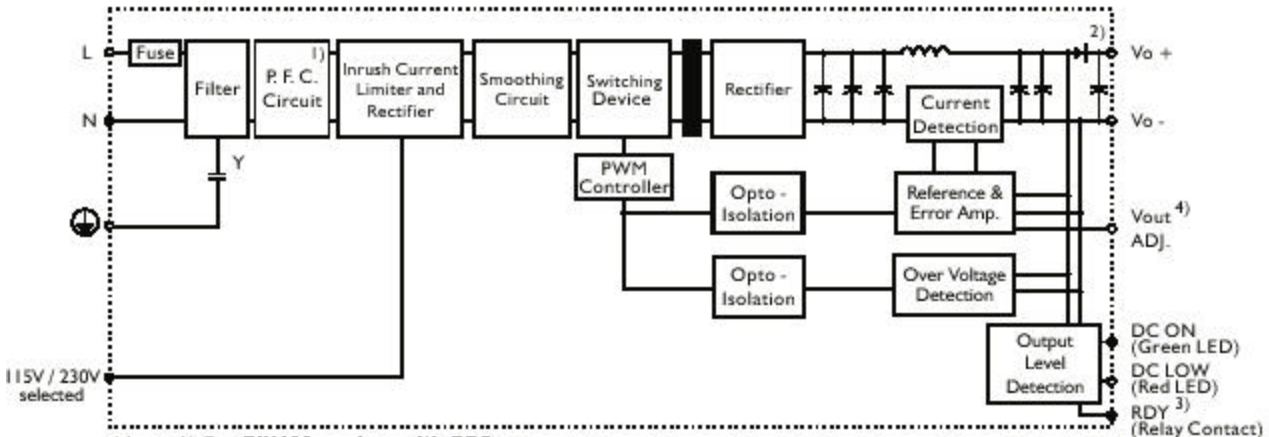
6) APPROVAL AND STANDARDS

All specifications typical at nominal line, full load, 25°C unless otherwise noticed

UL / cUL	UL508 Listed
TUV	EN60950
CE	EN50081-1
	EN61000-4-2,EN61000-4-3,EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8

7) CIRCUIT SCHEMATIC

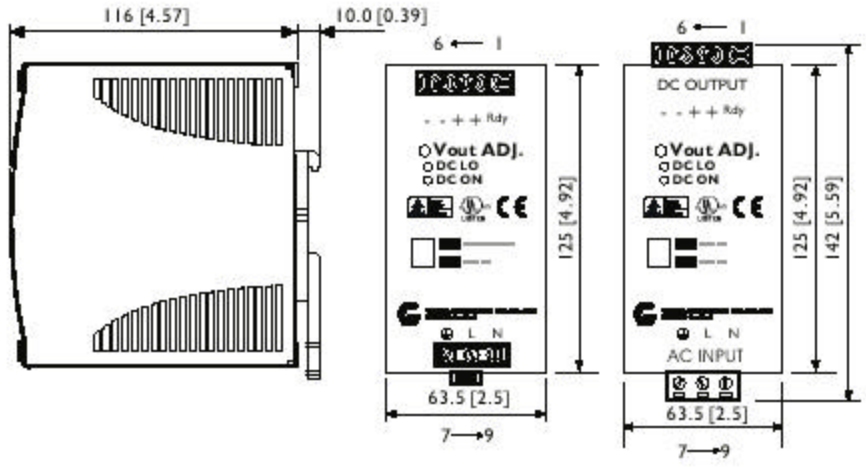
• Block diagram



Note: 1) For **DIN120 series with PFC**
2) For **DIN120 series with PARALLEL functionality**
3) For 24V Model Only
4) N / A For **DIN120 series with PARALLEL functionality**

8) MECHANISM & PIN CONFIGURATION

mm [inch]



CONSTRUCTION

Easy snap-on mounting onto the DIN-Rail (TS35/7.5 or TS35/15), unit sits safely and firmly on the rail.

INSTALLATION

Ventilation / Cooling
Normal convection
Above/below 25m/m free space
For cooling recommended
Connector size range
Screw terminal:
10-24AWG flexible / solid cable,
8 m/m stripping at cable end recommends
Detachable connector:
14-24AWG flexible / solid cable,
7 m/m stripping at cable end recommends

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9) PHYSICAL CHARACTERISTICS

CASE SIZE
SCREW TERMINAL TYPE…….. 125 x 63.5 x 126 mm 4.92 x 2.5 x 4.96 inches
DETACHABLE CONNECTOR TYPE……142 x 63.5 x 126 mm 5.59 x2.5 x 4.96 inches

WEIGHT
P.F.C TYPE……860 g
NONE P.F.C TYPE……640 g

10)PIN ASSIGNMENT

PIN NO.	Designation		Description
1	OUT	RDY	A normal open relay contact for DC ON level control
2			(Never connect except 24V model)
3		V +	Positive output terminal
4		V +	Positive output terminal
5		V -	Negative output terminal
6		V -	Negative output terminal
7	IN	⏚	Ground this terminal to minimize high-frequency emissions
8		L	Input terminals (phase conductor, no polarity at DC input)
9		N	Input terminals (neutral conductor, no polarity at DC input)
	OTHER	DC ON	Operation indicator LED
		DC LO	DC LOW voltage indicator LED
		Vout ADJ.	Trimmer-potentiometer for Vout adjustment (for non - parallel model only)
		115 / 230	Input voltage selection switch

11) DERATING CURVE