

# RS PRO Din rail power supply

RS Stock No.: 2211856



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

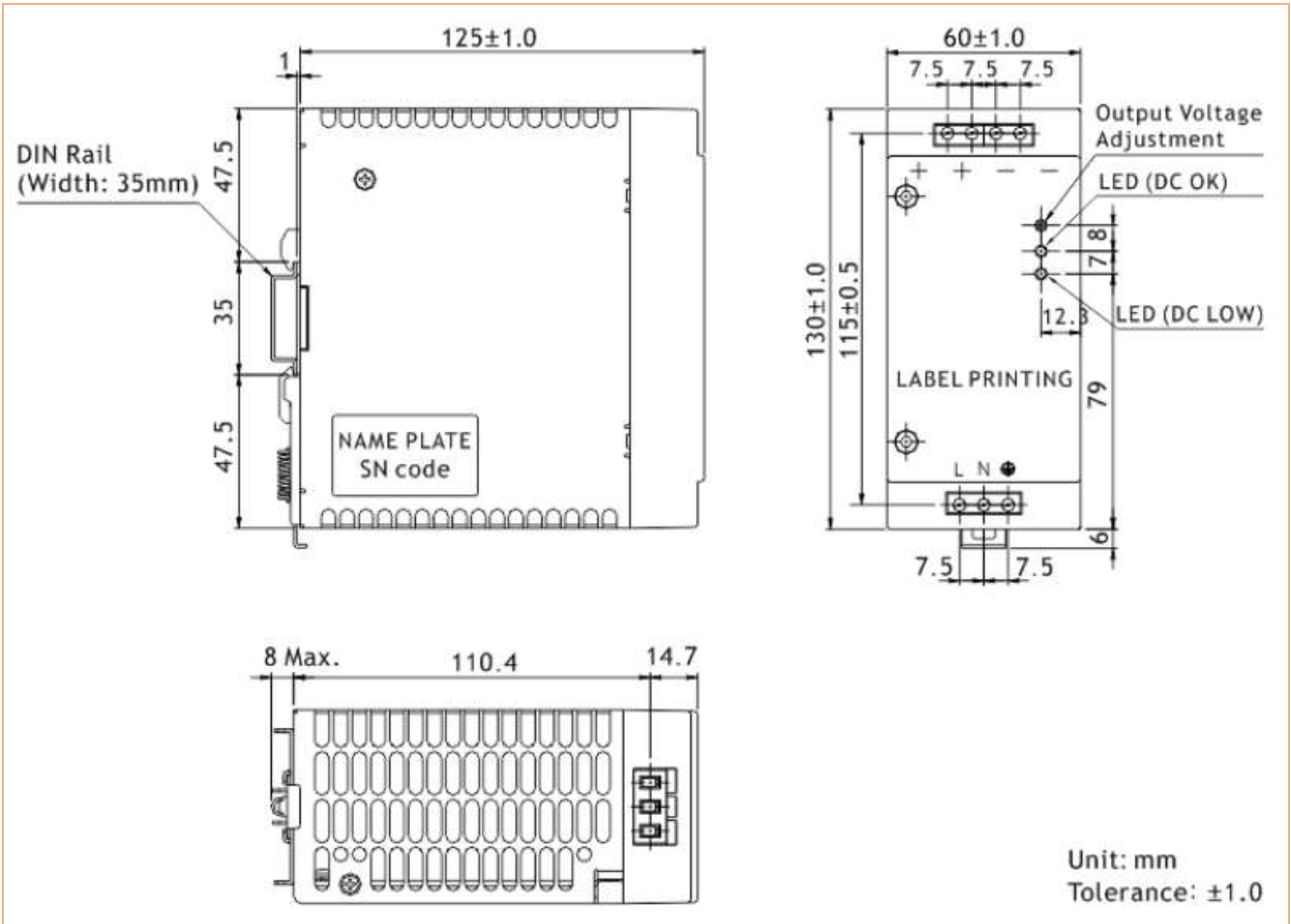
### Product Description

- 3 Year Warranty
- Universal Input 90-264Vac
- 100% Full Load Burn-in Test
- Cooling by free air Convection
- All Round protections: Short Circuit, Over Voltage, Over Current, Over Temperature
- LED Indicator for dc power on
- LED Indicator for dc low


### General Specifications

Part Number	Nominal Input Voltage	Output Voltage	Output Current	Ripple (Max.)	Efficiency		Certificate
					Min	Myp	
2211856	100-240Vac	24V	20A	1%VomVp-p	93%	94%	CE,FCC,CB,UL,CUL
IS480-48	100-240Vac	48V	10A	1%VomVp-p	93%	94%	CE,FCC,CB,UL,CUL

**Mechanical Specifications**





Marking	No.	Assignment
+	1	DC(+) Output Terminal
+	2	
-	3	DC(-) Output Terminal
-	4	
L	5	AC(L) Input Terminal
N	6	AC(N) Input Terminal
	7	AC Grounding Terminal
V-ADJ.	/	DC Output voltage adjustment trimmer
DC OK	/	DC Output OK indication LED(Green)
DC LOW	/	DC Output Low indication LED(Red)

### Electrical Specifications

<b>INPUT</b>				
PARAMETER	CONDITIONS	MIN MAX	TYP	UNITS
Input voltage		90 264		Vac
Input frequency		47 63		Hz
Input current	Full load. $v_{in}=115V_{ac}$ Full load. $v_{in}=230V_{ac}$	5 2.5		A A
Inrush current	Cold start. $v_{in}=115V_{ac}$ cold start. $V_{in}=230V_{ac}$	40 80		A A
	1. This product is built in inrush limiting circuit to protect the circuit from surge current damages when the power is turned on. Malfunction sufficient interval should be g/tt voltage on and off rapidly. Therefore can occur by repeating the inp en between turning on and off the power,			

## Din rail power supplies

	2. To avoid connecting the switch or fuse to input terminal (outside of the power supply) , more consideration should be given when selecting the parts that can endure the inrush current		
Power factor (PF)	Full load. Vin=115Vac Full load. Vin=230vac	0.99 0.97	
Stand-by power consumption	Vin=230Vac	5	W
Surge voltage	L-N	2	KV

### OUTPUT

PARAMETER	CONDITIONS	MIN MAX	TYP	UNITS
Output voltage accuracy		2		%

Output voltage adjustment range	2211856	22-27		V
	IS480-48	42-52		V
Output voltage can be adjusted within above range by v-ADJ variable resistance inside of the power supply. when output voltage exceeds the range, the power supply will be in failure or get into over voltage protection mode. To avoid the case that the output voltage is higher than rated voltage output current should be used under rated current				
Minimum load		0		%
Line regulation	Vin from 100Vac to 240Vac	2		%
Load regulation	Vout from min to max	3		%
Turn-on delay time	Full load, vin=115Vac	3600		Ms
Hold up time	Full load. vin=115Vac	20		Ms

### Environment

PARAMETER	CONDITIONS	MIN MAX	TYP	UNITS
Ambient operating temperature	startup at rated voltage	-25 +70		°C
Operating relative humidity	Non condensing	20 95		%
storage temperature	Humidity 5~95% RH	-40 +85		°C
MTBF	Fult load, 220Vac input. 25°C ambient temperature	230		Khrs
DC-OK led	LED (Gree) DC OK LED tight wiit be oN when property operat			
DC-Low led	LED (Red) DC Low LED Light wilt be ON : (1) when output voltage is below 85% ( $\pm 2.53$ ) from the rated utput voltage : (2) when get over voltage, over current, over temperature and ort cireuit fault			
Colling	Free air convection			
Mounting method	Vertical			
Dimension (W*H*D)	60.0*130.0*125.0 (2.36*5.12*4.92inch)			
weight	1000g			
packing	11pcs/12.5kg/0.7cuft/carton Carton size 620*260*175mm(L*W*H)			

### Safety/MEC

Isolation voltage	I/P. 0/P:3Kvac, I/P-FG:1.5KVac, 0/P-FG:0.5KVac			
Insulation resistance	Design refer to UL/CUL 62368-1			
EMC	EN55032:2015 EN61000-3-2:2014 (IEC61000-3-2:2014) EN61000-3-3:2013 (IEc61000-3-3:2013)			

	EN55024:2010+A1:2015
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### Protection Category

Short circuit	Hiccuo mode, it will recover automatically after fault condition is removed
Over voltage	2211856 : over voltage protection value 32V IS480-48 : over voltage protection value 62V
	(1) When output voltage exceeds above over voltage protection value or reversal voltage occurs, the protection will be started and the output voltage will be cut off in order to protect the power supply ; (2) The power supply will recover after the power is turned on again
Over current	2211856 : over current protection value 30A IS480-48 : over current protection value 15A
	(1) When output voltage exceeds above over current protection value, the protection will be started and the output voltage will be cut off in order to protect the power supply

## Din rail power supplies

	(2) The power supply will recover automatically after the fault condition is removed
Over temperature	Over temperature protection value : $110 \pm 10^{\circ} \text{C}$
	(1) When the ambient temperature exceeds above over temperature protection value, the protection will be started and go into hiccup mode ; (2) The power supply will recover automatically after the fault condition is

### Additional Information

<b>EAN</b>	8000126233360
<b>Custom Tariff Number</b>	85371098

### Classification

<b>eCl@ss</b> (Version)	
<b>UNSPSC</b> (Version)	

### Approvals

<b>Declarations</b>	MFR Declaration of Conformity
<b>Hazardous Area Certification</b>	ATEX / IECEx
<b>Standards Met</b>	CE, FCC, CB, UL

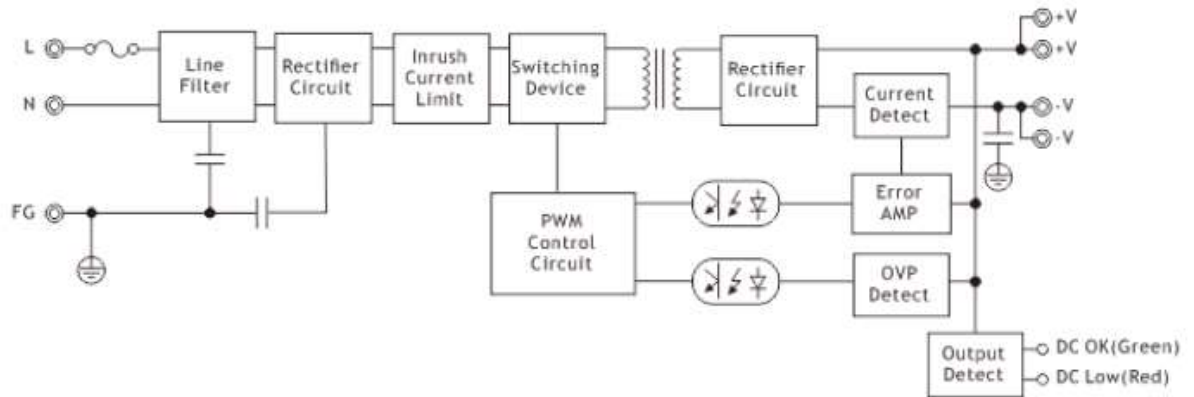
### Similar Products

Stock No.	Brand	Product Name	Attribute 1	Attribute 2	Attribute 3
2211856	RS PRO				
IS480-48	RS PRO				

Connection Diagrams Accessories

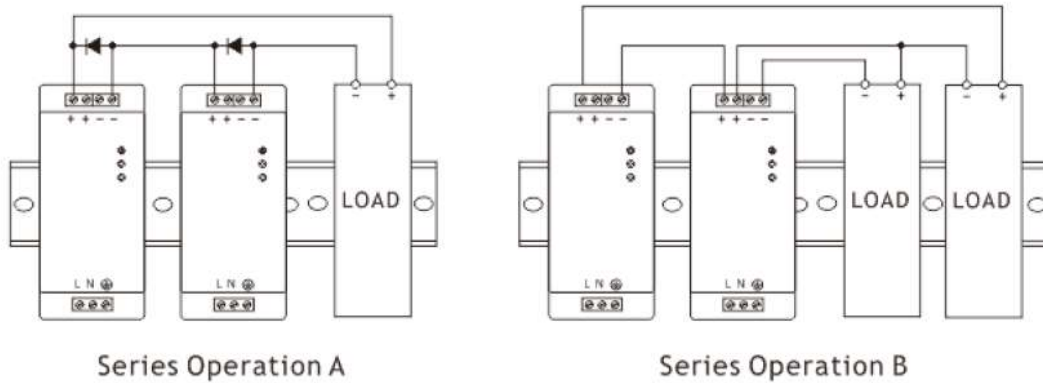


## Block Diagram



## Application Note

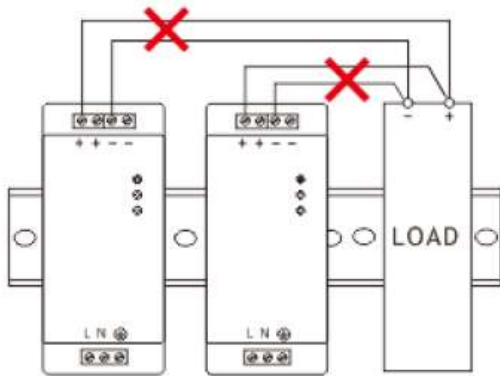
### 1. Series Operation



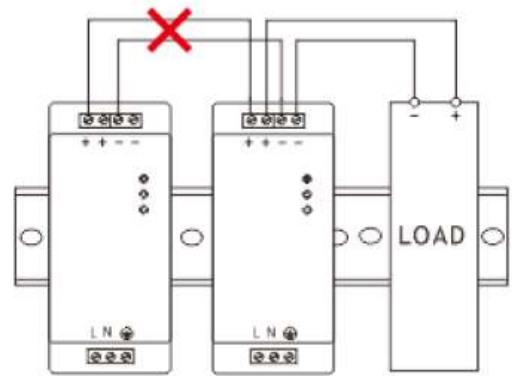
Note:

1. Series operation can be connected as shown in above;
2. Load current should be less than the current value of the product with the lowest output current specified at the product specification with the power supply at series connection.

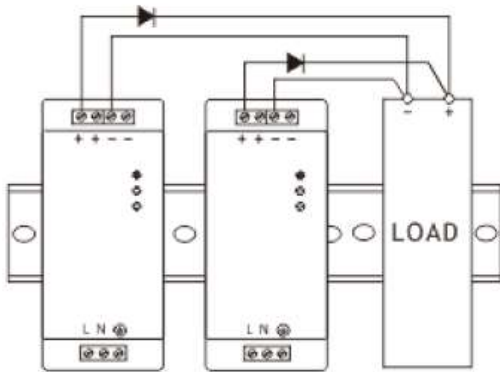
## 2. Parallel Operation



Parallel Operation A  
(Unable to use)

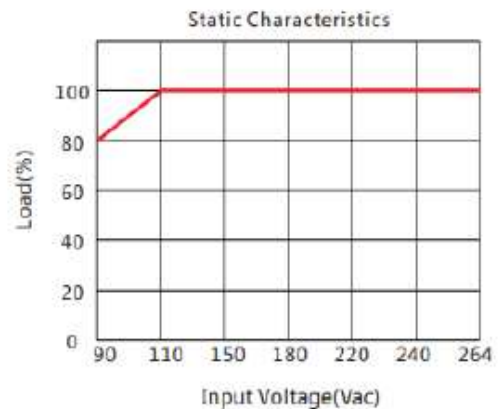
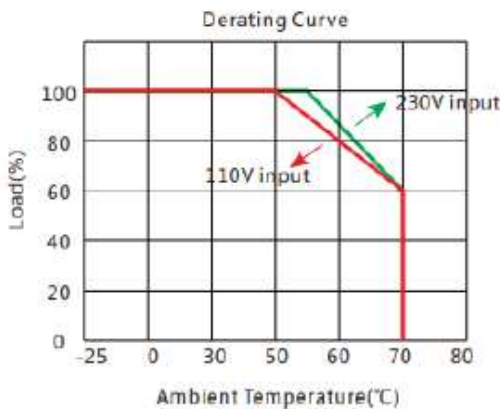


Parallel Operation B  
(Unable to use)



Parallel Operation C  
(Backup)

## Electrical Curve

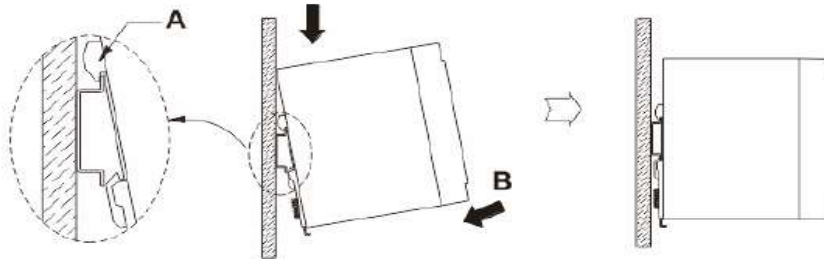


## Application Note

### 3. Mounting Method

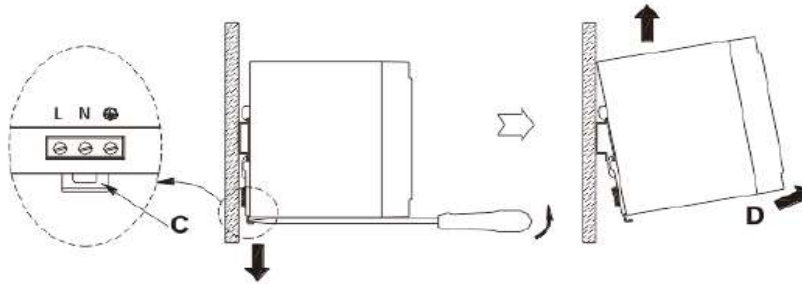
#### (1) How to fix

Firstly hang A part on the top of Rail as shown in below, then push the power supply into B direction to fix it.



#### (2) How to remove

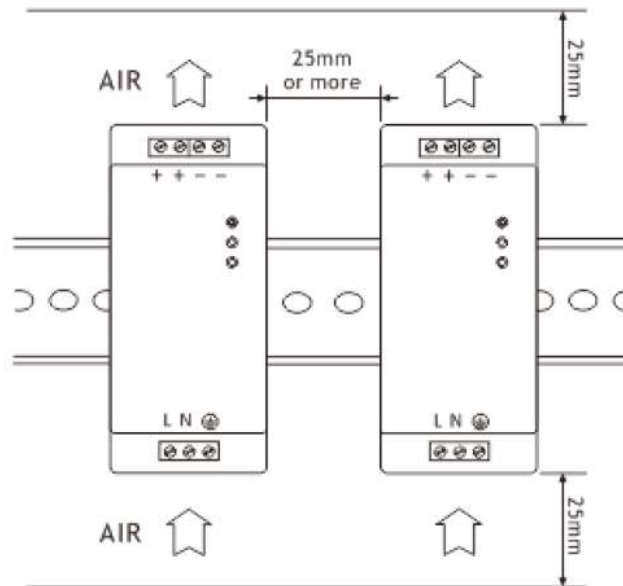
Remove the power supply to D direction, pulling C part by using tools, such as a screwdriver, to downward direction.



### 3. Mounting Method

#### (3) Mounting Spacing

Mounting method should be considered with airflow. Leave enough space between the units when several units are mounted together. Forced air cooling makes protection against heat better.



## Din rail power supplies

### 4. Cautions

- (1) Please confirm if the capacity of the product is suitable for your intended application before putting it in use
- (2) Only the rated input voltage specified on the product should be used
- (3) Only the wires with rated capacity should be connected to this product, as allowable voltage and current is varied according to each type of wire;
- (4) Ground terminal of the power supply must be grounded before use to prevent electric shock or electromagnetic interference;
- (5) Be cautious to keep the product clean as foreign matter near the input and output terminal or inside if the product could cause serious damages
- (6) If a fuse installed in the product blows off, the product should experience damages not only to the fuse but also to other parts as well. therefore, the product is to be required for maintenance work from customer service department as well as replacement of the fuse
- (7) Due to constant leakage current flows within the product, extra caution should be made if multiple number of products are used connecting to each other as total leakage current could be amounted beyond the capacity;
- 8) Be sure to avoid any physical contact with the product since some of the parts inside of the product are being functioned at high voltage, which could cause serious electric shock;
- (9) For the purpose of safety as well as reliability of the product, please avoid using the product at the following sites  
A place near water or fire  
A place with high room temperature and poor ventilation  
A place with a presence of foreign subject or dust  
A place near volatile or flammable compounds  
A place with high humidity  
A place vulnerable for vibration or shock
- (10) Do not inspect or repair the product while the power is applied
- (11) Unauthorized modification should be avoided in order to prevent serious injury or physical loss due to any malfunction;
- (12) In case of power outage while in operation, be sure to turn off the power supply.