

■ Features

- Wide Input voltage range (2:1/4:1)
- Typical efficiency is 85%
- Switch frequency: 300KHz
- Output over current protect, short circuit protection
- Input under voltage protection
- Input-output isolated
- PCB Board in-line type installs
- High reliability
- Optional heat Sink
- 3-year warranty



\*Product images are for illustrative purposes only and may vary from actual design.

■ Model List\*(See part number scheme for model number details)

Model Number	Input Voltage Range	Output Power	Output Voltage	Output Current Min.	Output Current Max.	Efficiency
SPDCE100-012-10331	12V(9-18V)	100W	3.3V	20000mA	20000mA	85%
SPDCE100-012-10501	12V(9-18V)	100W	5V	20000mA	20000mA	85%
SPDCE100-012-11201	12V(9-18V)	100W	12V	8300mA	8300mA	85%
SPDCE100-012-11501	12V(9-18V)	100W	15V	6700mA	6700mA	85%
SPDCE100-012-12401	12V(9-18V)	100W	24V	4200mA	4200mA	85%
SPDCE100-012-12801	12V(9-18V)	100W	28V	3600mA	3600mA	85%
SPDCE100-012-13601	12V(9-18V)	100W	36V	2800mA	2800mA	85%
SPDCE100-012-14801	12V(9-18V)	100W	48V	2100mA	2100mA	85%
SPDCE100-018-10331	18V(9-36V)	100W	3.3V	20000mA	20000mA	85%
SPDCE100-018-10501	18V(9-36V)	100W	5V	20000mA	20000mA	85%
SPDCE100-018-11201	18V(9-36V)	100W	12V	8300mA	8300mA	85%
SPDCE100-018-11501	18V(9-36V)	100W	15V	6700mA	6700mA	85%
SPDCE100-018-12401	18V(9-36V)	100W	24V	4200mA	4200mA	85%
SPDCE100-018-12801	18V(9-36V)	100W	28V	3600mA	3600mA	85%
SPDCE100-018-13601	18V(9-36V)	100W	36V	2800mA	2800mA	85%
SPDCE100-018-14801	18V(9-36V)	100W	48V	2100mA	2100mA	85%
SPDCE100-024-10331	24V(18-36V)	100W	3.3V	20000mA	20000mA	85%
SPDCE100-024-10501	24V(18-36V)	100W	5V	20000mA	20000mA	85%
SPDCE100-024-11201	24V(18-36V)	100W	12V	8300mA	8300mA	85%
SPDCE100-024-11501	24V(18-36V)	100W	15V	6700mA	6700mA	85%
SPDCE100-024-11801	24V(18-36V)	100W	18V	5600mA	5600mA	85%
SPDCE100-024-11851	24V(18-36V)	100W	18.5V	5400mA	5400mA	85%
SPDCE100-024-11901	24V(18-36V)	100W	19V	5260mA	5260mA	85%

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Model Number	Input Voltage Range	Output Power	Output Voltage	Output Current Min.	Output Current Max.	Efficiency
SPDCE100-024-12401	24V(18-36V)	100W	24V	4200mA	4200mA	85%
SPDCE100-024-12801	24V(18-36V)	100W	28V	3600mA	3600mA	85%
SPDCE100-024-13601	24V(18-36V)	100W	36V	2780mA	2780mA	85%
SPDCE100-024-14801	24V(18-36V)	100W	48V	2100mA	2100mA	85%
SPDCE100-036-10501	36V(18-72V)	100W	5V	20000mA	20000mA	85%
SPDCE100-036-11201	36V(18-72V)	100W	12V	8300mA	8300mA	85%
SPDCE100-036-11501	36V(18-72V)	100W	15V	6700mA	6700mA	85%
SPDCE100-036-12401	36V(18-72V)	100W	24V	4200mA	4200mA	85%
SPDCE100-036-12801	36V(18-72V)	100W	28V	3600mA	3600mA	85%
SPDCE100-036-14801	36V(18-72V)	100W	48V	2100mA	2100mA	85%
SPDCE100-036-14801	48V(36-72V)	100W	3.3V	20000mA	20000mA	85%
SPDCE100-048-10501	48V(36-72V)	100W	5V	20000mA	20000mA	85%
SPDCE100-048-11201	48V(36-72V)	100W	12V	8300mA	8300mA	85%
SPDCE100-048-11501	48V(36-72V)	100W	15V	6700mA	6700mA	85%
SPDCE100-048-11801	48V(36-72V)	100W	18V	5600mA	5600mA	85%
SPDCE100-048-12401	48V(36-72V)	100W	24V	4200mA	4200mA	85%
SPDCE100-048-12801	48V(36-72V)	100W	28V	3600mA	3600mA	85%
SPDCE100-048-13601	48V(36-72V)	100W	36V	2780mA	2780mA	85%
SPDCE100-048-14801	48V(36-72V)	100W	48V	2100mA	2100mA	85%
SPDCE100-110-10331	110V(72-144V)	100W	3.3V	20000mA	20000mA	85%
SPDCE100-110-10501	110V(72-144V)	100W	5V	20000mA	20000mA	85%
SPDCE100-110-11201	110V(72-144V)	100W	12V	8300mA	8300mA	85%
SPDCE100-110-11501	110V(72-144V)	100W	15V	6700mA	6700mA	85%
SPDCE100-110-11801	110V(72-144V)	100W	18V	5600mA	5600mA	85%
SPDCE100-110-12401	110V(72-144V)	100W	24V	4200mA	4200mA	85%
SPDCE100-110-12801	110V(72-144V)	100W	28V	3600mA	3600mA	85%
SPDCE100-110-13601	110V(72-144V)	100W	36V	2800mA	2800mA	85%
SPDCE100-110-14801	110V(72-144V)	100W	48V	2100mA	2100mA	85%

**■ Technical Data**

Input Features	Test condition	Notes
Start Voltage	18V(9-36V)	10V
	24V(18-36V)	18V
	48V(36-72V)	36V
	110V(72-144V)	72V

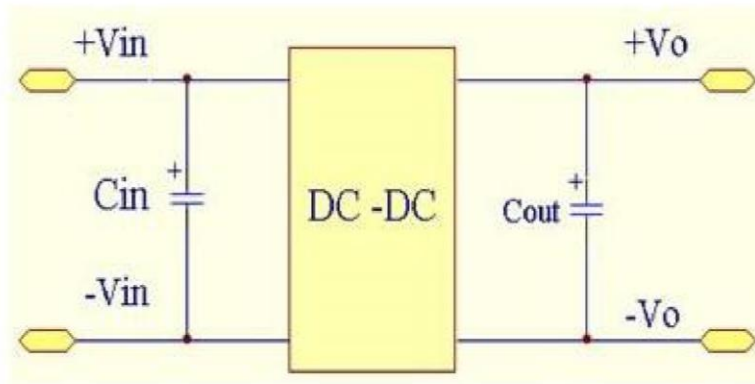
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■ Technical Data(cont.)

Input Features		Test condition		Notes
Input under voltage protection		18V(9-36V)		8V
		24V(18-36V)		17V
		48V(36-72V)		35V
		110V(72-144V)		71V
Input Features	Min.	Nom	Max	Notes
Input voltage (Vdc)	18	24	36	W 2:1
	36	48	72	W 2:1
	72	110	144	W 2:1
	9	18	36	W 4:1
	18	36	72	W 4:1
Start Time	Not capacitive load			20mS
Remote On/Off Function				
CTL	CNT Pin connect -Vin			OFF
	CNT Pin left open			ON
Output Feature	Test condition			Notes
Voltage accuracy	$I_o=0.1...1.0 \times I_{onom}$ , $V_i=V_{rated}$			$\pm 1.0\%$
Line regulation	$V_{imin} \leq V_i \leq V_{imax}$			$\pm 0.2\%$
Load regulation	$I_o=0.1...1.0 \times I_{onom}$ , $V_{imin} \leq V_i \leq V_{imax}$ , $V_i=V_{rated}$			$\pm 0.5\%$
Ripple and noise	2-MHz Broadband			1%
Over current protection	$V_{imin} \leq V_i \leq V_{imax}$			120%
Peak Deviation	25% Rate load vary			$\pm 5.0\%$
Dynamic Response setting time				400us
Output voltage Trim	$V_{imin} \leq V_i \leq V_{imax}$			10%
Switching frequency	$V_{imin} \leq V_i \leq V_{imax}$			300KHz
General Feature	Test Condition			Notes
Efficiency				85% typical
Board temperature	Industry level			-25°C-+55°C
Working environment Temperature	Military level			-25°C-+85°C
Max Board temperature	Industry level			+85°C
	Military level			+105°C
Storage temperature	Industry level			-40°C-+105°C
	Military level			-50°C-+105°C
Relative humidity	No condensation			5%-90%RH
Temperature coefficient				$\pm 0.02\%/^{\circ}\text{C}$
Case material				Epoxy Aluminum baseplate
Isolated resistance	Input-Output			100M ohm
Vibration resistance	10-55Hz			5G
Over current mode	Full input range			Protection type: Hiccup mode, recovers automatically

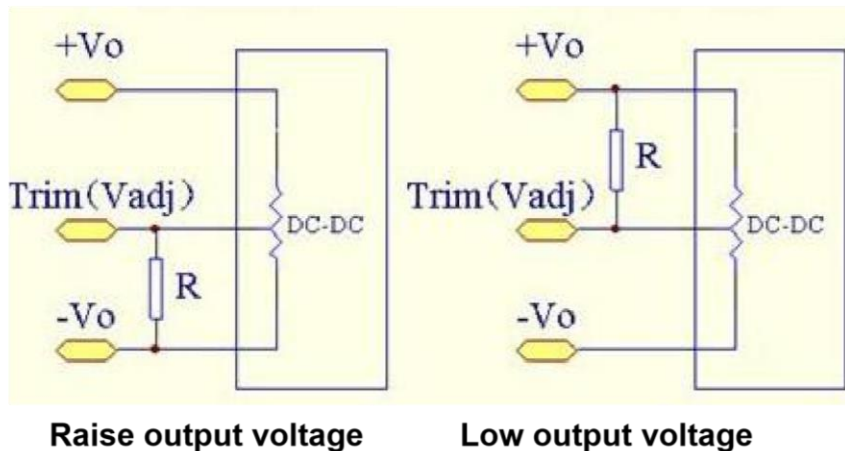
■ Technical Data(cont.)

Cooling	Heatsink, nature cooling	
MTBF	MIL-HDBK-217F2	5X10 <sup>6</sup> Hrs
Dimensions	57.9x61x12.70	
Isolated Voltage	Input-output 1500/Vdc; input-FG 1500Vdc, Output-FG 500Vdc	

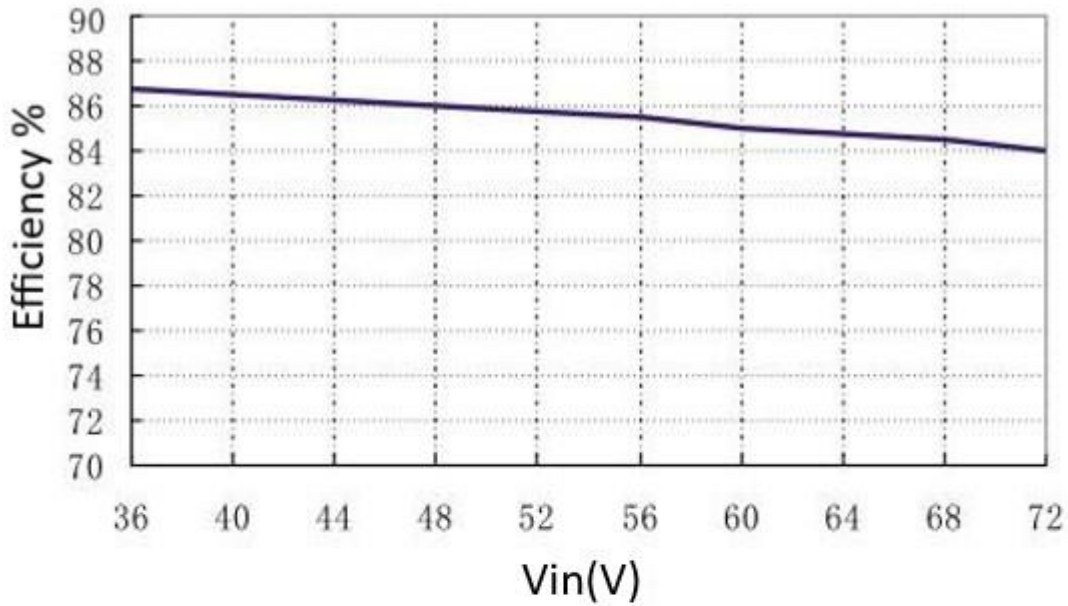


- (1)Power module with Cin is helpful to improve the electromagnetic compatibility, it is recommended to use 47  $\mu$ F~100 $\mu$ F electrolytic capacitor
- (2)Power module with Cout is helpful to lower the output ripple
- (3)Power module output connects the digital circuit needs to add Cout
- (4)Cout is recommended to use 100 $\mu$ F/A, the current is refers to the output current

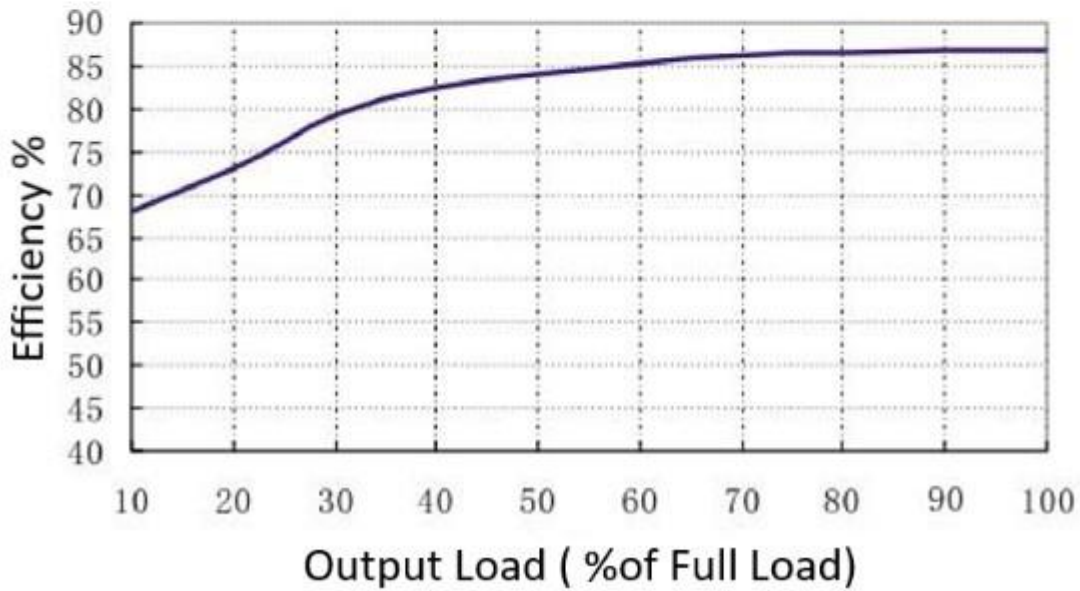
TRIM



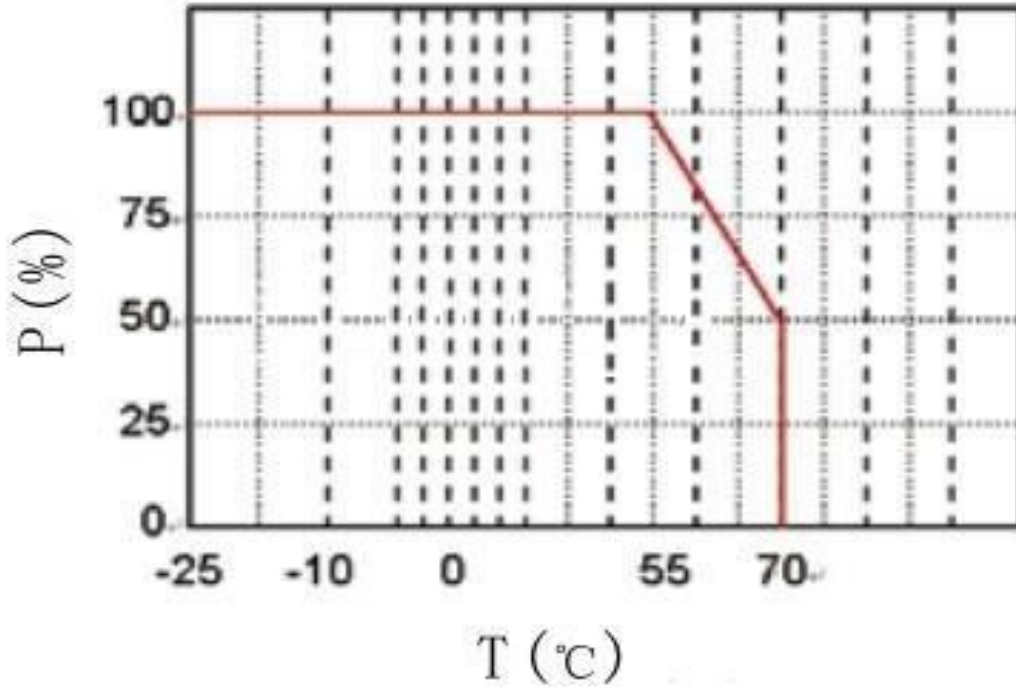
■ Input voltage-Efficiency



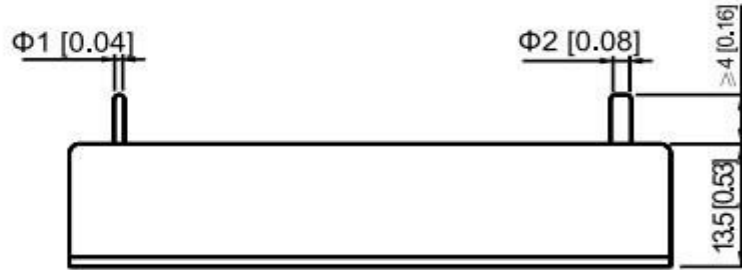
■ Output Load-Efficiency



■ Temperature Curve

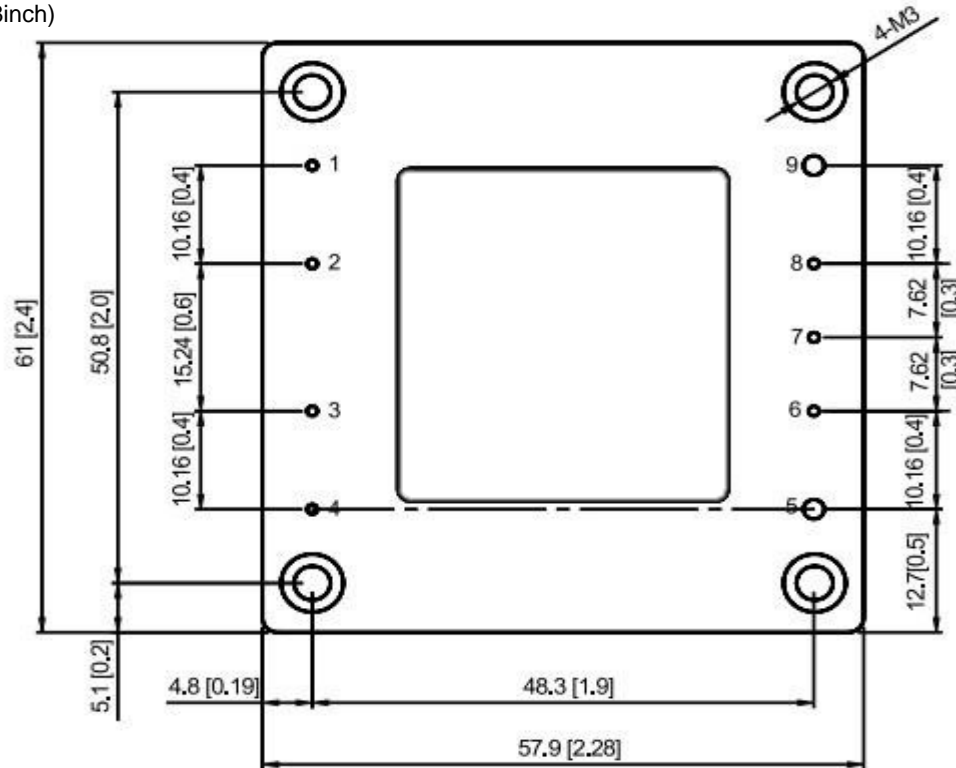


■ Mechanical Diagram



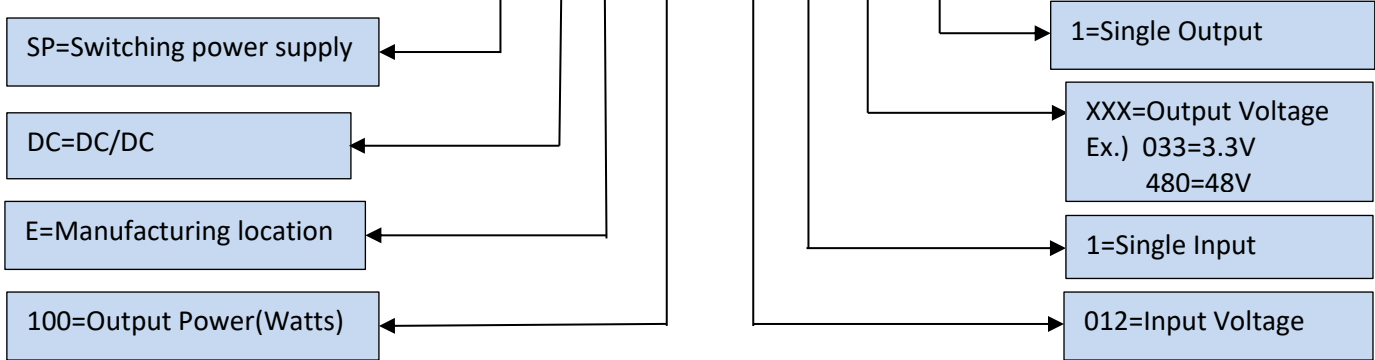
Unit: mm(inch)

Tolerance: ±0.2mm(±0.008inch)

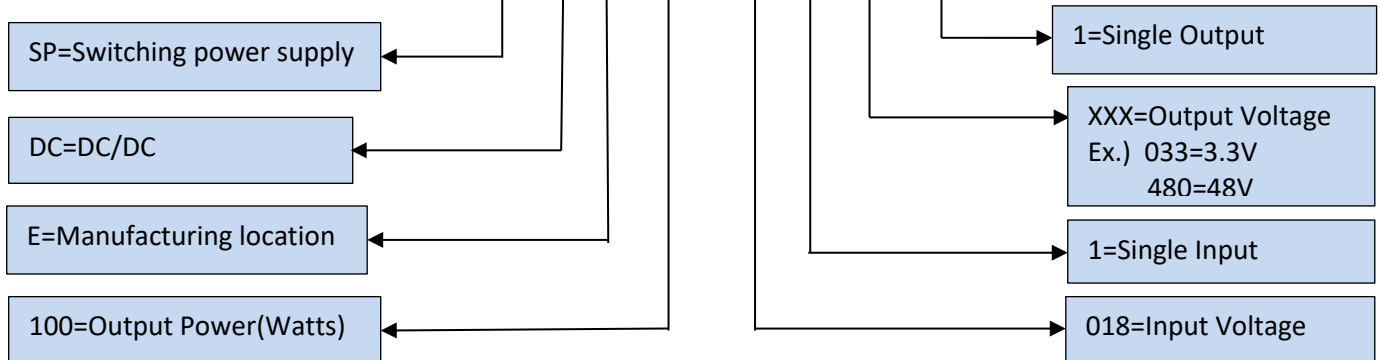


Mechanical Data									
WATT	100W								
L x W x H	57.90x 61.00 x 12.70mm								
Pin Assignment									
Pin	1	2	3	4	5	6	7	8	9
Single O/P	-Vin	CASE	CTL	+Vin	+Vout	+S	TRIM	-S	-Vout
*Note The power modules such as the definition of the pin does not match with the hand book, please refer to the actual item.									

**Part Number Scheme**  
SP DC E 100 012 1 XXX 1

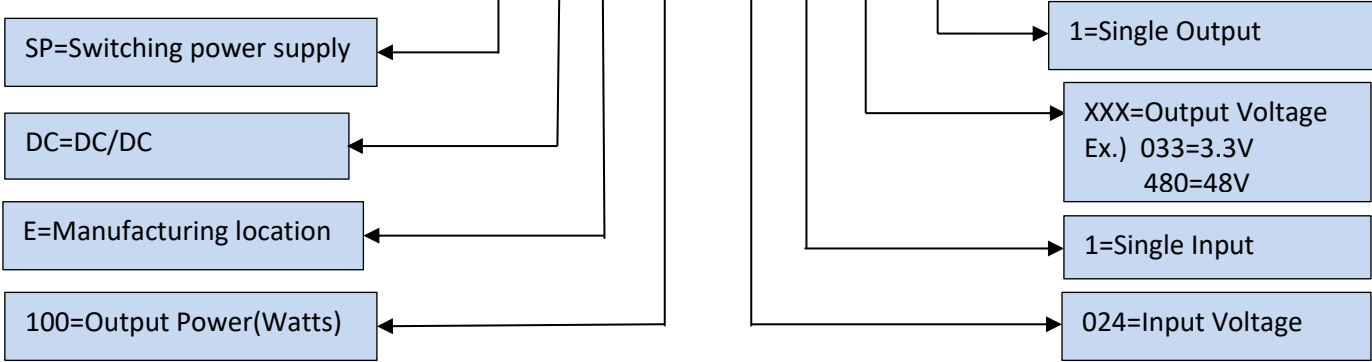


**Part Number Scheme**  
SP DC E 100 018 1 XXX 1

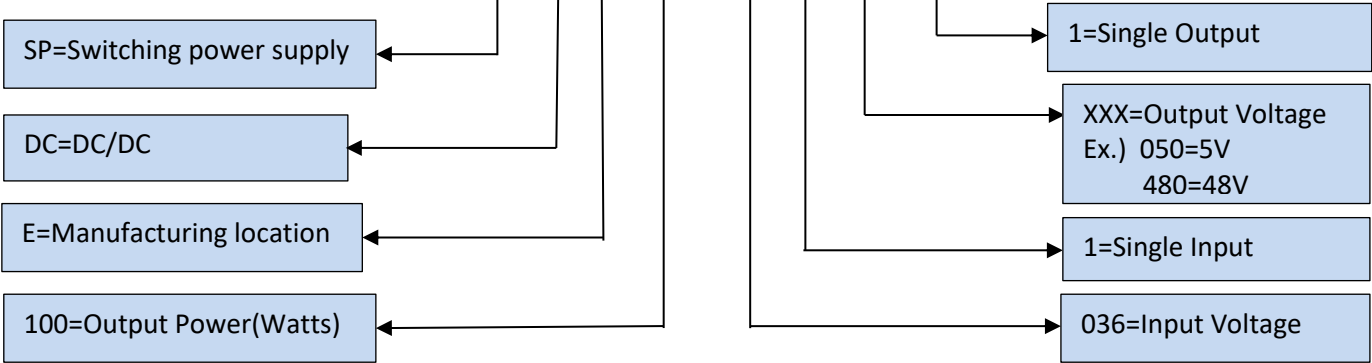


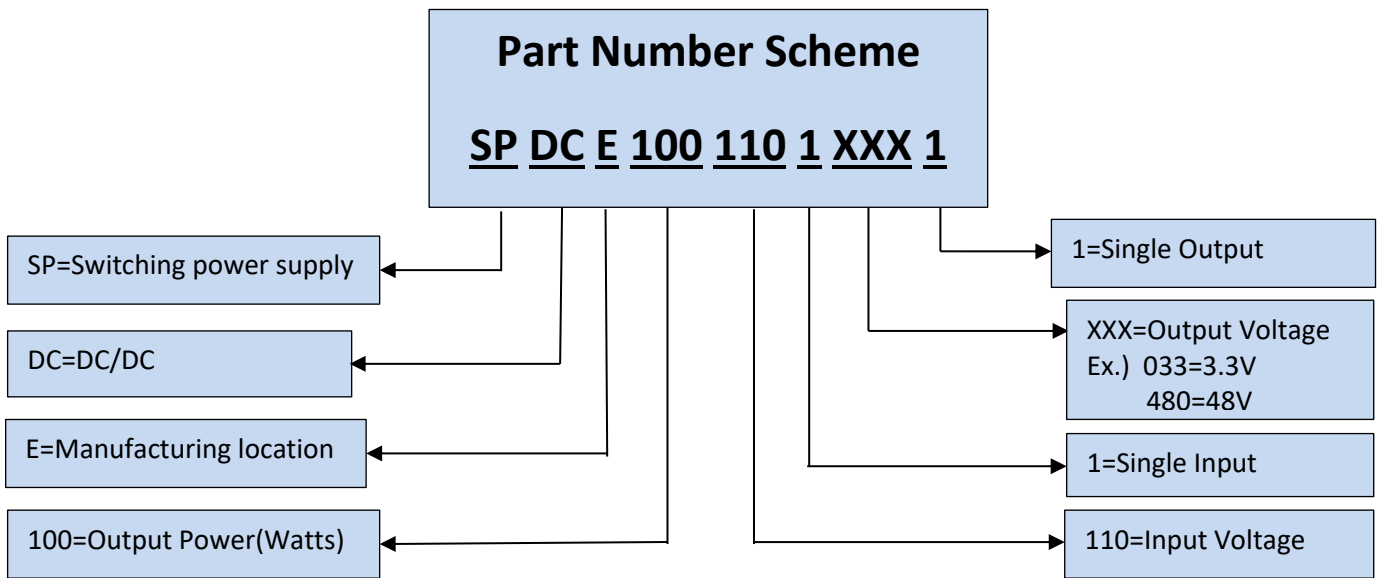
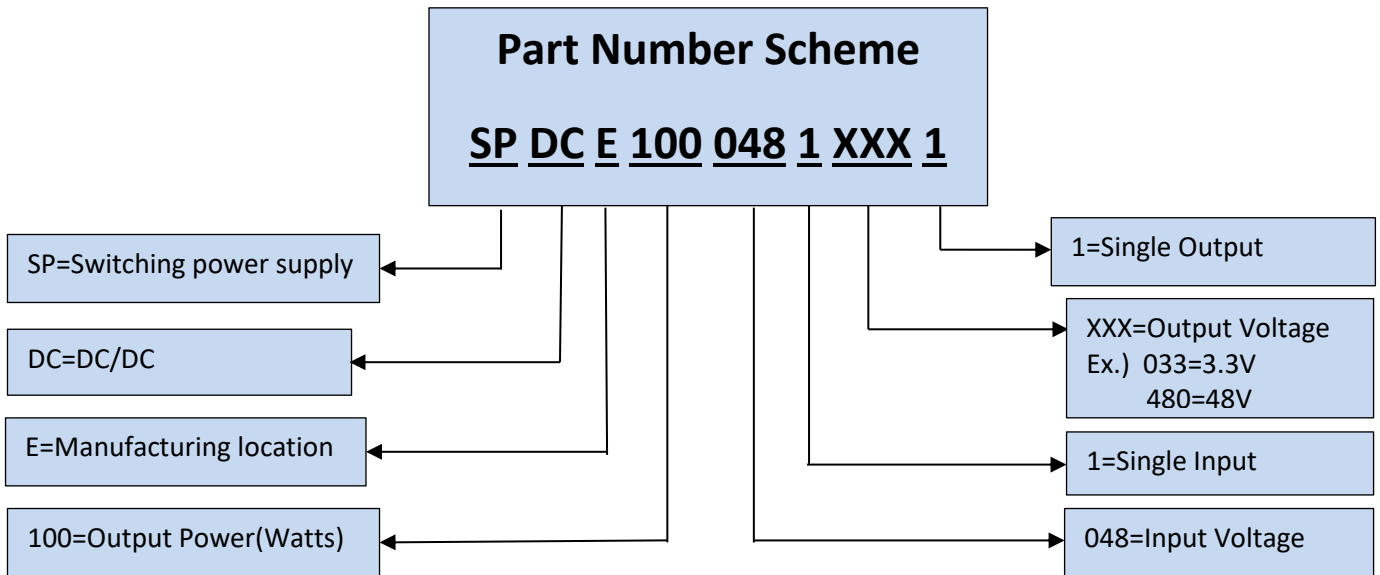


**Part Number Scheme**  
SP DC E 100 024 1 XXX 1



**Part Number Scheme**  
SP DC E 100 036 1 XXX 1





**\*Product images are for illustrative purposes only and may vary from actual design.**

**\*Specifications are subject to change without notice. Autec is not responsible for issues arising from errors or omissions.**