

CSP-3 SWITCHING POWER SUPPLY

UL version available in option

FEATURES

- Universal power AC90~264V/DC127~380V
- Build in power factor control circuit in high power model(120W~1000W)
- Available for series and parallel operation
- To be a Back up power function with relay output in option(not available in model 20W and 24W)
- RoHS & UL version in option
- DIN rail mounting



ORDERING INFORMATION

CSP-3- [Output Rating] - [Output Voltage] - [Optional Function]

CODE	OUTPUT RATING	CODE	OUTPUT VOLT	CODE	OPTIONAL FUNC.
020	20 Watts	05	5V	OV	Over voltage protection
024	24 Watts	12	12V	BP	Back up function
045	45 Watts	24	24V	Model 20W and 24W can not support the optional functions	
072	72 Watts	48	48V		
120	120 Watts	VO	Specify Voltage		
200	200 Watts	Please refer to the table of power rating on right side for the capability of output current.			
240	240 Watts				
500	500 Watts				

Power Rating	5V	12V	24V	48V
20 Watts	4A	X	X	X
24 Watts	X	2A	1A	X
45 Watts	9A	3.75A	1.875A	0.93A
72 Watts	14.4A	6A	3A	1.5A
120 Watts	X	10A	5A	2.5A
200 Watts	X	16.6A	8.3A	4.2A
240 Watts	X	20A	10A	5A
500 Watts	X	41.6A	20.8A	10.4A

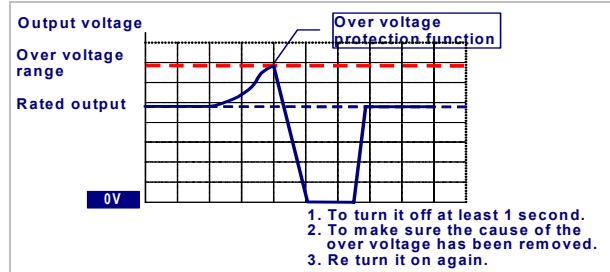
TECHNICAL SPECIFICATION

MODEL	24W	45W	72W	120W	200W	240W	500W	
INPUT								
Voltage								
		AC 90~264V, 47~63Hz and DC 127~380V			AC 115 and 230V switchable by switch		AC 90~264V, 47~63Hz and DC 127~380V	
Efficiency (at 110V rated load)	5V	60%	69%	70%	--	--	--	--
	12V	70%	65%	73%	73%	77%	78%	78%
	24V	71%	75%	75%	75%	79%	80%	80%
	48V	--	77%	75%	76%	80%	80%	80%
Power factor		≥ 70%			≥ 95%(Build in PFC circuit)			
Inrush Current	110V	20A	20A	20A	20A	20A	20A	20A
	220V	40A	40A	40A	40A	40A	40A	40A
OUTPUT								
Output indication								
Green LED								
Voltage adjustment								
-10% to 10% (with VR adjustment)								
Ripple (Vp-p)	5V	50mV	50mV	70mV	--	--	--	--
	12V	100mV	100mV	100mV	100mV	100mV	100mV	100mV
	24V	150mV	150mV	150mV	150mV	150mV	150mV	150mV
	48V	--	300mV	250mV	250mV	250mV	250mV	250mV
Voltage tolerance								
±1.0% max., (with rated input, 0 to 100% load)								
Linearly								
±1.0% max., (with rated input, 0 to 100% load)								
Load influence								
±1.0% max., (with rated input, 0 to 100% load)								
Start up time								
3 seconds max. (at rated input/output voltage)								
Hold time(at 110V)								
16ms								
Over-voltage protection (V max.)	Auto reset available in optional				Auto reset in standard			
	5V	11V	5.8-7.0V		--			
	12V	22V	15-18V		15-18V			
	24V	44V	27.6-31V		27.6-31V			
48V	--	54-60V		54-60V				
Overload protection								
105~150% rated output, and auto-reset after fault condition is removed								
Short protection								
Auto reset in standard								
Back up function								
Available in option(please specify in order code)								
ENVIRONMENTAL								
Ambient temp.								
Operating: -15°C ~ 50°C; Storage: -20°C ~ 85°C (Non-condensing)								
Ambient humidity								
Operating: 5 to 95 % RH; Storage: 5 to 95 % RH								
Temp. influence								
0.05%/°C max.(0~50°C)								
Voltage influence								
0.5% max. (at 85 to 264 VAC input, 100% load)								
Vibration								
10 to 500Hz, 2G, 10 min/cycle for 1 hour each in X, Y, and Z directions								
Shock resistance								
150 m/s ² (about 50g) 3 times each in X, Y, and Z directions								
ELECTRICAL SAFETY								
Dielectric strength								
AC 2.0 kV for 1 min. (between input, output and housing; detection: 20 mA)								
Insulation resistance								
100 MΩ min. (between input, output and housing) at 500 VDC								
EMC								
EN55022 Class A, EN50082-1, EN55204, EN61000-3-2, -3, EN61000-4-2, -3, -4, -5, -6, -11								
LVD								
IEC60950, EN60950								
MTBF								
	350khr	300khr.	280khr.	210khr.	230khr.	110khr.	110khr.	

DESCRIPTION OF TECHNICAL

Over voltage protection

To avoid the possibility of an over voltage and damage the system, CSP-3 series has been designed over voltage protection function. When an excessive voltage that is approximately protection range (please refer to the technical specification), the output voltage will be shut OFF until the cause of the over voltage has been removed. Please reset the Power Supply by turning it OFF when an excessive voltage that is approximately protection range for at least 1 second and then turning it back ON again.



Over load protection

The Power Supply is provided with an overload protection function that protects the power supply from possible damage by over current. When the output current rises above 105% min. of the rated current, the protection function is triggered, decreasing the output voltage. When the output current falls within the rated range, the over load protection function is automatically cleared.

Short protection

The short protection function of idea is same as over load protection with more strictly condition. That protects the power supply from possible damage by short current.

Back up function(option)

The CSP-3 series is provides parallel operation to be a back up power. However, the power was supplied is rated output of one, even the system has been parallel more than one unit.

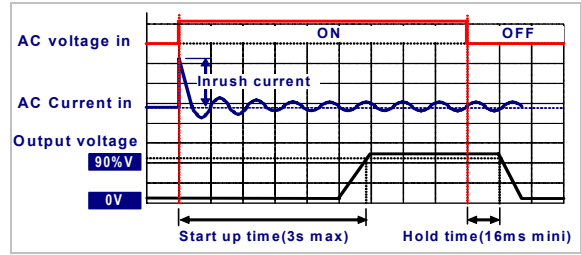
The typical application is to get a un-shunt down DC power supply system. For example, to parallel two still 50W DC power supply (the maximum power output is still 50W). If the load is 40W, the power output may separates 25W and 15W in two units. Someday, unit one is broken down cause of unknown reason, the unit two will increase output to supply the total 40W to avoid shunt down of system.

Faulty alarm(option)

The user can specify the faulty alarm relay in ordering code to get a faulty signal for system. The rated of relay is 1A, 220V. Please refer to the connection diagram in detail.

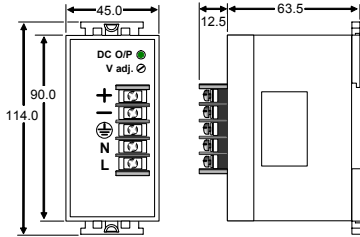
MODEL	24W	45W	72W	120W	200W	240W	500W
MECHANICAL							
Dimensions	104(H) x76(D) x45(W)	100(H) x83(D) x49(W)	100(H) x110(D) x60(W)	100(H) x110(D) x90(W)	100(H) x110(D) x90(W)	100(H) x120(D) x90(W)	210(H) x110(D) x109(W)
Housing	Self-extinguishing, black ABS, UL94V0						
Terminals	Screw terminal, up to 2 x 2.5mm ² wire						
Mounting	35mm DIN rail (EN50022)						
Weight	190g	370g	500g	820g	830g	1260g	1790g

Inrush Current, Start Up Time, Output Hold Time

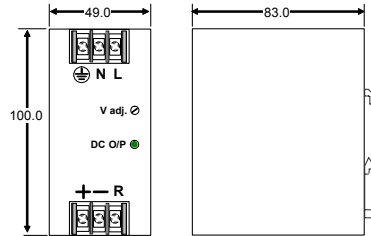


DIMENSIONS

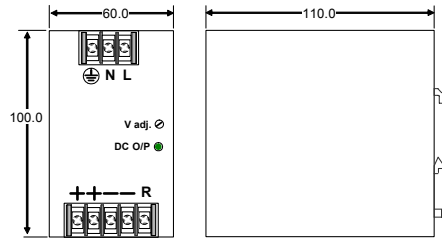
CSP-3-24W



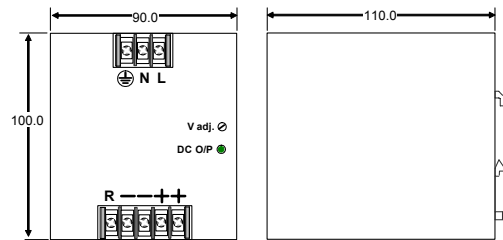
CSP-3-45W



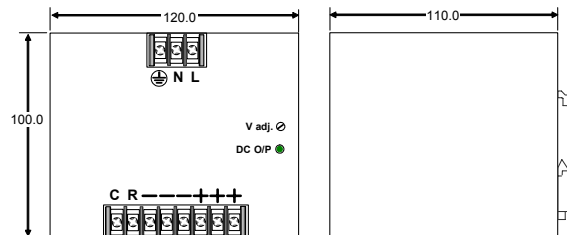
CSP-3-72W



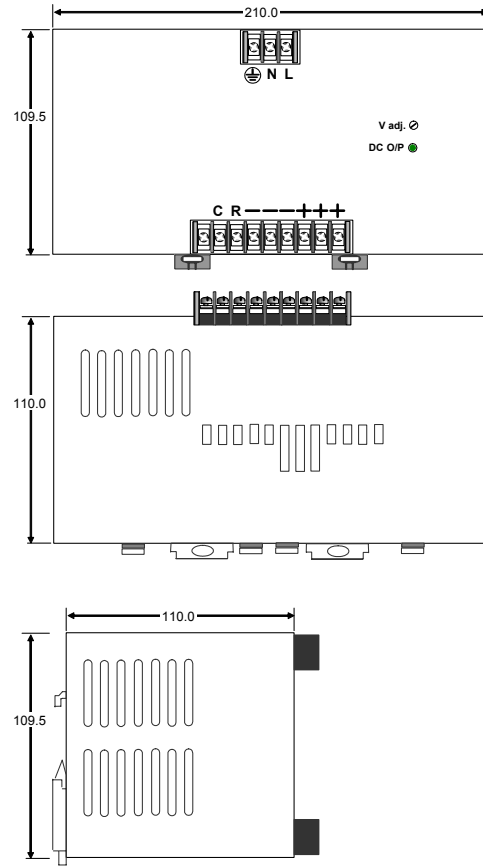
CSP-3-120W/200W



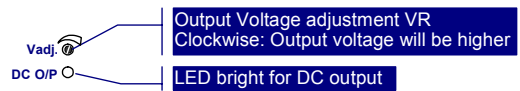
CSP-3-240W



CSP-3-500W



OUTPUT VOLTAGE ADJUSTMENT

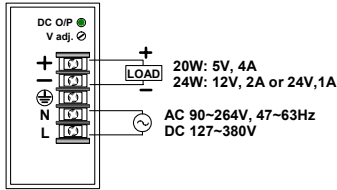


CSP-3 Power supply

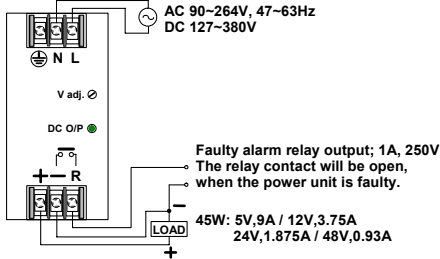
CONNECTION DIAGRAM

Please check the voltage of power supplied first, and then connect to the specified terminals. It is recommended that power supplied to the meter be protected by a fuse or circuit breaker.

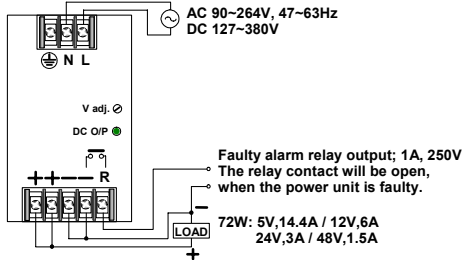
CSP-3-24W



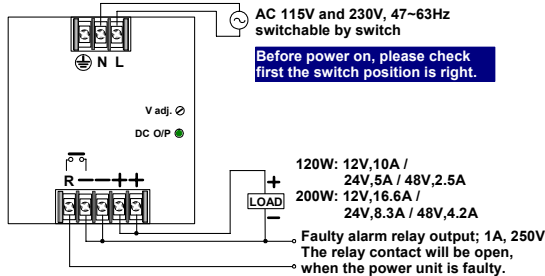
CSP-3-45W



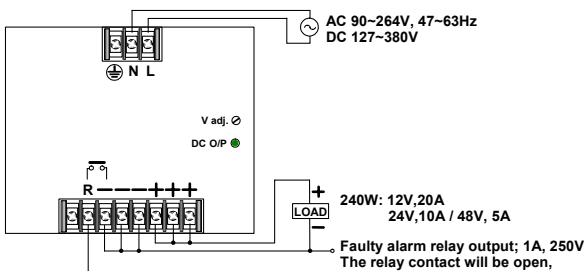
CSP-3-72W



CSP-3-120W/200W



CSP-3-240W



CSP-3-500W

