

## ● Product Features



- ✓ 90~264Vac/100~370VDC global input voltage range;
- ✓ Dimension: 52.5\*90\*54.5mm
- ✓ No load power Consumption<0.75W
- ✓ Built-in Overvoltage/overload/short circuit/Overheat protection
- ✓ Air convection cooling, -40°C to +70°C working temperature range
- ✓ 3KV insulated voltage
- ✓ 100% Full load aging test
- ✓ 3Years warranty

## ● Applications

Industrial Control system  
Railway industry

## ● Quality Standards

EMC compliance with IEC/EN62368/EN61000-4\CISPR32/EN55032/UL2368

## ● Product Description

CSR-60 is a single output 60W Plastic Din Rail power supply, 90~264V wide input voltage range, support 5V,12V,24V and 48V output options. Very low No load power consumption(<0.75W), 1mA low leakage current. Compact size (52.5\*90\*54.5mm). Isolated voltage up to 3KV. High reliability and good EMC performance.

## ● Model Encoding



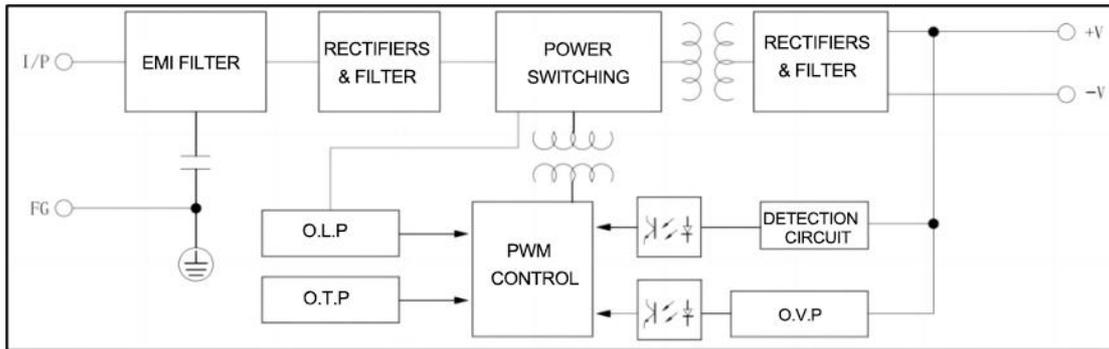
## ● Electronic Specification

Model No	CSR-60-5	CSR-60-12	CSR-60-24	CSR-60-48
INPUT	Input voltage Range			
	90~264VAC/100~370VDC			
	Rated Input voltage			
	100-240VAC			
	Input Current			
1.1A/115VAC 0.7A/230VAC				
Inrush Current				
30A/115VAC 60A/230VAC Cold Start				
Frequency				
47-63HZ				

## Datasheet for DIN rail CSR Series CSR-60 Series

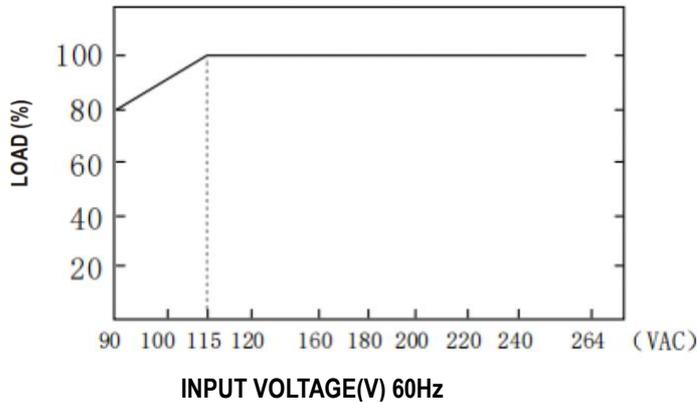
	<b>Leakage current</b>	<1mA/230VAC/50HZ			
<b>OUTPUT</b>	<b>Output voltage</b>	5V	12V	24V	48V
	<b>Output voltage adjustable range(V)</b>	4.75~5.25V	11.2~12.6V	22.5~25.6V	44.8~53.4V
	<b>Rated Current</b>	6.5A	4.5A	2.5A	1.25A
	<b>Output Power</b>	32.5W	54W	60W	60W
	<b>Efficiency</b>	78%	88%	89%	90%
	<b>Ripple &amp; Noise</b>	100mVp-p	120mVp-p	120mVp-p	240mVp-p
	<b>Set up, Rise time(Typ)</b>	1200ms,30ms/230VAC, 3000mS, 50mS/115VAC (full load)			
	<b>Hold up time</b>	50ms/230VAC, 15ms/115VAC(full load)			
	<b>Line Regulation</b>	±1%			
	<b>Load Regulation</b>	±1%			
	<b>Voltage tolerance</b>	±2.0%			
<b>ENVIRONMENT</b>	<b>Working Temp&amp;Humidity</b>	-40~+70°C(pls refer to derating curve) ,85%RH max			
	<b>Storage Temp&amp;Humidity</b>	-40~+85°C 10%~95%RH, non-condensing			
	<b>Temperature Coefficient</b>	0.03%/(0°C-50°C)			
	<b>Vibration</b>	Component:10~500Hz, 2G 10min./1cycle, 60min. Six cycles along X,Y,Z axis;			
<b>EMC</b>	<b>EMC Emission</b>	Compliance to EN55032(CISPR32), EN55011			
	<b>ESD</b>	Compliance to EN61000-4 level 2 Contact ±4kV/level 3 Air ±8kV			
	<b>Radiated</b>	IEC/EN 61000-4-3			
	<b>EFT/Burst</b>	IEC/EN 61000-4-4 level 4 2kV			
	<b>Surge</b>	IEC/EN61000-4-5 Level 4 2KV			
<b>SAFETY</b>	<b>Safety standards</b>	Compliance to UL1012			
	<b>Withstand voltage</b>	I/P-O/P:3.0KVAC(min)			
	<b>Isolation Resistance</b>	I/P-O/P:100M ohms/500VDC 25°C 70%RH			
<b>PROTECTION</b>	<b>Overvoltage</b>	≤7.2VDC	≤16.2VDC	≤36VDC	≤64.8VDC
		Shut-down output voltage, Re-power on to recover			
	<b>Overload</b>	≥110% Auto-recovery after fault condition is removed			
	<b>Short Circuit</b>	Hiccup mode, Auto-recovery after fault condition is removed			
<b>OTHERS</b>	<b>SIZE</b>	52.5*90*54.5mm(W*H*D)			
	<b>MTBF</b>	200K hrs min. MIL-HDBK-217F(25°C)			
<b>NOTE</b>	<ol style="list-style-type: none"> <li>All parameters NOT Specially mentioned are measured at 230VAC input, rated load and 25°C ambient temperature, humidity&lt;75%</li> <li>Ripple &amp; Noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>The power supply is considered as an independent unit, but the final equipment still need to re-confirm at that the whole system complies with the EMC directives.</li> <li>EMC tested after 10 minutes working</li> </ol>				

● **BLOCK DIAGRAM**

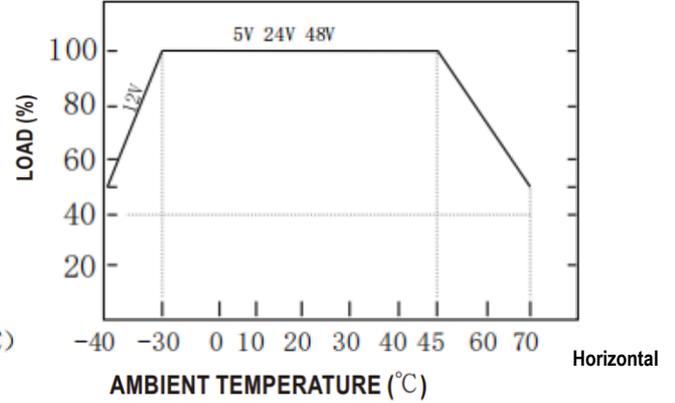


● **Derating Curve**

■ Output derating VS input voltage.

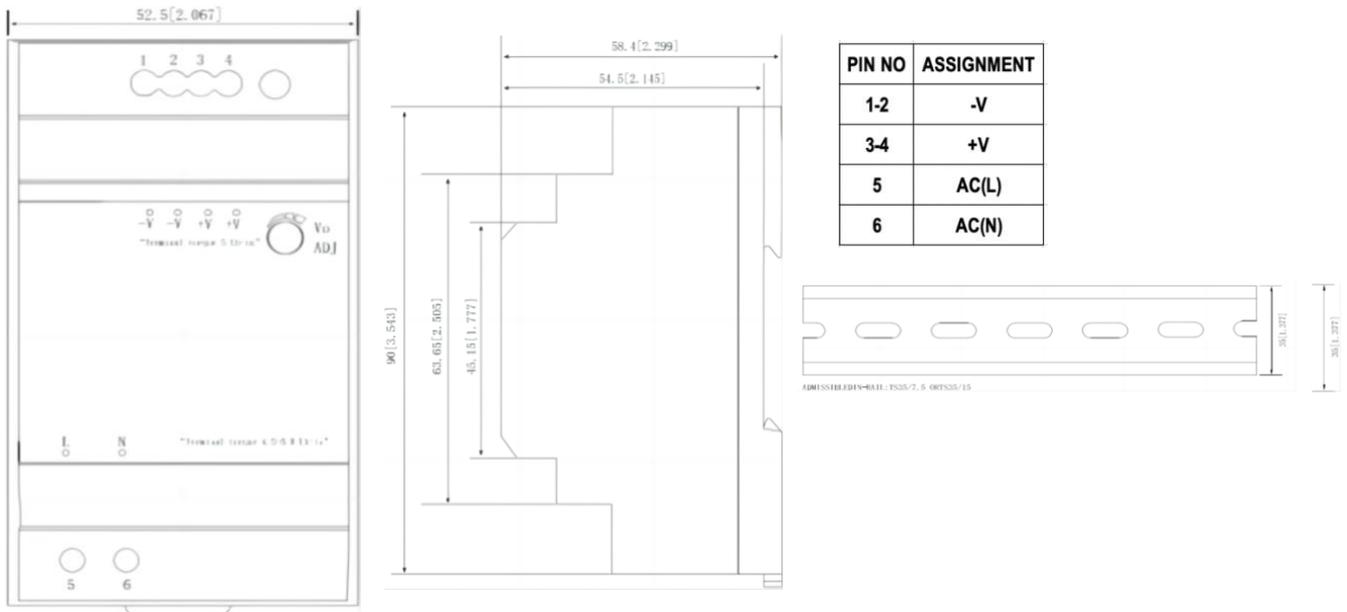


■ Output Load VS temperature



● **Mechanical Specification**

(unit: mm, tolerance±1mm) Unmarked tolerance: ±0.5mm



### ● **Product Installation Instructions**

1. During installation, please follow the installation instructions.
2. Before the installation is completed and the power is turned on for trial operation, please check and calibrate the connections on each terminal to ensure that the input and output, AC and DC, positive and negative poles, voltage and current values are correct, and prevent the occurrence of reverse connection and wrong connection to avoid damage to the power supply and final equipment.
3. Before powering on, please use a multimeter to measure whether the live wire, neutral wire and ground wire are short-circuited, and whether the output terminal is short-circuited; it is best to start with no load when powering on.
4. Do not exceed the rated power of the power supply to avoid affecting the reliability of the product. If the output parameters of the power supply need to be changed, please consult our technical department before using the power supply.

### ● **Transportation & Storage**

1. Transportation:  
This packaging is suitable for transported by car, ship, plane, train, etc. During transportation, it should be protected from rain and loaded and unloaded in a civilized manner.
2. Storage:  
When the product is not in use, it should be stored in the packaging box. The storage environment temperature and relative humidity should meet the requirements of the product. There should be no corrosive gas or corrosive chemicals in the warehouse, and there should be no strong mechanical vibration, impulse and strong magnetic field. The packaging box should be at least 20cm above the ground and at least 50cm away from the wall, heat source, window or air inlet, and should not be soaked in water. If it has been too long (more than 1 year), it should be re-inspected by professionals before use.