# 360W AC/DC Power Supply Data Sheet

## Description:

This 360W Caesar Series can be used as a constant voltage power supply or a DC/DC converter, see **DC/DC section** on website for separate datasheet. It is designed with ultra-high efficiency and has a metal case enclosure. The extraordinary performances of low power dissipation and fan-less design provide high reliability and long lifetime. This series offers solid and safe power conversions for applications such as robotics, e-vehicles, e-bikes, e-motorcycles, e-boats, e-machines, etc.

## Features:

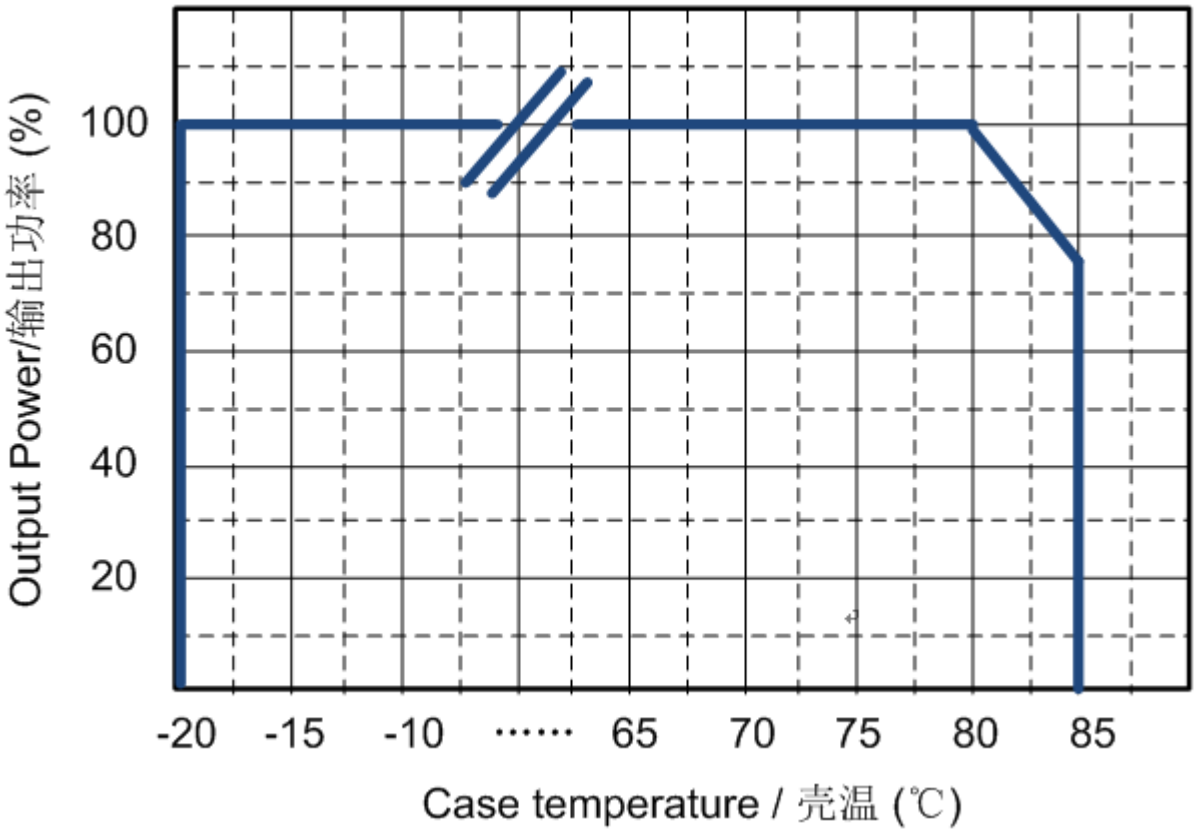
- Input Voltage: 90~264VAC (or 100~400VDC)
- Output Power: 230~360W
- Isolated Input/Output design
- Easily parallel for power scalability and redundancy
- High Efficiency: Up to 95.5%
- All-Around Protections: UVLO, OVP, OCP, SCP, OTP
- Certifications: CTUVUS, FCC, CE, CB, CCC
- Complies with EN60950 and EN62368
- Ultra-High Power Density: 27W/inch$^3$
- Wide Working Temperature Tc: -40°C~85°C
- IP60 Ingress Grade


## Specifications

| **Model Number** (factory number) | **PSA-360-05-A** (PLD360-PDD050) | **PSA-360-12-A** (PLD360-PDD120) | **PSA-360-15-A** (PLD360-PDD150) | **PSA-360-20-A** (PLD360-PDD200) | **PSA-360-24-A** (PLD360-PDD240) | **PSA-360-28-A** (PLD360-PDD280) | **PSA-360-36-A** (PLD360-PDD360) | **PSA-360-48-A** (PLD360-PDD480) |
|---|---|---|---|---|---|---|---|---|
| Output Voltage | 5V | 12V | 15 | 20V | 24V | 28V | 36V | 48V |
| Max. Current Out | 45A | 21.5A | 17.3A | 16A | 13.3A | 11.4A | 8.9A | 7.5A |
| Voltage Accuracy | ±3% | | | | | | | |
| Output Power (AC/DC) | 231W @ 180~264VAC | 260W @ 180~264VAC | | 320W @ 180~264VAC | | | | 360W @ 180~264VAC |
| | 168W @ 90~179VAC | 180W @ 90~179VAC | | 220W @90~179VAC | | | | 240W @ 90~179VAC |
| Input Voltage | 90~264VAC (or 100~400VDC) | | | | | | | |
| Efficiency | 93% | 94% | | 95% | | | | 95.5% |
| Protections | UVLO, OVP, OCP, SCP, OTP | | | | | | | |
| Working Temp. | Tc=80°C | | | | | | | |
| Cooling | Natural Cooling | | | | | | | |
| EMI | EN55032 Class A | | | | | | | |
| Surge Protection | Line to Line: 1kV/ Line to Earth 2kV | | | | | | | |
| Isolation | Primary to Secondary: 3000VAC/10mA max./60s | | | | | | | |
| Dimensions | 182 x 48.6 x 27.5 mm | | | | | | | |
| Weight | 540g | | | | | | | |

| General | | | |
|---|---|---|---|
| Working Temperature (Tc) | MIN<br>MAX | -40<br>+85 | ºC |
| Temperature (Storage) | MIN<br>MAX | -40<br>+85 | ºC |
| Relative Humidity (Operating)<br>Relative Humidity (Storage) | 20% RH to 90% RH, No condensation.<br>5% RH to 95%RH. No condensation. | | |
| Weatherproof | IP60 | | |

## Temperature Derating



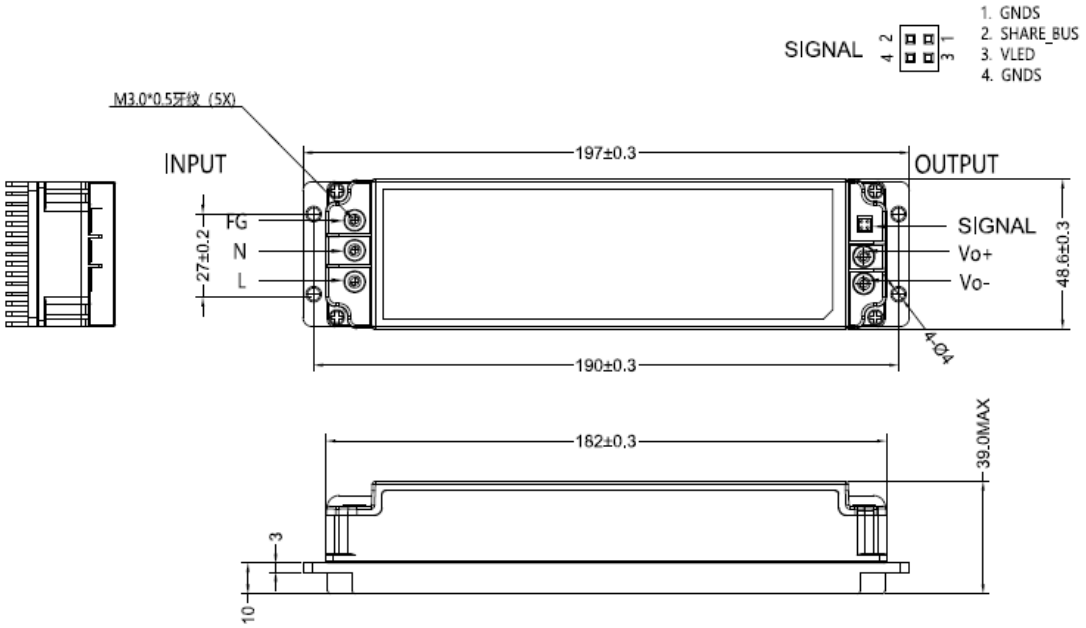
| Protections (All Models) | |
|---|---|
| Short Circuit Protection (SCP) | Latch Mode<br>The power supply shall enter latch mode after protection and shall return to normal operation after the fault condition is removed and the AC input is powered off and on again. |
| Over Voltage Protection (OVP) | Enters Auto recovery mode when output voltage triggers over voltage protection. The power supply will return to normal operation when the fault condition is removed. |
| Over Temperature Protection (OTP) | The power supply shall enter auto-recovery mode during over temperature protection and return to normal operation after the fault condition is removed. |
| Over Current Protection (OCP) | When the output current is between 105% to 188% of the rated output current, the power supply shall enter auto-recovery mode and return to normal operation after the fault condition is removed. |
| UVLO | When the input voltage falls below 80VAC. The power supply shall shut down, and return to normal operation after the input voltage goes back within the range. |

| Regulatory | |
|---|---|
| Agency Approval | CTUVUS, FCC, CE, CB, CCC |
| Dielectric Strength (Hi-pot) Production test is 3 seconds | Primary to Secondary: 3000VAC / 10mAMax / 60seconds<br>Primary to Earth: 1500VAC 10mA max./60 seconds<br>Secondary to Earth: 500VAC 10mA max./60 seconds |

| Electromagnetic Compatibility EMI/EMC | |
|---|---|
| **EMI, RFI** | Comply with EN55032 CLASS A |
| **Immunity:** | |
| EN61000-3-2 | Harmonic current emission |
| EN61000-3-3 | Voltage Fluctuations and Flicker |
| EN61000-4-2 | ESD 8kV Air Discharge, 4kV Contact Discharge, Criteria B |
| CISPR 16-2-1: | Radio-Frequency Electromagnetic Field Susceptibility Test-Rs Level 3, Criteria B |
| EN61000-4-4 | Electrical Fast Transient/Burst-EFT 2KV, Criteria B. |
| EN61000-4-5 | Surge Immunity Test, AC power line: line to line 1kV, line to each 2kV Criteria B |
| EN61000-4-6 | Conducted Radio Frequency Disturbance Test-CS Level 3, Criteria B |
| EN61000-4-11 | Voltage Dips, Criteria B |

*Notes:* Specification is subject to change without notice.

## *MECHANICAL (Dimension and Outline Drawing)*




### Output Pins Description

| No. | Name | Function | Drawing |
|---|---|---|---|
| 1，4 | GNDS | Signal ground |  |
| 2 | SHARE_BUS | Current-sharing bus signal | |
| 3 | DC_OK | High (3~3.5V): When the power supply is good.<br>Low (-0.5~0.5V): When the power supply is not good. | |

### Output Connector

| Type | Brand | Part Number |
|---|---|---|
| Socket | CHANGJIANG CONNECTORS CO LTD or equivalent | A2006WR-2X2P, or equivalent |
| Plug (customer) | CHANGJIANG CONNECTORS CO LTD or equivalent | A2006H-2X2P, or equivalent |