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One-stop solutions of industrial power supplies

MORNSUN
MORE THAN RELIABILITY
Industry Applications

Industrial control, power electronics, rail transportation, automotive electronics, intelligent building, tele-communication, medical industry and mining etc.

More than 3000 power supplies, over 1000 power solutions

Mornsun provides reliable power supplies and high-efficient solutions to more than 5,000 enterprises around the world, including Siemens, GE, etc.

Mornsun has been devoted into the electromagnetic isolation and power supply technology for 17 years, and has rich experience in power supply applications of industrial control, power electronics, rail transportation, automotive electronics, intelligent building, tele-communication, etc.

- Our sales network covers more than 30 countries.
- Our independent R&D and manufacturing centers enable us to meet different requirements of design and supply.
- We have advanced management systems, innovative technology, and more than 300 patents of design and technique.
- We have technical seminars in different cities all over the world to communicate with customers and introduce our latest products and technical solutions.

One-stop Solution

Mornsun supports our partners and customers from design, manufacturing to total solution.

Selection
Convenient selection tools help to find the products you need.

Purchase
Quick response and short lead time (3~4 weeks for high running products).

Technical Support
Efficient technical support from product selection to application.
**Railway Industry**

**Power Solutions for High-speed Rail, Light Rail and Metro**

- Door system
- Entertainment system
- Field bus
- LED information display
- Panthograph
- Traction control and intelligent display
- Communication system
- Traction converter
- Braking system
- Auxiliary power supply system
- Air-conditioning system

Mornsun 6~150Watt power supplies for railway industry provide the standard input bus voltage of 72V, 96V, 110VDC, and feature short-circuit, output over-voltage protections. They meet the EN60950, EN50155, and EMC meets RIA12 with external circuits.

Mornsun provides professional technical support for railway customers. The power supplies are widely used in vehicle systems and subsystems of side tracks.

**Broadcast System**

Usually, the power of broadcast system in rail system is within 10Watt. Mornsun 6~20Watt railway power supplies are ideal for such applications, which simplifies the design and reduces cost.

Mornsun URB1D12LD-15W 15Watt DC/DC converter offers an input voltage range of 40~160 VDC, which covers the standard bus input voltage of 72V, 96V, 110VDC. The converter meets the EN50155 with Mornsun filter FC-CX1D, and meets RIA12 with Mornsun filter FC-CX1D-RIA.

**Information Display System**

LED information display screen ensures the accuracy of rail broadcasting. Mornsun 75Watt railway power supplies can optimize the efficiency of display and meet EN50155 standard.
SiC MOSFET Devices

SiC MOSFET features high voltage resistance, low power consumption and high speed switching, which greatly enhances the power conversion efficiency of high-voltage inverter.

High-voltage Inverter

Mornsun QA01C module offers an ultra-high isolation voltage of 3500VAC and ultra-low isolation capacitance of 3.5pF, effectively avoiding the control side from being interfered by the buses dV/dt. It features an unsymmetric driving voltage of +20/-4VDC designed for SiC MOSFET devices, reducing the switching loss. The high capacitive load ensures the instant high power driving and high frequency operation. The operating temperature of -40°C ~ +105°C meets most of the environmental requirements.

Photovoltaic Industry

Solution for Combiner Box of Photovoltaic Power Generation System

The photovoltaic power stations are located at remote areas, which makes it difficult to set the mains supply for the control systems. In addition, common power supplies cannot meet the requirement of the ultra-high output voltage of photovoltaic arrays (e.g. 200–800V).

Mornsun special power supplies for photovoltaic industry feature a wide input voltage range of 100-1000VDC, which allows the changing input voltage from low to high from arrays. They can be widely used in high voltage applications, such as PV combiner box, PV inverter, wind power inverter and high voltage storage applications, etc.

PV Combiner Box

Mornsun PV15-27B24R2 power modules convert the power from the photovoltaic arrays and supply for the monitoring system, solving the problem of separately building mains which is expensive and difficult to maintain.

The modules feature a wide input voltage range of 100–1000VDC and a high isolation voltage of 4000VAC, and provide output over-voltage, short-circuit and reverse polarity protections. PCB mounting, chassis mounting and DIN-rail mounting are available.
Mornsun got TS16949 in 2012 and provides professional technical services for the customers of automotive electronics. Mornsun 1~50Watt DC/DC power modules are widely used in BMS, air condition control, etc.

**Motor Bus Voltage Monitoring and Battery Management System**

Mornsun CF0505XT-1WR2 DC/DC converters offer an operating temperature range of -50°C~+125°C, which can withstand the high temperature from the motor. The converters feature 3500VDC withstand voltage, which ensure the reliable monitoring of 600VDC bus voltage. The components meet AEC-Q100, and SMD package is convenient for installation.

**Intelligent Building**

Intelligent switches, control systems

Smart home control systems require the power supplies of compact size, low power consumption with safety certification. However, common power supplies can not meet the requirements.

**Intelligent Switch**

Mornsun cost- effective LS series (UL/EN60950 approval) accept universal AC input of 85-264VAC or 70~400VDC, and feature the isolation voltage of 3000VAC; the compact size of 35mmx18mmx11mm and the over-current, short-circuit protections make them ideal for smart home, sensors network or similar applications which require cost effective, compact and lower wattage AC power supplies.
**Product Line**

**DC/DC Converter**

- Output Power: 0.25 ~ 150 Watt
- Input: ±10%, ±5% (fixed input); 2:1, 4:1, 8:1, 10:1 (wide input)
- Package: SMD, SIP, DIP, 1x1 Inch, 1x2 Inch, 1/2 Brick, 1/4 Brick
- Isolation: 1500VDC, 3000VDC, 6000VDC, 12000VDC
- Operating temperature: -40°C ~ +85°C, -40°C ~ +105°C, -50°C ~ +125°C
- Protection: Short-circuit, over-current, under-voltage protections
- Certificate: UL/EN60950, EN60601, EN50155, EN62109

**AC/DC Converter**

- Output Power: 1 ~ 240 Watt
- Input: 85 ~ 264VAC, 85 ~ 305VAC, 65 ~ 460VAC
- Package: SIP, DIP, DIN-Rail, Open frame, chassis mounting
- Isolation: 2500VAC, 3000VAC, 4000VAC
- Operating temperature: -40°C ~ +70°C, -40°C ~ +85°C
- Protection: Short-circuit, over-current, under-voltage, over-voltage protections
- Certificate: UL/EN60950, UL/EN60601

**Other Products**

- Signal Conditioning Module
- EMC Filter
- Transceiver Module
- IGBT Driver LED Driver

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**Product Selection Guide**

**AC/DC Converter**

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<tr>
<th>Series</th>
<th>Power</th>
<th>Input Voltage (VAC)</th>
<th>Isolation</th>
<th>Package</th>
<th>Cert.</th>
<th>Target Industries</th>
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<tr>
<td>LD/LN Series</td>
<td>1 ~ 5W</td>
<td>85 ~ 264VAC</td>
<td>3000VAC</td>
<td>DIP</td>
<td>CB</td>
<td>Instrumentation</td>
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<tr>
<td>LS Series</td>
<td>1 ~ 5W</td>
<td>85 ~ 264VAC</td>
<td>3000VAC</td>
<td>SIP</td>
<td>CB</td>
<td>Intelligent Building, Instrumentation, Lighting</td>
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<tr>
<td>LH Series</td>
<td>5 ~ 60W</td>
<td>85 ~ 264VAC</td>
<td>3000VAC</td>
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**DC/DC Converter/LED Driver**

<table>
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<tr>
<th>Series</th>
<th>Power</th>
<th>Input Voltage (VDC)</th>
<th>Isolation</th>
<th>Package</th>
<th>Cert.</th>
<th>Target Industries</th>
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<tr>
<td>IB_XT-1WR2</td>
<td>1W</td>
<td>3.3.5, 12.15</td>
<td>1500VDC</td>
<td>SMD</td>
<td>CB</td>
<td>Automotive Electronics</td>
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<td>CF_XT-1W</td>
<td>1W</td>
<td>5</td>
<td>3500VDC</td>
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<tr>
<td>A/B_XT-xWR2</td>
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<td>3.3.5, 12, 15, 24</td>
<td>1500VDC</td>
<td>SMD</td>
<td>/</td>
<td>Industrial Control, Power Grid, Transportation</td>
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<td>A/B_S-xWR2</td>
<td>1 ~ 2W</td>
<td>5, 12, 24</td>
<td>1500VDC</td>
<td>SIP</td>
<td>/</td>
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<tr>
<td>E/F_XT-xWR2</td>
<td>1 ~ 2W</td>
<td>3.3.5, 12, 15, 24</td>
<td>1500VDC</td>
<td>SMD</td>
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<td>E/F_S-xWR2</td>
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<td>1500VDC</td>
<td>SIP</td>
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<td>G/H_S-xW</td>
<td>1 ~ 2W</td>
<td>5, 12, 15, 24</td>
<td>6000VDC</td>
<td>SIP</td>
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<td>Indusrial Control, Power Grid, Medical Treatment</td>
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<td>4.5 ~ 9.9 ~ 18, 18 ~ 36, 36 ~ 75</td>
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<td>SIP</td>
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<tr>
<td>URA/B_LD-xWR3</td>
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<td>URIH/F_P-xWR3</td>
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<td>9 ~ 36, 18 ~ 75</td>
<td>6000VDC, 3000VDC</td>
<td>DIP</td>
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<td>URB/1D_S Series</td>
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<td>40 ~ 160</td>
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<td>PV Series</td>
<td>5 ~ 40W</td>
<td>100 ~ 1000, 200 ~ 1200</td>
<td>4000VDC</td>
<td>DIP</td>
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<td>Industrial Control, Power Grid, Transportation</td>
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<tr>
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<td>5 ~ 9W</td>
<td>9 ~ 15, 11.6 ~ 12.4, 145 ~ 155, 23.3 ~ 24.2</td>
<td>3000VAC</td>
<td>SIP</td>
<td>CB</td>
<td>Intelligent Building, Instrumentation, Lighting</td>
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<td>KC24 Series</td>
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<td>5.5 ~ 48</td>
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<td>SMD</td>
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<td>Lighting, Mining</td>
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