

**Double-channel AC Switcher**






**PW021**

**User manual**

**IM19H18-E**














Notices
<ul style="list-style-type: none"> <li>● The reproduction, transmission or use of this document or its contents is not permitted without express written authority.</li> <li>● Information and specifications in this document are subject to change without notice.</li> <li>● While information in this document is well edited and checked, mistake or omission may exist. Please don't hesitate to contact SUPCON if you have any question about this document.</li> <li>● Please contact SUPCON via email "SMS@supcon.com" if you have any question.</li> </ul>

Trademarks
<p>Trademarks or marks SUPCON, SPlant, Webfield, ESP-iSYS, MultiF, InScan, SupField are all registered, registering or using by Zhejiang SUPCON Technology Co., Ltd., which owns the properties of all trademarks or marks above. Without the written authority from Zhejiang SUPCON Technology Co., Ltd, no individual or company shall use any trademarks or marks above. We reserve the right to take legal action for any individual or company using trademarks or marks above illegally.</p>

Symbol Definition	
	<b>WARNING:</b> Indicates information that a potentially hazardous situation which, if not avoided, could result in serious injury or death.
	<b>RISK OF ELECTRICAL SHOCK:</b> Indicates information that Potential shock hazard where HAZARDOUS LIVE voltages greater than 30V RMS, 42.4V peak, or 60V DC may be accessible.
	<b>ESD HAZARD:</b> Indicates information that Danger of an electro-static discharge to which equipment may be sensitive. Observe precautions for handling electrostatic sensitive devices
	<b>ATTENTION:</b> Identifies information that requires special consideration.
	<b>TIP:</b> Identifies advice or hints for the user.

## Security& Caution Symbols

The following table lists Security& Caution symbols used on equipments.

No.	Symbol	Description
1		Direct current (DC)
2		Alternating current (AC)
3		Ground (Earth) terminal
4		Protective earth (ground) terminal
5		Reference ground (Earth) terminal
6		Frame or chassis
7		Equipotentiality
8		On (power)
9		Off (power)
10		Caution, risk of electric shock
11		Caution, hot surface
12		Caution, risk of danger
13		Electrostatic sensitive devices (ESD)

# Table of Contents

<b>Double-channel AC Switcher PW021 .....</b>	<b>1</b>
<b>Section 1 Overview .....</b>	<b>1</b>
<b>Section 2 Specification .....</b>	<b>2</b>
<b>Section 3 Usage .....</b>	<b>3</b>
3.1 Structure .....	3
3.2 LED Indicator .....	3
3.3 Installation .....	3
3.4 Interface Feature .....	3
3.5 Terminal Wiring .....	4
3.6 Maintenance .....	4
<b>Section 4 Application .....</b>	<b>5</b>
4.1 Notice .....	5
4.2 Troubleshooting .....	5
<b>Section 5 Revision .....</b>	<b>6</b>

# Double-channel AC Switcher PW021

## Section 1 Overview

---

Double-channel AC switcher is specially designed for matching the power supply of computer in DCS operation node and network switch. It can provide reliable redundant power supply for equipment of single power supply. Double-channel AC switcher together with double-input power supply wire provide connected equipment with power supply. If the main power supply is unavailable, the auxiliary power supply will be switched on instantaneously, without causing any interruption in power supply of key load.

The switcher applies standard DIN rail in installation, and both input and output interfaces apply terminals for wiring.

## Section 2 Specification

---

**Table 2-1 Specification of PW021**

Model	PW021
AC Input	2-Channel Input (Can be in Different Phase)
AC Output	2-Channel Output (Parallel Connection)
Input/Output Voltage	220VAC±10%, 50/60Hz
Input/Output Current	2A (MAX)
Overload Protection	Need Externally Equipped
Switch Condition	Voltage for main power supply switched to auxiliary power supply: Main power supply voltage<66VAC
	Voltage for auxiliary power supply switched to main power supply: Main power supply voltage >176VAC

## Section 3 Usage

### 3.1 Structure

The appearance and structure of a double-channel AC switcher is shown in Figure 3-1.

Dimension: 92mm (Length) ×76mm (Width) ×60mm (Height)



Figure 3-1 Structure of PW021

### 3.2 LED Indicator

The statuses and corresponding indications of module indicator light are shown in Table 3-1.

Table 3-1 Instructions of module indicator light

LED Indicator Light	Power(Green)
Meaning	Indication on power supply status of module output
Status	
Off	Module AC power supply outputs abnormal
On	Module AC power supply outputs normal
Flash	--

### 3.3 Installation

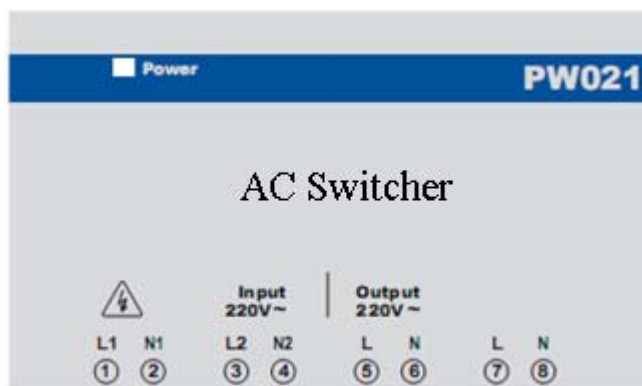
Installation conforms to standard DIN guide. For more details, refer to *Control Station Hardware User Manual*.

### 3.4 Interface Feature

Double-channel AC switcher PW021 in use should be connected with two AC input power supplies. The first channel is main power supply and the second is auxiliary power supply. When both

channels are normal, the first channel will provide output. In order to enhance the reliability of power supply, it is suggested that the first channel be connected with UPS.

Double-channel AC switcher panel and its terminal connection are shown in Figure 3-2.



**Figure 3-2 Panel and terminal connection of module PW021**

### 3.5 Terminal Wiring

Wiring instruction of module PW021 is shown in Table 3-2.

**Table 3-2 Instructions of CN032-S30 terminal connection**

Terminal Instruction	Terminal Number
First Channel 220VAC Power Supply L (Input)	1
First Channel 220VAC Power Supply N (Input)	2
Second Channel 220VAC Power Supply L (Input)	3
Second Channel 220VAC Power Supply N (Input)	4
220VAC Power Supply L (Output)	5
220VAC Power Supply N (Output)	6
220VAC Power Supply L (Output)	7
220VAC Power Supply N (Output)	8

### 3.6 Maintenance

The double-channel AC switcher PW021 in use should be examined regularly, by watching whether the status of channel indicator light is normal. Special attention should be paid to that whether one AC input is power off.

When DCS system is shut down for maintenance, module CN034-S10 should be checked that whether the input and output terminal connection line is loose. Switch experiment should be carried to test whether the switch function of switcher is normal.



## Section 4 Application

---

### 4.1 Notice

- Input voltage is  $220\text{VAC} \pm 10\%$ . Make sure requirement for input voltage is satisfied before being used.
- It is strictly forbidden that providing power supply to equipment outside the control system.

### 4.2 Troubleshooting

When “Power” light is off, it indicates power supply abnormal, please examine power supply or change the module.

## Section 5 Revision

---

*Table 5-1 Retrofit list of the version*

Document Version	Applicable Product Version	Remarks
V1.0	PW021-10.00.00	The first version.
V2.0(20140220)		Modify the format and some contents.
V2.1(20161018)	PW021	Add code.