



# Installation and Operation Guide for PD52 & PD53 Series Automatic Transfer Switch

## *LIMITED WARRANTY*

- I. **LIMITED WARRANTY:** Progressive Dynamics, Inc. warrants its power control center to be free from defects in material or workmanship under normal use and service; and limits the remedies to repair or replacement.
- II. **DURATION:** This warranty shall extend for a period of two years from the original date of purchase, and is valid only within the continental limits of the United States and Canada.
- III. **WARRANTY EXCLUSIONS:** This warranty specifically does not apply to:
  - A. Any product which has been repaired or altered in any way by an unauthorized person or service station;
  - B. Damage caused by excessive input voltage, misuse, negligence or accident; or an external force;
  - C. Any product which has been connected, installed or adjusted or used other than in accordance with the instructions furnished, or has had the serial number altered, defaced or removed;
  - D. Cost of all services performed in removing and re-installing the power converter; and
  - E. ANY LOST PROFITS, LOST SAVINGS, LOSS OF USE OF ENJOYMENT OR OTHER INCIDENTAL DAMAGES ARISING OUT OF THE USE OF, OR INABILITY TO USE, THE PRODUCT. THIS INCLUDES DAMAGES TO PROPERTY AND, TO THE EXTENT PERMITTED BY LAW, DAMAGES FOR PERSONAL INJURY. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.
- IV. **PROOF OF PURCHASE:** A warranty claim must be accompanied by proof of the date of purchase.
- V. **CLAIM PROCEDURE:** Upon discovery of any defect, Progressive Dynamics, Inc. shall be supplied the following information at the address listed in this manual:
  - A. Name and address of the claimant;
  - B. Name, model and serial number of the product;
  - C. Application in which product was installed. (Includes manufacturer, model and model year where applicable)
  - D. Date of purchase; and
  - E. Complete description of the claimed defect.

Upon determination that a warranty claim exists (a defect in material or workmanship occurring under normal use and service,) the product shall be shipped postage prepaid to Progressive Dynamics, Inc. together with proof of purchase. The product will be repaired or replaced and returned postage prepaid.

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## INSTALLATION INSTRUCTIONS

**WARNING: TORQUE ALL CONNECTIONS PER LABEL – EXCESSIVE TORQUE MAY CAUSE DAMAGE TO CONNECTIONS LEADING TO A FIRE CAUSING PROPERTY DAMAGE, SERIOUS INJURY OR DEATH.**

**WARNING: SHOCK HAZARD - DUE TO THE HIGH VOLTAGES ASSOCIATED WITH ITS OPERATION ONLY QUALIFIED SERVICE PERSONNEL SHOULD INSTALL OR TROUBLESHOOT THIS TRANSFER SWITCH! ALL APPLICABLE CODES AND STANDARDS MUST BE MET WHEN INSTALLING THIS DEVICE. SEE WIRING DIAGRAM INSIDE OF THE COVER AND ON THE BACK OF THIS PAGE. IMPROPER HANDLING OR INSTALLATION MAY CAUSE SERIOUS INJURY OR DEATH.**

**WARNING: THE 5200 & 5300 SERIES AUTOMATIC TRANSFER SWITCHES ARE NOT IGNITION PROTECTED AND SHOULD NOT BE MOUNTED IN THE SAME COMPARTMENT AS BATTERIES OR FLAMMABLE MATERIALS SUCH AS GASOLINE. DO NOT MOUNT THE TRANSFER SWITCH IN THE GENERATOR OR LP GAS COMPARTMENT. A FIRE CAUSING PROPERTY DAMAGE SERIOUS INJURY OR DEATH COULD RESULT!**

THESE PRODUCTS ARE NOT DESIGNED FOR USE WITH 240 VOLT SINGLE LEG SUPPLIES. APPLICATION OF VOLTAGES IN EXCESS OF 130 VOLTS FROM HOT TO NEUTRAL MAY CAUSE PERMANENT DAMAGE TO THE UNIT.

The 5200 & 5300 Automatic Transfer Switches can be installed as shown in figures 1 and 2 provided there is room to route the shore power, generator, and distribution connection wires. The 5200 & 5300 Automatic Transfer Switches including the Remote Display are not suitable for outdoor locations and should be mounted in a protected area. We recommend that the transfer switch be mounted as close to the shore power and generator power cords as practical to reduce voltage loss.

**REFER TO WIRING DIAGRAMS LOCATED INSIDE THE COVER FOR ALL CONNECTION INFORMATION AND TORQUE REQUIREMENTS.**

### **PROPER MOUNTING CONFIGURATIONS:**

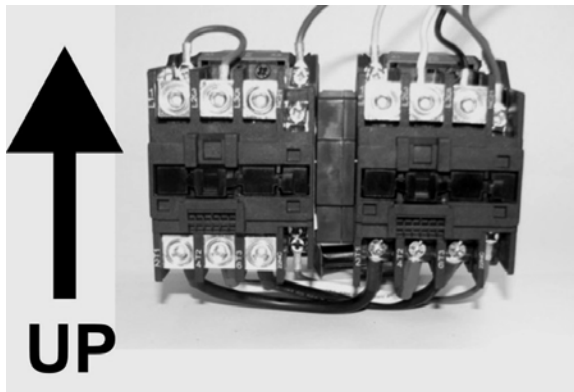


Figure 1 – Horizontal Wall Mount

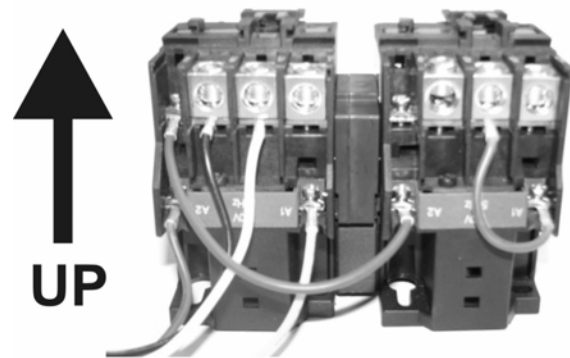
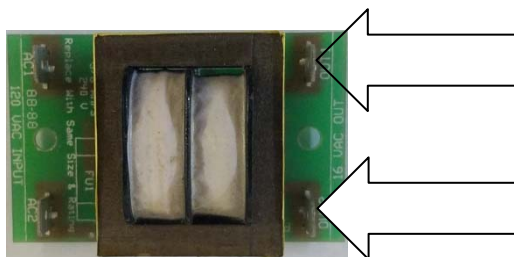


Figure 2 – Floor Mount

### **OPTIONAL VOLTAGE SENSE CONNECTION:**

(Used for Auto Generator Start)

For transfer switches supplied with the optional voltage sense PCB assembly, connect the '16 VAC OUT' connections to the 'Shore Power Present' inputs of your generator control center. These connections do not have a polarity requirement. This output will be 16VAC whenever shore power is present.

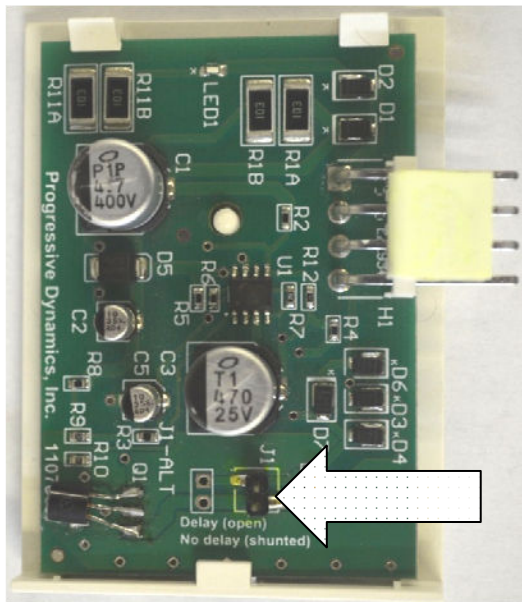


Consult a licensed electrician or RV technician for installation assistance

## GENERAL OPERATION

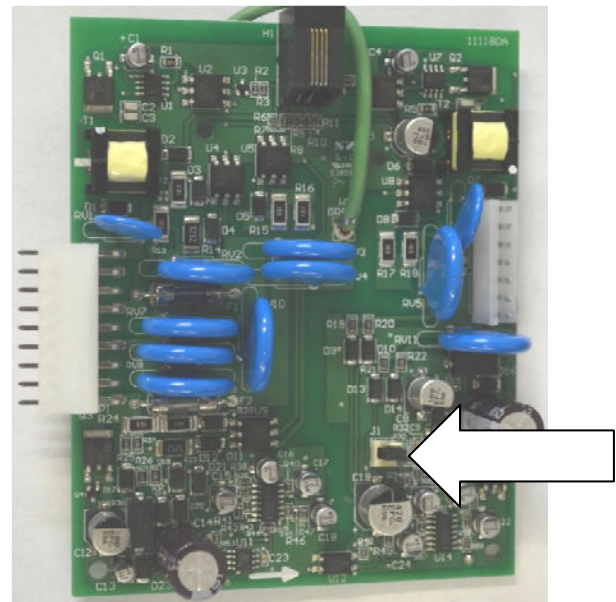
- When power is applied to the shore side, the contactor activates and supplies power to the panel - GREEN shore LED on front panel will light.
- When power is applied to the Gen side there is a 20-45 second delay then the Gen side contact will activate, power will go to the panel from the Gen side and the shore side will be locked out - GREEN generator LED on front panel will light.
- If shore power returns while the Gen power is present, nothing will happen. When the Gen power is removed the contactor will drop out and allow the shore side to supply power.
- In a single leg application, the HOT1 side must be used for the control circuitry to work. For models with surge protection, both HOT1 and HOT2 must have power applied for proper operation.

### HOW TO DISABLE GENERATOR TIME DELAY:



#### PD52/53 CONTROL BOARD

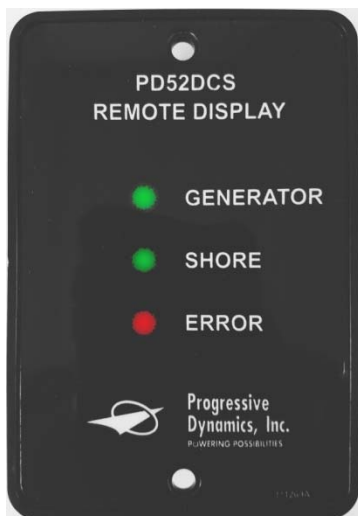
To **DISABLE** the time-out function of the control board, **INSTALL** a .100" jumper of the connector at **J1**.



#### PD52DCS CONTROL BOARD

To **DISABLE** the time-out function of the control board, **REMOVE** the jumper installed on the connector at **J1**.

### PD52DCSD REMOTE DISPLAY



The PD52DCSD remote display is equipped with three LED lights. The GREEN LEDs indicate SHORE power or GENERATOR power. The RED LED indicates an error has occurred and the surge protection may no longer be functioning.

If the RED LED is illuminated, please contact Progressive Dynamics service department for a replacement control board. The transfer switch may continue to function safely without surge protection.

<b>Specifications</b> (Specifications subject to change without notice)			
<b>Model</b>	<b>PD52</b>	<b>PD52DCS</b>	<b>PD53</b>
Voltage Rating	120/240Vac	120/240Vac	120/240Vac
Current Rating (line)	50A	50A	100A
Current Rating (neutral)	70A	70A	100A
Dominant Source	Generator	Generator	Generator
Open Neutral Protection	No	Yes	No
Reverse Polarity Protection	No	Yes	No
Safety Interlocks	Mechanical & Electrical	Mechanical & Electrical	Mechanical & Electrical
Under Voltage Protection	No	Yes	No
Over Voltage Protection	No	Yes	No
Multimode Surge Protection	No	Yes	No
Surge Energy Rating	n/a	3,300 Joules	n/a
Surge Current Rating	n/a	103,000A	n/a
Weight	7 lbs	10 lbs	17 lbs
Dimensions	10.38L x 6.88W x 4.50H	10.25L x 8.25W x 5.50H	12.00L x 10.00W x 6.00H
Listed	Yes	Yes	No

## **TROUBLESHOOTING GUIDE**

<u><b>PROBLEM</b></u>	<u><b>POSSIBLE CAUSES</b></u>	<u><b>ACTION</b></u>
No Output when Plugged into Shore Power	Wiring error between shore power and the transfer switch.	Correct wiring
	Defective transfer switch	Replace transfer switch
	Wiring error between generator and the transfer switch	Correct wiring
	Generator malfunction	Have generator serviced
No Output when Generator is Running	Wiring error between generator and the transfer switch.	Correct wiring
	Generator malfunction	Have generator serviced
	Defective transfer switch	Replace transfer switch
No Output to Auto Generator Start	Wiring error between shore power and the transfer switch.	Correct wiring
	Bad voltage sense control board.	Replace control board
Red LED(s) Illuminated (surge protected models only)	Surge protection has been damaged and is no longer functional.	Replace control board assembly. (Contact Progressive Dynamics service department for correct control board assembly)

See website [www.progressivedyn.com](http://www.progressivedyn.com) for more troubleshooting information and return instructions

**NOTES:**

Consult a licensed electrician or RV technician for installation assistance