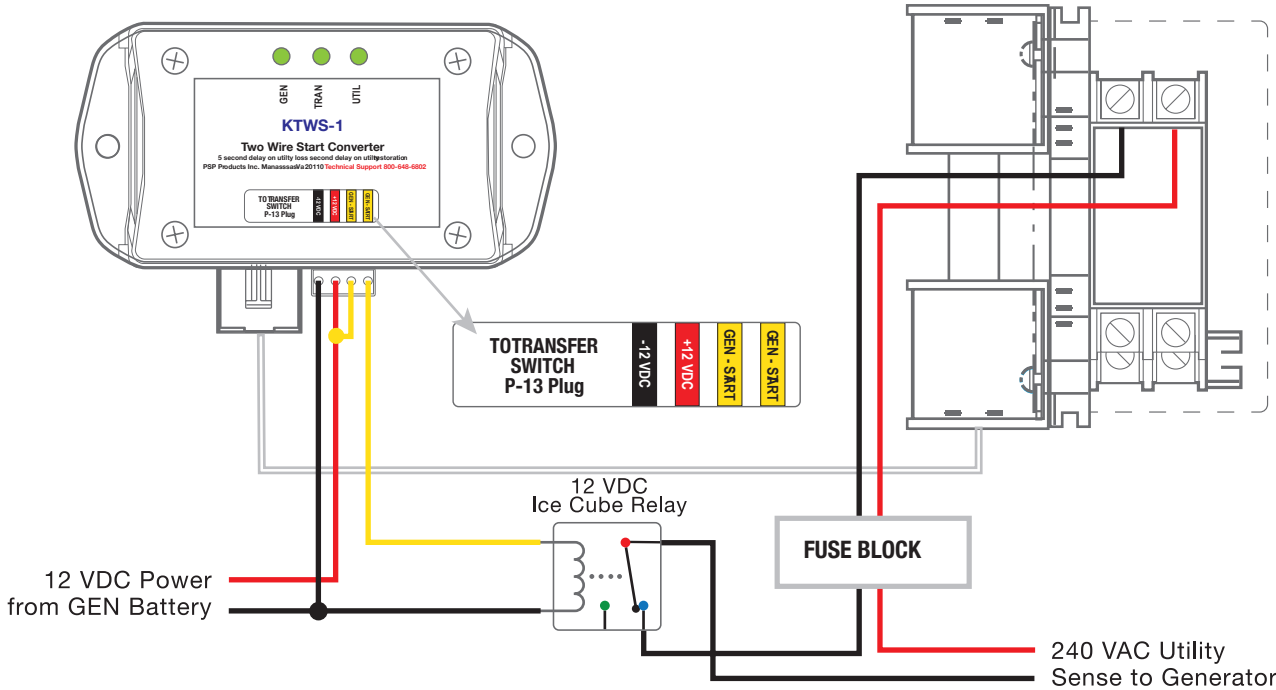


ATTENTION: SURGE PROTECTOR MUST BE INSTALLED ON THE LINE SIDE OF THE TRANSFER SWITCH OR THE PRODUCT WARRANTY WILL BE VOIDED



<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; border: 1px solid black; border-radius: 50%; width: 30px; height: 30px;">6</td> <td style="text-align: center; border: 1px solid black; border-radius: 50%; width: 30px; height: 30px;">5</td> </tr> <tr> <td style="text-align: center; border: 1px solid black; border-radius: 50%; width: 30px; height: 30px;">7</td> <td style="text-align: center; border: 1px solid black; border-radius: 50%; width: 30px; height: 30px;">4</td> </tr> <tr> <td style="text-align: center; border: 1px solid black; border-radius: 50%; width: 30px; height: 30px;">8</td> <td style="text-align: center; border: 1px solid black; border-radius: 50%; width: 30px; height: 30px;">3</td> </tr> <tr> <td style="text-align: center; border: 1px solid black; border-radius: 50%; width: 30px; height: 30px;">9</td> <td style="text-align: center; border: 1px solid black; border-radius: 50%; width: 30px; height: 30px;">2</td> </tr> <tr> <td style="text-align: center; border: 1px solid black; border-radius: 50%; width: 30px; height: 30px;">10</td> <td style="text-align: center; border: 1px solid black; border-radius: 50%; width: 30px; height: 30px;">1</td> </tr> </table> <p style="text-align: center; font-weight: bold; color: blue;">TIMERS</p>	6	5	7	4	8	3	9	2	10	1	<p>20 Minute Weekly Exercise Timer Pins 1&2 Open- Off Pins 1&2 Shorted- On</p> <p>Utility Return Transfer Timer Pins 3,4&5 Open- 129 Seconds Pins 3&4 Shorted- 30 Seconds Pins 3&5 Shorted- 600 Seconds</p> <p>Utility Loss Timer Pins 6&7 Open- 5 Seconds Pins 6&7 Shorted- 30 Seconds</p> <p>Generator Cool Down Timer Pins 8,9 & 10 Open- 10 Seconds Pins 8&9 Shorted- 300 Seconds Pins 9&10 Shorted- 600 Seconds</p> <p><i>Use shorting pins provided if changes are required</i></p>
6	5										
7	4										
8	3										
9	2										
10	1										

Pre-Set Timers

The KTWS-1 is factory pre-set as follows: 5 second utility loss delay before starting the generator, 15 second delay before transferring after generator voltage is detected and a 2 minute delay before switching back to utility after power is restored. The generator ON contacts will open 10 seconds after the power transfers back to utility.

Exercise Timer

Exercise Timer: An optional exercise timer can be activated by shorting pins 1 & 2. The exercise timer is preset to activate once every 7 days and run for 20 minutes. This setting is not adjustable. The exercise timer starts at power-up and will continue to exercise every seven days. Note the seven day cycle starts at power-up. In the event battery power is lost and restored the exercise time will restart at the time of power-up.

Installation Instructions

Disconnect Power from Generator and Utility source. Remove connector P-13 from the control board and remove control board. Insert connector P-13 plug into **KTWS-1** Module and secure to transfer switch enclosure. Remove 4 pin connector from KTWS-1 and connect +12 VDC, -12 VDC and two wire start terminals from generator to **GEN START** connections. Restore utility power and install 4 pin connector on KTWS-1.

Start-Up / Initial Test Procedure

At power-up the utility LED should illuminate. 1) Simulate utility outage, after 5 second delay generator start contacts will close and generator LED will illuminate when generator power is present. After 15 second delay, generator power will be transferred to the load. 2) Restore utility power, after a 2 minute delay power will transfer back to utility, after a 10 second delay the generator start contacts will open.

Technical Assistance Call: 800-648-6802 • After Hours Tech Support 443-600-3403



Important: Risk of electrical shock.
This device should only be installed by qualified personnel.