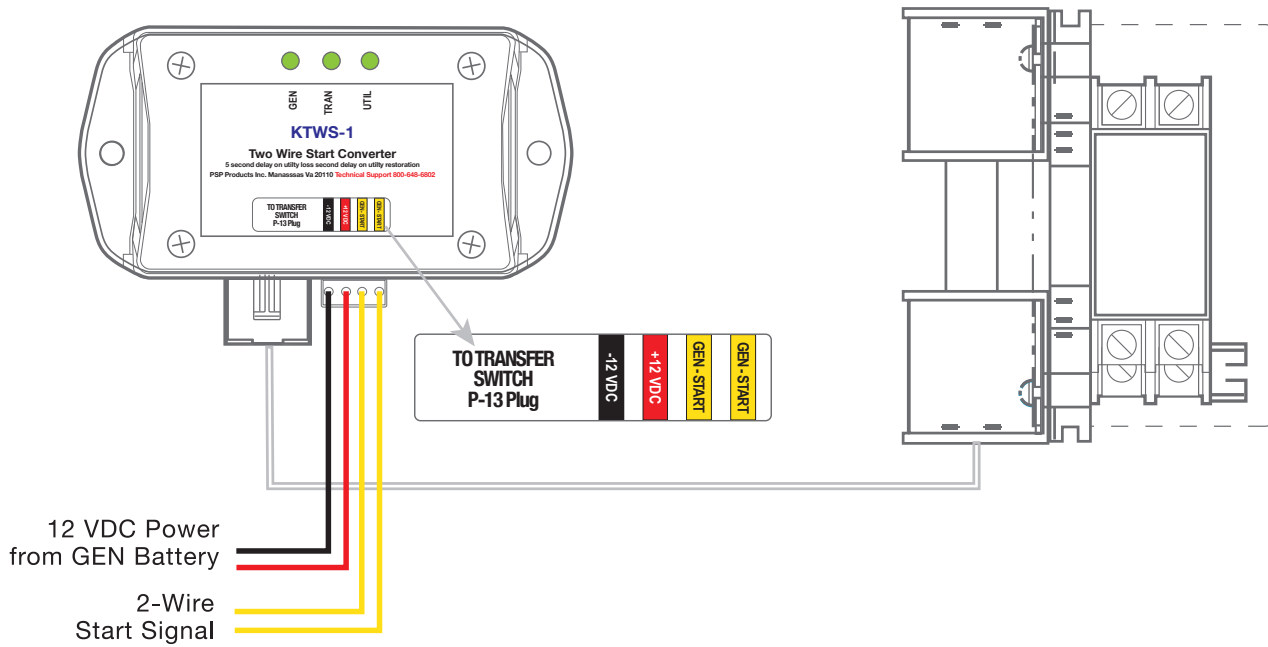


**ATTENTION: SURGE PROTECTOR MUST BE INSTALLED ON THE LINE SIDE OF THE TRANSFER SWITCH OR THE PRODUCT WARRANTY WILL BE VOIDED**



|               |   |  |
|---------------|---|--|
| 6             | 5 | <b>Utility Return Transfer Timer</b><br>Pins 3,4&5 Open- 129 Seconds<br>Pins 3&4 Shorted- 30 Seconds<br>Pins 3&5 Shorted- 600 Seconds<br><br><b>Utility Loss Timer</b><br>Pins 6&7 Open- 5 Seconds<br>Pins 6&7 Shorted- 30 Seconds<br><br><b>Generator Cool Down Timer</b><br>Pins 8,9 & 10 Open- 10 Seconds<br>Pins 8&9 Shorted- 300 Seconds<br>Pins 9&10 Shorted- 600 Seconds<br><br><i>Use shorting pins provided if changes are required</i> |
| 7             | 4 |  |
| 8             | 3 |  |
| 9             | 2 |  |
| 10            | 1 |  |
| <b>TIMERS</b> |   |  |

**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.

*Optional weekly exercise timer available - Consult factory*

**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.*