9,000-volt output
- Solid state technology yields high performance, long life and durability
- Interrupted-duty rated
- Low current draw saves electricity
- Epoxy sealant provides water resistance and heat dissipation
- Consistent voltage output across a wide range of input voltages

<table>
<thead>
<tr>
<th>SPECIFICATIONS*</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power input</td>
<td>120 VAC, 60 HZ</td>
</tr>
<tr>
<td>Ignitor output</td>
<td>11 kV</td>
</tr>
<tr>
<td>Secondary grounding</td>
<td>Single pole endpoint grounding</td>
</tr>
<tr>
<td>Operating temperature limits</td>
<td>0°F to +106°F</td>
</tr>
<tr>
<td>Storage temperature limits</td>
<td>-40°F to 185°F</td>
</tr>
<tr>
<td>Spark connection</td>
<td>1/4&quot; male Rajah connection</td>
</tr>
<tr>
<td>Agencies</td>
<td>UL Recognized – US &amp; Canada (File #MH16422)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>40VA</td>
</tr>
<tr>
<td>Interrupted ignition duty cycle</td>
<td>20%, 60 seconds on (Max.)</td>
</tr>
<tr>
<td>Spark gap</td>
<td>1/8&quot;</td>
</tr>
<tr>
<td>Firing rate</td>
<td>23 kHz</td>
</tr>
<tr>
<td>Energy discharge</td>
<td>1.6 milijoule per spark</td>
</tr>
<tr>
<td>Discharge time</td>
<td>43 µSeconds</td>
</tr>
<tr>
<td>Weight</td>
<td>12 oz.</td>
</tr>
</tbody>
</table>

*Performance specifications under static air conditions.
Installing and Wiring

**Carlin ignitors must be installed and serviced only by a qualified burner service technician. Always disconnect power source before wiring to avoid electrical shock or damage to electrical components.**

**NOTICE**

Grounding – The ignition circuit requires a reliable ground path back to the ground strap in the external mounting lug.

1. Disconnect wires from primary control to existing ignition transformer.
2. Remove any screws securing ignition transformer.
3. Observe the routing of electrical wiring from burner junction box to transformer.
4. Remove existing ignition transformer or ignitor.
5. Install new ignitor, reversing the above steps.
6. Mount the ignitor as described below.

**WARNING**

Ignitor Part Number 4180002F provides connection to a high voltage wire using a standard Rajah spring terminal with boot.

**Mounting 4180002F Ignitor**

1. Secure the 4180002F ignitor using two #10 screws through the external mounting lugs.

**Electrode Setting and Positioning for Gas Burner Systems**

Ignition electrode location must be set according to the burner manufacturer’s instructions:

1. Ignition electrodes must not interfere with the normal flame pattern.
2. Ignition electrodes should not be positioned such that they will be overheated by the flame.
3. The flame detection device must not be adversely affected. In the case of flame rod sensors make sure that the ignition spark does not disturb the flame signal unduly. See Ignition Spark Test

**NOTE:** For ultraviolet (UV) sensors, ensure that the spark does not give a false flame indication. See Ignition Spark Test.

**Field Check**

**WARNING**

Never test an ignitor by placing a screwdriver (or other metallic object) across the high voltage terminals or from high voltage terminal to ground. Serious injury and damage to the ignitor could result.

1. You must use the burner’s ignition device to test the ignitor. This is because there must be a reliable ground path to the ground strap in the external mounting lug.
2. Turn off the burner gas supply and start the burner. Observe the burner ignition electrode to see if spark operation is correct.
3. If ignition spark is not acceptable, check ground path back to ignitor mounting plate or j-box. Verify ignition electrode is not in contact with any grounded surface and electrode insulators are in good condition.

**Ignition Spark Test**

If an ultraviolet flame sensor is being used in your application, the UV detector may pick up UV radiation being emitted by the electrical spark. To test whether the UV detector is picking up the ignition spark and to eliminate the condition, take the following actions:

1. Shut off fuel supply to both pilot and main fuel.
2. Enable system by raising controller set point or by pressing the Start button.
3. Turn on the ignitor so that the ignition spark is produced between electrode and ground.
4. Test to make sure that ignition has not occurred. There should be no flame sensed. If detected, reverse the leads.
5. Test the flame relay on the flame safeguard control. If the relay has not pulled in, the system is functioning properly. Turn on the fuel supply and continue to check out with the pilot turn-down test (if applicable).
For applications requiring burner cover plate mounting, contact Carlin factory for availability and part numbers of cover plate kits.