TempVision’s two-color spectrum imaging technology measures furnace temperature within its viewing window with a better than 1% accuracy. TempVision simultaneously monitors the temperature and automatically compensates for emissivity variation caused by the soot around the target area. This is a critical capability for precise temperature measurement in a coal-fired furnace environment.

Safe-Fire’s TempVision 5000 system continuously measures - in real time - burner temperature profiles inside a boiler’s or furnace’s combustion chamber. This dynamic system can be configured for use on a variety of boilers and furnaces with the appropriate combination of TempVision Detectors and a processing/communications suite. The on-demand combustion temperature display enables plant operators to make informed decisions to adjust the crucial fuel-to-air ratio inside the furnace. With a focus in the combustion field, Safe-Fire is committed to improving our customers’ combustion efficiency through reduced fuel consumption, decreased emissions, and increased boiler service life.
HOW THE TEMPVISION 5000 SYSTEM WORKS...

FEATURES

- Better than 1% accuracy
- Real time burner temperature profile
- Temperature measurement is independent of soot dynamic and emissivity variation
- On-demand combustion temperature view
- Data storage and analytical tool makes analysis easy
- Flexible alarm setting and powerful failure log screen
- Communication interface with process control system
- Modular design for easy maintenance and configuration

Notes:
1. Up to 8 Detectors per Local Process Cabinet
2. Up to 4 Local Process Cabinet per System

1. HMI Station: Rodin Q
2. Master Server: MCP-5000
3. Local Process Cabinet
4. Terminal Box
5. Temperature Detector: TDU-5000
**BENEFITS**

- TempVision 5000 system enables the operator to visualize the temperature distribution of burner flames as well as the maximum, minimum, and median temperatures of the region of interest.
- TempVision 5000 can correlate the impact of the temperature distribution of burner flames when a different type of coal is deployed.
- TempVision 5000 enables the user to intuitively understand the flame temperature differences and its distribution inside the furnaces.
- TempVision 5000 provides critical data for remote diagnosis of boiler combustion conditions.
- TempVision 5000 is a powerful tool for historical data analysis.
- TempVision 5000 system can be used to evaluate the performance of boiler operations under various conditions.

**SYSTEM SOFTWARE CAPABILITY**

**DIMENSIONS**

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>PRODUCT SERIES</th>
<th>TDU-5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>INPUT POWER</td>
<td>12-24VDC, 7.3W</td>
</tr>
<tr>
<td>MEASUREMENT RANGE</td>
<td>850°C To 1900°C</td>
</tr>
<tr>
<td>ACCURACY</td>
<td>Better than 1% full scale</td>
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<tr>
<td>FIELD OF VIEW (FOV)</td>
<td>60°</td>
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<tr>
<td>IMAGE PIXELS</td>
<td>1024(h)x768(v)</td>
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<tr>
<td>LENS LENGTH</td>
<td>12&quot;, 18&quot;, 24&quot;</td>
</tr>
<tr>
<td>MOUNTING TUBE DIAMETER</td>
<td>60 mm(2.37&quot;)</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>16kg (for 18&quot; variant)</td>
</tr>
</tbody>
</table>