Weldguide III
Thru-the-arc Seam Tracking
Weldguide III

1. **Two external sensors**
   - Welding current and arc voltage
   - Patented technology

2. **Faster path correction**
   - Measurements at 25 kHz
   - Quick and accurate path corrections

3. **Supports different welding modes**
   - Spray-arc
   - Short-arc
   - Pulsed-arc

The most powerful robotic thru-the-arc seam tracking sensor on the market
Weldguide III is seamlessly integrated with the robots IRC5 control system, which makes it easy to program and makes all pertinent information available at your fingertips.
Weldguide III
Multi-Pass Welding

Sometimes multiple weld passes are required due to the required weld size and thickness of the material being joined. Weldguide III makes this easy by tracking the first pass and storing the actual tracked path so it can offset for subsequent passes.

- Root-path memorization
- Path off-sets, both angle and position
- Forward/reverse path replay
- Path length control
Weldguide III
Basic Tracking Modes

Torch to Work Mode

Torch to Work mode is a height-sensing value where the torch-to-work distance is maintained by measuring the target current and adjusting the height to maintain the setting.

Centerline Mode

Centerline mode is used in weaving where the impedance is measured as the torch moves side-to-side. The position of the weld can be adjusted side to side using the bias parameter.
Weldguide III
Advanced Tracking Modes

Adaptive Fill Mode enables the robot to identify and adjust for variations in joint tolerances. If the joint changes in width, the robot’s weave will increase or decrease and the travel speed will be adjusted accordingly.
## Comparison
**Weldguide III vs. AWC**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Weldguide III Basic</th>
<th>Weldguide III Advanced</th>
<th>AWC</th>
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</thead>
<tbody>
<tr>
<td>FlexPendant User Interface</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Height Sensing</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Centerline Tracking</td>
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<tr>
<td>Multipass</td>
<td>✓</td>
<td>✓</td>
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<tr>
<td>Adaptive Fill</td>
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<td>✓</td>
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<tr>
<td>Singleside Tracking</td>
<td>✓</td>
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<td><strong>Release 10.1 Q2 2010</strong></td>
<td><strong>Release 10.2 Q4 2010</strong></td>
<td><strong>Phased-out 2010</strong></td>
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</tbody>
</table>
Route the 16 gauge, 600V conductor (3" long) from the Positive (+) terminal of the Voltage Sense Terminal Block to the Positive welding cable connection point at the Welding Torch or Wire Feeder.

Route the 16 gauge, 600V conductor (25" long) from the Negative (-) terminal of the Voltage Sense Terminal Block to the Negative welding cable connection point at the Work piece ground point.

Figure 1: Weldguide III Installation Diagram
For more information ...

... go to www.abb.com