Thank you for your purchase of a PDW90 Base Station Module. Modules are easy to install and add functionality to your wireless system.

There are four types of modules available: dual analog inputs, dual analog outputs, digital I/O, and dual relays.

The analog outputs module allows the base station to output two independent analog signals being broadcast by any of the field units.

The analog inputs module allows the base station to accept two analog signals and transmit them wirelessly to any of the connected field units.

The digital I/O module contains four channels which can be programmed to correspond with any of the field units' digital inputs or outputs.

The dual relays module can also be controlled from any of the connected field units' digital I/O.

⚠️ The PDW90 base station must be powered down completely prior to installing or removing any modules. Failure to do so could result in damage to the electronics.

⚠️ To prevent damage to electronic components caused by electrostatic discharge, a grounding strap should always be worn when handling electronic components.

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Installing the Module Card

- Power off the PDW90 base station by unplugging it from the power source.
- Plug the module pins into an available module port on the base station’s main board as shown in the illustration to the right.
- Power the PDW90 base station back on. For information on configuring the newly attached module, consult the PDW90 instruction manual.

Specifications

Dual Analog Inputs

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Field selectable: 4-20 mA, 0-10 V, 0-5 V, 1-5 V</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>±0.03% of cal. span ±1</td>
</tr>
<tr>
<td>Isolation</td>
<td>500 V</td>
</tr>
<tr>
<td>Recalibration</td>
<td>Recalibration recommended every 12 months.</td>
</tr>
<tr>
<td>Temperature Drift</td>
<td>0.005% of cal. span/°C max (0 to 65°C ambient), 0.01% of cal. span/°C max (-40 to 0°C ambient)</td>
</tr>
<tr>
<td>Input Impedance</td>
<td>Voltage ranges: greater than 500 kΩ; Current ranges: 50 - 100 Ω</td>
</tr>
<tr>
<td>HART Transparency</td>
<td>Analog input will not interfere with existing HART communications on the wired 4-20 mA signal</td>
</tr>
</tbody>
</table>

Dual Analog Outputs

<table>
<thead>
<tr>
<th>Output Source</th>
<th>Analog input from connected wireless unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calibration</td>
<td>Factory calibrated: 4.000 to 20.000 = 4-20 mA out</td>
</tr>
<tr>
<td>Accuracy</td>
<td>± 0.1% span ± 0.004 mA</td>
</tr>
<tr>
<td>Isolation</td>
<td>500 V</td>
</tr>
<tr>
<td>Temperature Drift</td>
<td>0.4 μA/°C max (0 to 65°C ambient), 0.8 μA/°C max (-40 to 0°C ambient)</td>
</tr>
</tbody>
</table>

Loop Power Supply

<table>
<thead>
<tr>
<th>Supply</th>
<th>Internally powered; no external supply needed</th>
</tr>
</thead>
</table>

Output Loop Res.

<table>
<thead>
<tr>
<th>Power</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 VDC</td>
<td>10Ω</td>
<td>900Ω</td>
</tr>
</tbody>
</table>

Digital I/O

<table>
<thead>
<tr>
<th>Channels</th>
<th>Four (4) digital connections, independently field selectable as either inputs or outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>DI Logic Hi</td>
<td>3 to 5 VDC</td>
</tr>
<tr>
<td>DI Logic Lo</td>
<td>0 to 1.1 VDC</td>
</tr>
<tr>
<td>DO Logic Hi</td>
<td>3 to 5 VDC</td>
</tr>
<tr>
<td>DO Logic Lo</td>
<td>0 to 0.4 VDC</td>
</tr>
<tr>
<td>Source Current</td>
<td>10 mA max output current</td>
</tr>
<tr>
<td>Sink Current</td>
<td>1.5 mA min input current</td>
</tr>
</tbody>
</table>

Dual Relays

<table>
<thead>
<tr>
<th>Rating</th>
<th>2 SPDT (Form C); 3 A @ 30 VDC, 125/250 VAC resistive.; 1/14 HP (≈ 50 W) @ 125/250 VAC inductive.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Noise Suppression</td>
<td>Noise suppression recommended for switching inductive loads.</td>
</tr>
<tr>
<td>Initialization</td>
<td>After power failure, relays initialize to default state.</td>
</tr>
</tbody>
</table>