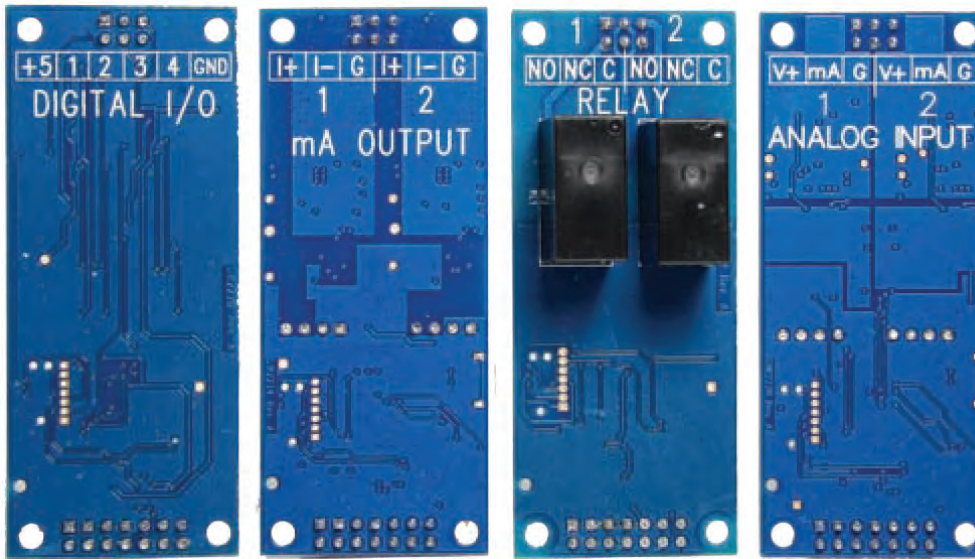


PDW90 Base Station Module

Instruction Manual



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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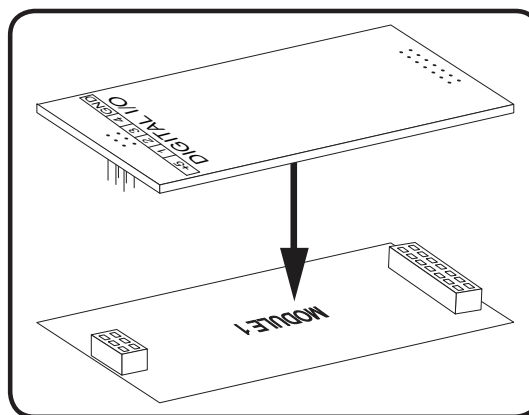
1.888.610.7664

 www.calcert.com

sales@calcert.com

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

Inputs	Field selectable: 4-20 mA, 0-10 V, 0-5 V, 1-5 V
Accuracy	$\pm 0.03\%$ of cal. span ± 1
Isolation	500 V
Recalibration	Recalibration recommended every 12 months.
Temperature Drift	0.005% of cal. span/ $^{\circ}$ C max (0 to 65 $^{\circ}$ C ambient), 0.01% of cal. span/ $^{\circ}$ C max (-40 to 0 $^{\circ}$ C ambient)
Input Impedance	Voltage ranges: greater than 500 k Ω ; Current ranges: 50 - 100 Ω
HART Transparency	Analog input will not interfere with existing HART communications on the wired 4-20 mA signal

Dual Analog Outputs

Output Source	Analog input from connected wireless unit
Calibration	Factory calibrated: 4.000 to 20.000 = 4-20 mA out
Accuracy	$\pm 0.1\%$ span ± 0.004 mA
Isolation	500 V
Temperature Drift	0.4 μ A/ $^{\circ}$ C max (0 to 65 $^{\circ}$ C ambient), 0.8 μ A/ $^{\circ}$ C max (-40 to 0 $^{\circ}$ C ambient)

Loop Power Supply	Internally powered; no external supply needed		
Output Loop Res.	Power	Min	Max
	24 VDC	10 Ω	900 Ω

Digital I/O

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

Dual Relays

Rating	2 SPDT (Form C); 3 A @ 30 VDC, 125/250 VAC resistive.; 1/14 HP (\approx 50 W) @ 125/250 VAC inductive.
Noise Suppression	Noise suppression recommended for switching inductive loads.
Initialization	After power failure, relays initialize to default state.