

PDWM90 Base Station I/O Modules

Instruction Manual



Dual Relays
Module

Dual Analog
Output Module

Four Digital
I/O Module

Dual Analog
Input Module



PDW90 Base Station
(Sold Separately)

INTRODUCTION

Modules for the PDW90 base station are easy to install and add functionality to the wireless system. There are four types of modules available: dual analog inputs, dual analog outputs, four digital I/O, and dual relays. The base station modules are completely enclosed in plastic housings for added protection.

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 four 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.

FEATURES

- Easy to Install
- Adds Functionality to the PDW90 Wireless System
- Three Sizes of PDW90 Base Stations Can Hold 2, 6, and 16 I/O Modules
- Modules are Completely Enclosed in Plastic Housings for Added Protection
- Dual Analog Inputs Module
- Dual Analog Outputs Module
- Four Digital I/O Module
- Dual Relays Module

SPECIFICATIONS

Dual Analog Inputs

Inputs	Field selectable: 4-20 mA, 0-10 V, 0-5 V, 1-5 V
Accuracy	±0.03% of cal. span ±1
Isolation	500 V
Recalibration	Recalibration recommended every 12 months.
Temperature Drift	0.005% of cal. span/° C max (0 to 65° C ambient), 0.01% of cal. span/° C max (-40 to 0° C ambient)
Input Impedance	Voltage ranges: greater than 500 kΩ; 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	± 0.1% span ± 0.004 mA		
Isolation	500 V		
Temperature Drift	0.4 µA/°C max (0 to 65°C ambient), 0.8 µA/°C max (-40 to 0°C ambient)		
Loop Power Supply	Internally powered; no external supply needed		
Output Loop Res.	Power	Min	Max
	24 VDC	10Ω	900Ω

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 (~50 W) @ 125/250 VAC inductive.
Noise Suppression	Noise suppression recommended for switching inductive loads.
Initialization	After power failure, relays initialize to default state.

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INSTALLING MODULES

Make sure the PDW90 base station is powered off by unplugging it from the power source prior to installation.



Plug the module pins into an available module port on the base station's main board as shown in the photo on the left.



Press the module firmly onto the electronics board to make sure it is in place and secure.



Install the connector plug into the terminal on the base station's main board. It is recommended that the wires be inserted into the plug and screws tightened prior to installing the plug into the terminal.

Note: To install the new modules into the first generation of Base Station: Remove and discard the 2 screws holding the plastic electronic module together, remove the circuit board from the housing and discard the housing, and then install the circuit board into the Base Station.

ORDERING INFORMATION

PDW90 Base Station Module Models	
PDWM90-BASE-2AI	PDW90 Dual Analog Input Base Station Module
PDWM90-BASE-2AO	PDW90 Dual Analog Output Base Station Module
PDWM90-BASE-2RY	PDW90 Dual Relay Output Base Station Module
PDWM90-BASE-4DI	PDW90 Four Digital I/O Base Station Module

⚠ WARNING

Cancer and Reproductive Harm - www.P65Warnings.ca.gov

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