



## PDR900

### SERIES 900 CONTROLLER

The PDR900 power supply and readout unit is a stand alone, single channel controller for use with the Series 900 digital vacuum transducers. The instrument sets new standards for vacuum gauge controllers and can be used as a stand-alone power supply readout unit or as a tool for configuration, calibration and diagnostics of system integrated transducers in OEM applications.

### Features & Benefits

- LCD menu display for easy user interface
- Easy to read 5 digit LED display
- Three high power set point relays for process control
- Auto setup permits plug and play functionality
- Leak detection tool for system diagnostics
- Data logging tool for process monitoring
- Simplified setup and configuration of transducer parameters
- Front panel indicators provide clear, concise overview of setpoint relay status
- Alarm function provides warning in case of vacuum line or venting failure
- Code protection function to prevent unauthorized access to critical settings
- Calibrate transducers quickly and easily
- Ease of operation via analog output and digital communication
- Robust, compact design can be used on the bench or rack mounted
- Light weight, aluminum housing is ideally suited for field service applications
- World-wide universal power supply, 100 to 240 VAC/ 50-60hz
- RoHS and CE compliance

### Description

The PDR900 controller is the ideal solution for vacuum measurement, configuration of digital transducers and advanced system diagnostics. The controller features an easy to use menu-driven user interface, which guides the user through setup and configuration of remote transducer parameters.

The readout unit communicates digitally with the transducer which eliminates analog measurement noise coupling via transducer cables. The unit automatically detects the transducer type, and can be used with both RS232 and RS485 transducers.



## Description (cont)

The PDR900 controller is compatible with all digital Series 900 transducers, including:

- 901P Loadlock™ Transducer
- 902 Piezo Transducer
- 909AR Hot Cathode Transducer
- 910 DualTrans™ Transducer
- 925/925C MicroPirani™ Transducer
- 971 UniMag
- 972 DualMag
- 973 TriMag
- 974 QuadMag
- 979B Atmosphere to Vacuum Transducer
- 999 Quattro™ Transducer

(Not compatible with 909/909A or 903 analog transducers)

## User Interface and Display

The controller's menu-driven user interface provides easy access to the digital transducer settings via push button controls on the front panel (Figure 1).



Figure 1

The alpha numeric LCD display features a green back-lit screen that is easily visible in low light conditions. The 5-digit LED display provides a clear readout of the measured pressure.

The multi-colored set point indicators provide a quick and clear overview of the set point relay status. Units are selectable and can be displayed in either Torr, mbar, or Pascal.

The PDR900 features various display modes that allow the user to display pressure in an analog bar graph readout (Figure 2) or show set point status information.



Figure 2

## Data Capture and Analysis

The built-in data logging tool allows the user to perform measurement acquisitions and eliminates the need for a separate PC and software. The measurements are logged to the internal non-volatile memory with a capacity of 450 measurements.

The data logger can be programmed to acquire data from seconds to hours. The time stamped measurements are either viewed on the screen or uploaded to a PC for subsequent analysis or data plotting (Figure 3).



Figure 3

The data logger can also be used to perform and document out-gassing tests of vacuum chambers by monitoring pressure rise over time.

## Power Set Point Relays

The PDR900 has up to three power set point relays, depending on the transducer type. The relays are controlled by the transducer relay contacts, eliminating the need for external power relays. The relay connector has terminal screw connections for quick and easy connectivity.

## Digital and Analog Communication

The PDR900 is equipped with both an RS232 and RS485 user interface as a standard feature. The communication interface enables remote control of transducer setup as well as transmission of measurement data. The user interface type is selected via the controller menu (Figure 4).



Figure 4

Additionally, the transducer analog output voltage is available on the rear panel of the PDR900 controller.

For more information call MKS Instruments, HPS Products at 1-800-345-1967 (US only) or 303-449-9861. Or visit our website at [www.mksinst.com](http://www.mksinst.com).



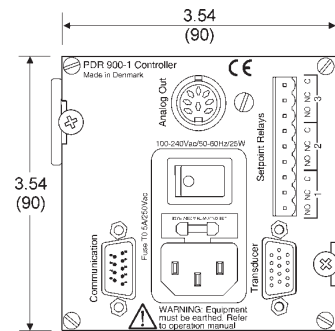
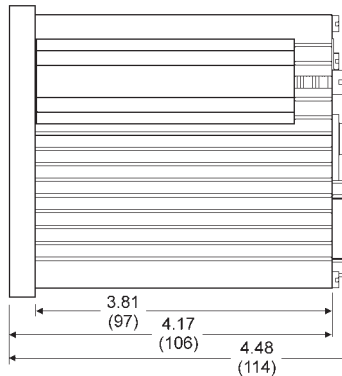
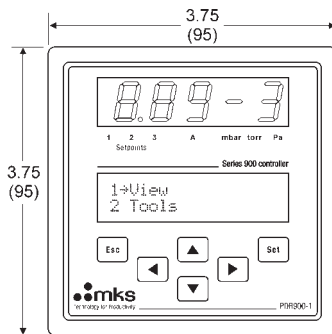
# Specifications and Dimensions

## PDR900 Controller Specifications

<b>Display Range</b>	1.0 X 10 <sup>-10</sup> to 1,500 Torr (transducer dependent)
<b>Pressure Units</b>	User selectable: Torr, mbar, Pascal
<b>Operating Temperature</b>	5° to 40°C (41° to 104°F)
<b>Storage Temperature</b>	-10° to 55°C (14° to 131°F)
<b>Power Requirements</b>	100-240 VAC, 50-60 Hz, 25 Watts
<b>User Interface</b>	RS232 / RS485 and analog output (transducer dependent)
<b>Relays</b>	Up to 3 relays, SPDT (transducer dependent)
<b>Relay Contact Rating</b>	4 A @ 250 VAC, resistive
<b>Display</b>	5 digit, 14.2 mm, green LED
<b>Weight</b>	1.4 lbs (0.625 kg)
<b>Electronic Casing</b>	Painted aluminum
<b>Mounting</b>	96 x 96mm, DIN43700
<b>CE Certification</b>	89/336/EEC EMC Directive 73/23/EEC Low Voltage Directive
<b>Compatible Transducers</b>	901P, 902, 909AR, 925, 925C, 910, 971, 972, 973, 974, 979, 999 (Not compatible with 909/909A or 903 analog transducers).

*Note: The PDR900 operates 100% digitally, and consequently, there is no loss of accuracy from the measured transducer pressure value to the displayed pressure value. For transducer specifications and performance, please refer to individual transducer datasheets.*

## PDR900 Controller Dimensions



Dimensions: inches / (mm)



# Ordering Information

## PDR900 Controllers

Part Number	Description
PDR900-12-US	PDR900 Single Channel Controller, RS232/RS485, region US
PDR900-12-EU	PDR900 Single Channel Controller, RS232/RS485, region EU
PDR900-12-UK	PDR900 Single Channel Controller, RS232/RS485, region UK
PDR900-12-DK	PDR900 Single Channel Controller, RS232/RS485, region DK

PDR 900 controllers are supplied complete with power cord (region specific), manual, mounting hardware and set point connector kit

## Cables

Transducers with RS232 communication & 15 pin D sub  
PDR900 to Series 901P, 909AR, 910, 925, 971, 972, 973, 974, 979B, 999

Part Number	Description
100013620	Cable, PDR900 to 15 Pin, 10ft (3m)
100013622	Cable, PDR900 to 15 Pin, 25ft (7.6m)

Transducers with RS485 communication & 15 pin D sub  
PDR900 to Series 901P, 909AR, 910, 925, 971, 972, 973, 974, 979B, 999

Part Number	Description
100013671	Cable, PDR900 to 15 Pin, 10ft (3m)
100013673	Cable, PDR900 to, 15 Pin 25ft (7.6m)

Transducers with RS232 communication & 9 pin D sub  
PDR900 to Series 902, 925, 925C

Part Number	Description
100013613	Cable, PDR900 to 9 Pin, 10ft (3m)
100013615	Cable, PDR900 to, 9 Pin 25ft (7.6m)

Transducers with RS485 communication & 9 pin D sub  
PDR900 to Series 902, 925, 925C

Part Number	Description
100013664	Cable, PDR900 to 9 Pin, 10ft (3m)
100013666	Cable, PDR900 to, 9 Pin 25ft (7.6m)

## Accessories

Part Number	Description
100013638	Analog Output DIN8P
100010757	Set Point Connector Kit
100013690	Mounting Hardware
100013695	Operating Manual



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