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/ 50-60 Hz
- 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.
The PDR900 controller is compatible with the digital Series 900 transducers, shown in graph.

### 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).

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.

### 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).

### 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).

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

**Display Range**  
1.0 x 10⁻⁸ to 1,500 Torr (transducer dependent)

**Pressure Units**  
User selectable: Torr, mbar, Pascal

**Operating Temperature**  
5°C to 40°C (41°F to 104°F)

**Storage Temperature**  
-10°C to 55°C (14°F to 131°F)

**Power Requirements**  
100-240 VAC, 50-60 Hz, 25 Watts

**User Interface**  
RS232 / RS485 (transducer only) and analog output (transducer dependent)

**Relays**  
Up to 3 relays, SPDT (transducer dependent)

**Relay Contact Rating**  
4 A @ 250 VAC, resistive

**Display**  
5 digit, 14.2 mm, green LED

**Weight**  
1.4 lbs (0.625 kg)

**Electronic Casing**  
Painted aluminum

**Mounting**  
96 x 96 mm, DIN43700

**CE Certification**  
2004/108/EC EMC Directive  
73/23/EEC Low Voltage Directive

**Compatible Transducers**  
901P, 902B, 910, 925, 971B, 972B, 974B

*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.*

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### Dimensional Drawing

*Note: Unless otherwise specified, dimensions are nominal values in inches (mm referenced).*

![Dimensional Drawing](image)
### Ordering Information

**PDR900 Controllers**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tbody>
<tr>
<td>PDR900-12-US</td>
<td>PDR900 Single Channel Controller, RS232/RS485, region US</td>
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<tr>
<td>PDR900-12-EU</td>
<td>PDR900 Single Channel Controller, RS232/RS485, region EU</td>
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<tr>
<td>PDR900-12-UK</td>
<td>PDR900 Single Channel Controller, RS232/RS485, region UK</td>
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<tr>
<td>PDR900-12-DK</td>
<td>PDR900 Single Channel Controller, RS232/RS485, region DK</td>
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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

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<th>Part Number</th>
<th>Description</th>
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<td>100013620</td>
<td>Cable, PDR900 to 15 Pin, 10ft (3m)</td>
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<tr>
<td>100013622</td>
<td>Cable, PDR900 to 15 Pin, 25ft (7.6m)</td>
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Transducers with RS485 communication & 15 pin D sub

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Transducers with RS232 communication & 9 pin D sub

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Transducers with RS485 communication & 9 pin D sub

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**Accessories**

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<td>Set Point Connector Kit</td>
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<td>100013690</td>
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<td>100013695</td>
<td>Operating Manual</td>
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