PD7000 ProVu Temperature Meter

Data Sheet

ProVu Series

Super-Bright LEDs
Our Brightest Display Ever

MeterView Pro
USB Install

- 1/8 DIN Digital Panel Temperature Meter with UL Type / NEMA 4X, IP65 Front
- J, K, T, E, R, S, B, N, C Thermocouples
- 100 or 1000 Ω Platinum, 10 Ω Copper, 120 Ω Nickel RTDs
- Optional Isolated 4-20 mA Output Turns the Meter into a Temperature Transmitter
- 1° or 0.1° Resolution
- Averages up to 10 RTD Sensors
- Automatic Cold Junction Compensation
- Dual-Line 6-Digit Display, 0.6" (15 mm) & 0.46" (12 mm)
- 2 or 4 Relays with Interlocking Capability + Isolated 4-20 mA Output Options
- Free PC-Based, On-Board, MeterView Pro USB Programming Software
- No Assembly Required
- Optional SunBright Display Models for Outdoor Applications
- Operating Temperature Range: -20 to 65°C (-4 to 149°F)
- UL & C-UL Listed. E160849; 508 Industrial Control Equipment
- Input Power Options: 85-265 VAC / 90-265 VDC or 12-24 VDC / 12-24 VAC
- Programmable Display, Function Keys & Digital Input
- External 4-Relay & Digital I/O Expansion Modules
- RS-232 & RS-485 Serial Communication Options with Modbus RTU
- Password Protection
- Wide Assortment of UL Type / NEMA 4X Enclosures for up to Ten Meters
- Light/Horn & Button Accessory
- Control Station Accessory For Remote Operation of ProVu
- Stainless Steel Sun Hood Accessory Available
- 3-Year Warranty

ProVu meter mounted in PDA2301 enclosure with PDA18DINSH Sun Hood and MOD-LH Light/Horn accessory. See page 16 for details.

TABLE OF CONTENTS

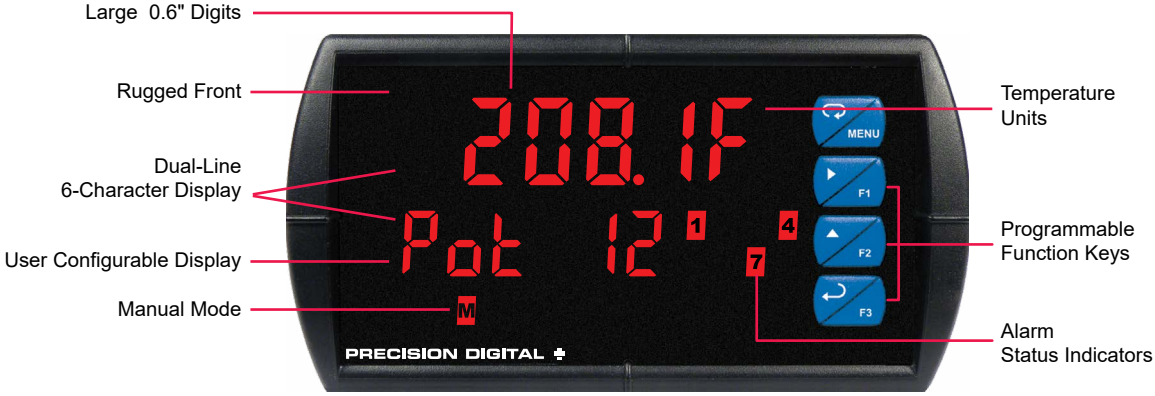
OVERVIEW

Front

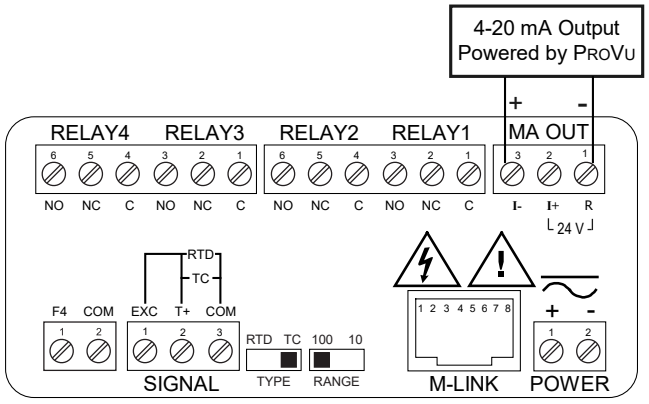
UV Resistant Sunlight Readable Models

UL Type / NEMA 4X Front Panel

MeterView Pro USB Install



Connections



Connections for PD7000-6H7 & PD7000-7H7

- Form C (SPDT) relays
- Two isolated power supplies available even on 12/24 VDC input power models
- Removable terminal blocks
- 2 or 4 relays + isolated 4-20 mA output option
- Universal 85-265 VAC or 12/24 VDC input power
- Thermocouple or RTD inputs
- M-Link for adding expansion modules
- Digital Input (F4)

The Only Temperature Meter You Will Ever Need

Front, back and in between, the PROVU meter boasts specifications, features and functionality that make it the only temperature meter you will ever need. The number one feature that makes the PROVU such a useful device is its built-in 24 VDC power supply to drive the transmitter as illustrated by the above diagram. This feature not only saves the cost of an external power supply, but also greatly simplifies wiring. In addition, there is a second 40 mA power supply provided with the 4-20 mA output option, evident also in the above diagram.

The picture above illustrates several other reasons why the PROVU is the only temperature meter you will ever need. First off, is the UL Type / NEMA 4X rated front panel which means you can install the PROVU in panels exposed to moisture, dust and other adverse conditions. The picture also points out that the PROVU is available with an optional Sunbright display which means you can install and read the PROVU in direct sunlight. The next thing to notice is the 6-digit dual-line display that can display numbers up to 999,999 on the upper line and show either a tag or the input in a different scale on the lower line.

The PROVU PD7000 can be programmed by the user to accept type J, K, T, E, R, S, B, N, and C thermocouples as well as 100 or 1000 Ω platinum, 10 Ω copper, and 120 Ω nickel RTD inputs. The meter's six-digit display allows it to display the higher temperature thermocouples up to their standard Fahrenheit range, such as 2400 degrees for the Type K thermocouple. The user can also set the meter to display in Fahrenheit or Celsius and set the resolution to 1 degree or 0.1 degree. Finally all these features and capabilities can easily be programmed with free MeterView Pro PC-based software.

ADVANCED DISPLAY FEATURES

Informative Display

The most common setup for the dual-line display on the PD7000 is to show the temperature (in °F or °C with 1° or 0.1° resolution) on the main display and a tag on the second display.

Dual-Line Makes All the Difference

The main display can be programmed to indicate PV, maximum (peak), minimum (valley), alternating maximum/minimum, one of eight alarm set points, or Modbus input. The second display can be configured to display engineering units, set points, user defined messages, or simply turned off.

Programming Assistance

The PROVU's dual-line display makes programming the instrument much easier because the lower line prompts for the needed information and also helps you keep track of where you are in the setup process.

Input Setup

Display Setup

Bright & Optional Super-Bright Display

The standard PROVU's display is bright enough for most applications, including moderate sun exposure. However, for direct sunlight exposure the PROVU is available with super-bright LEDs that make it possible to read the PROVU even in direct sunlight. Both versions of the PROVU have eight levels of adjustable intensity.

Rounding Feature for Even Steadier Display

The rounding feature is used to give the user a steadier display with fluctuating signals. It causes the display to round to the nearest value according to the rounding value selected (1, 2, 5, or 10). For example, with a rounding value of 10, and an input of 123.45, the display would indicate 123.50.

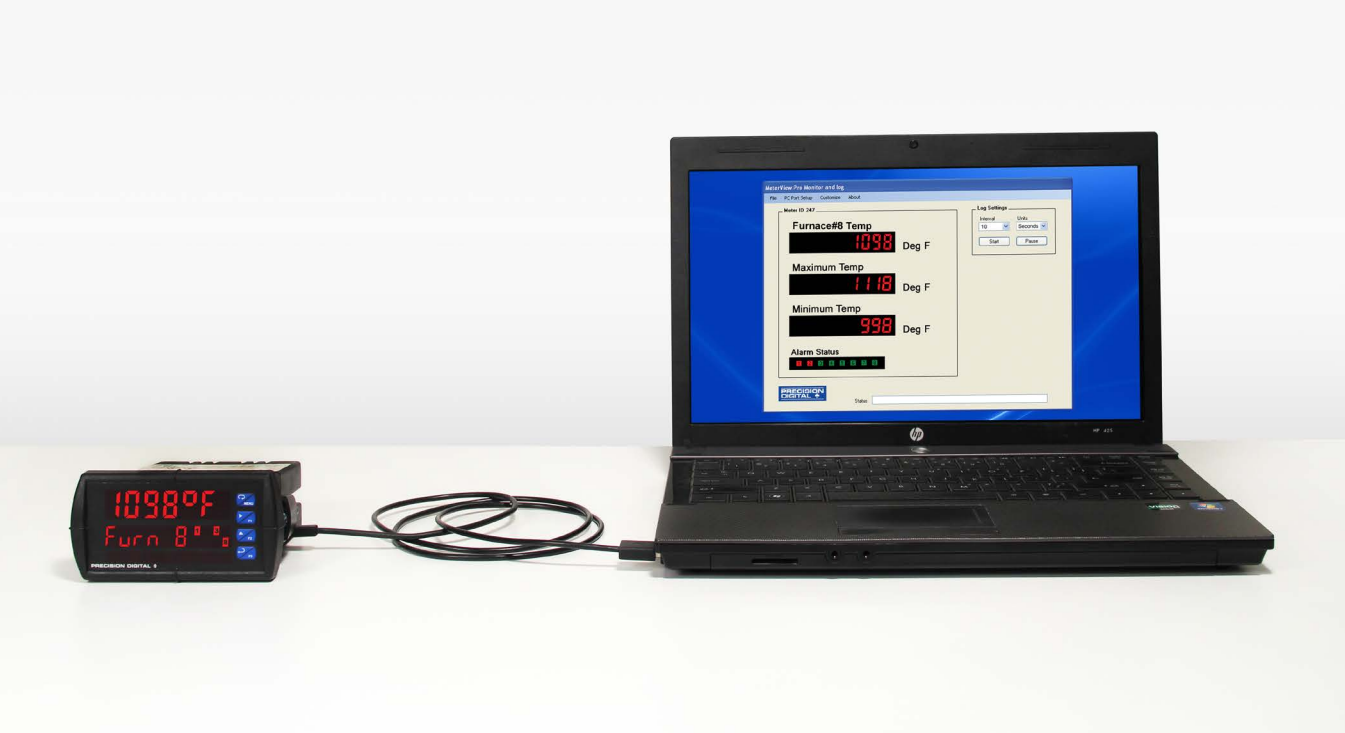
Multiple Sensor Averaging

The PD7000 can find the average temperature of up to 10 RTD probes connected in parallel. This new calculated value would then be treated as the PV (temperature) displayed on the meter. The average temperature is also available via Modbus communications and as the retransmitted value for the optional 4-20 mA output.

QUICK & EASY SCALE & PROGRAMMING METHODS

The PROVU can be programmed either via the front panel push buttons or free, PC-based MeterView Pro software. MeterView Pro is resident on the PROVU and is accessed by a provided USB cable, so it is by far the easiest way to program the PROVU. Selecting the input to be thermocouple or RTD is done with the front panel buttons or MeterView Pro software in conjunction with a switch on the back of the meter. Once programming is completed it can be locked with a password.

Free PC-Based MeterView Pro USB Programming Software & Cable

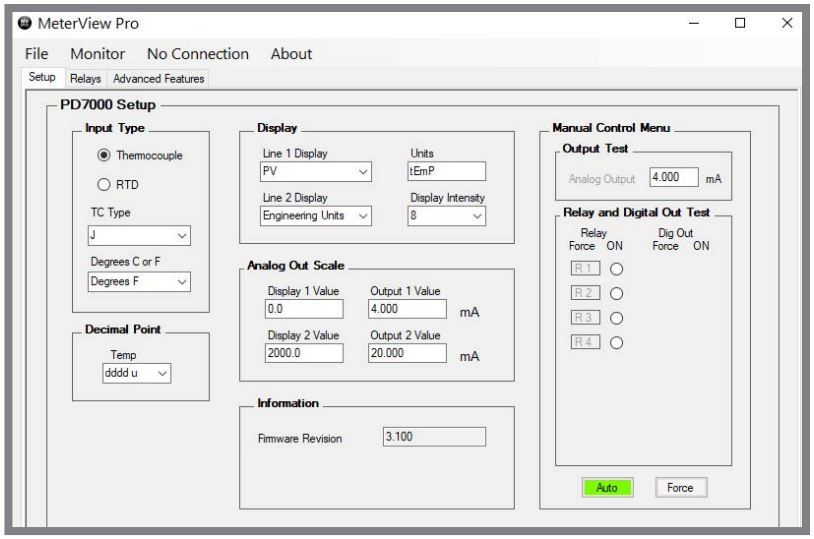


The PROVU comes preloaded with free MeterView Pro programming software that connects and installs directly to your PC with a standard USB cable, also provided free with each instrument. This eliminates the need to insert CDs, install drivers, or download software from the internet. When you connect your PROVU to your PC, MeterView Pro is downloaded to your PC, the software automatically selects the model you are programming, and you're ready to start programming immediately. Further simplifying the programming process, the PROVU can be powered from the USB port, so no need to apply external power while programming your meter. In addition to programming, the software will also allow you to monitor, and datalog a PROVU using your PC. You can also generate and save programming files for later use.

Click here to watch the Meterview Pro video

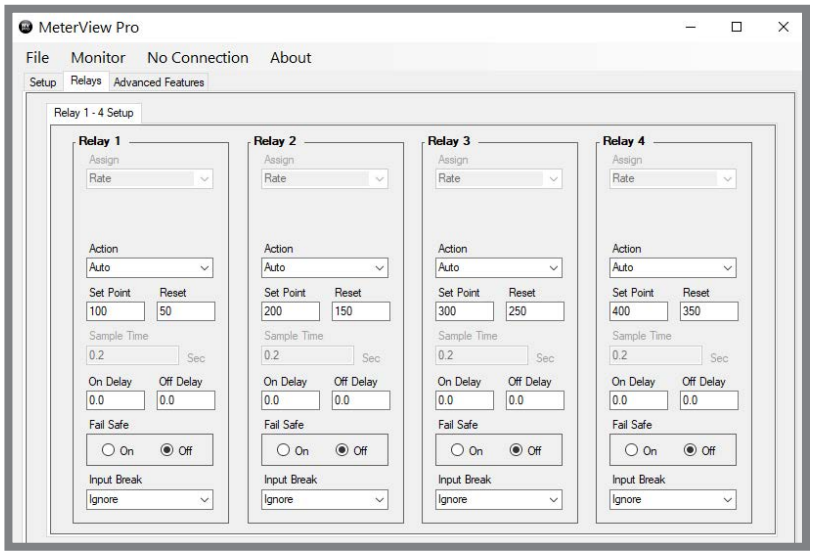
Setup Screen

- Select Thermocouple or RTD Input
- Select TC Type and Degrees C or F
- Set Decimal Point
- Set Line 1 Display Parameters
- Set Line 2 Display Parameters
- Set Units
- Set Display Intensity
- Set Analog Output Values
- Enable Manual Control
- Test Relays & Digital Outputs



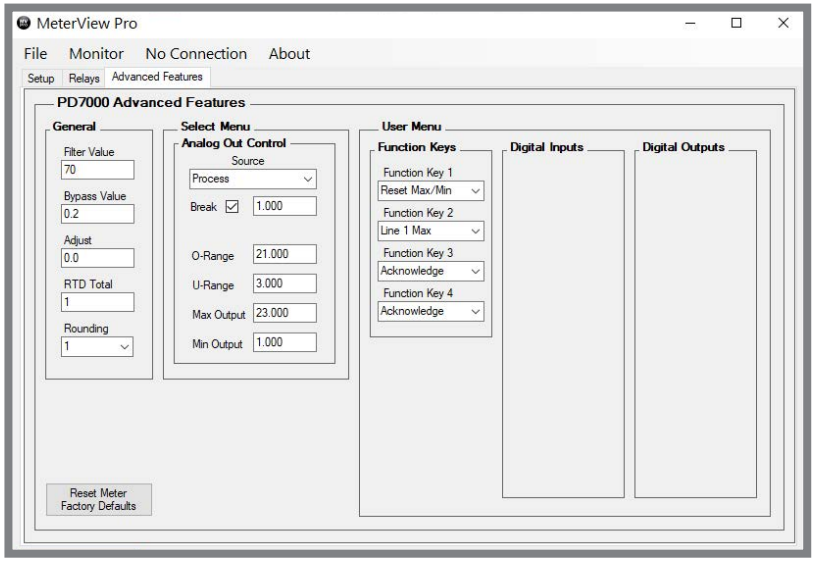
Relays Screen

- Greatly Simplifies Programming a Variety of Relay Features
- Set Relay Action
- Set Sampling Time
- Set Set & Reset Points
- Set On/Off Time Delays
- Set Fail Safe Operation
- Set Input Break Relay Action



Advanced Features Screen

- Set Filter and Bypass Values
- Control Analog Out
- Set Function Keys
- Control Digital Inputs/Outputs
- Reset Meter to Factory Defaults

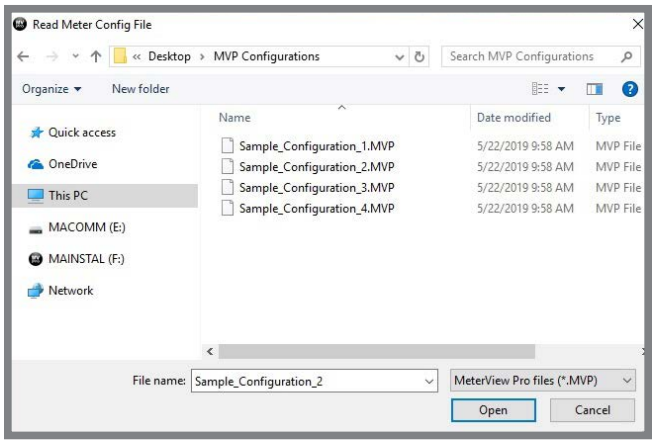


Save/Open Configuration

At the bottom of most MeterView screens are two tabs:

1. **Get Meter Data:** This reads the programming of the meter that is currently connected to the PC.
2. **Send Meter Data:** Clicking this button, sends current MeterView programming to the meter.

The configuration file can be sent or retrieved from the directory of your choice. This makes it very easy to program multiple meters with the same programming. It is also a great backup utility as well.



Specifications

System Requirements:
Microsoft® Windows® 10/11
Communications:
Onboard USB (firmware version 4.0 or higher), RS-232 Adapter or RS-485 Adapter
Meter Address: 1 - 247
Reports:
- Data logging: Save as CSV file format
- Configuration: Save as PDC file format or print configuration

Baud Rate: 300 - 19,200 bps
Configuration: One meter at a time
Protocol:
Modbus RTU (requires firmware version 4.0 or higher)

**Note: Windows® 32/64-bit operating systems*

Click here to watch the Meterview Pro video

Password Protection

The Password menu is used for programming three levels of security to prevent unauthorized changes to the programmed parameter settings:

Pass 1: Allows use of function keys and digital inputs

Pass 2: Allows use of function keys, digital inputs and editing set/reset points

Pass 3: Restricts all programming, function keys, and digital inputs

4-20 mA OUTPUT & RELAYS

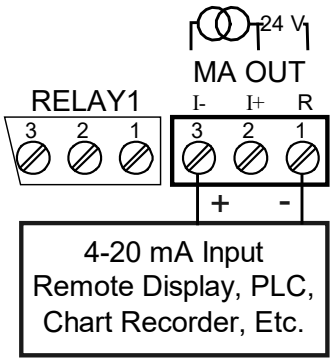
4-20 mA Analog Output

The isolated analog retransmission signal can be configured to represent the process variable (PV), maximum (peak) value, minimum (valley) value, the value for any of the eight relay set points, or Modbus input. While the output is nominally 4-20 mA, the signal will accurately accommodate under- and over-ranges from 1 to 23 mA.

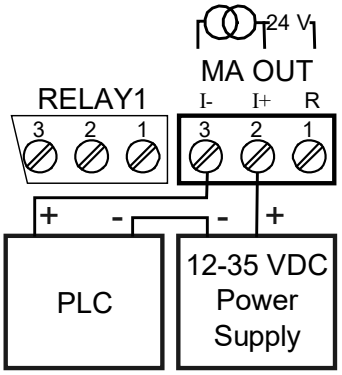
The 4-20 mA output can be reversed scaled such that 4 mA represents the high value and 20 mA represents the low value. For instance, a 4-20 mA output signal could be generated as the meter went from 100.0 to 0.0.

Connections

The PROVU can provide 40 mA at 24 VDC to power the 4-20 mA output signal or an external power supply can be used:



4-20 mA Output Powered by PD7000



4-20 mA Output Powered by External Power Supply

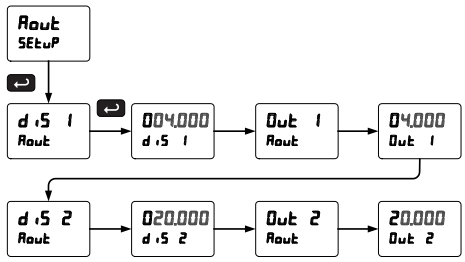
The internal 24 VDC power supply powering the analog output may be used to power other devices, if the analog output is not used. The I+ terminal is the +24 V and the R terminal is the return.

The 4-20 mA output can either be programmed using the front panel push buttons or free MeterView Pro software.

Front Panel Push Button Programming

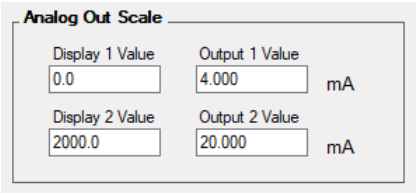
The 4-20 mA analog output can be scaled to provide a 4-20 mA signal for any display range selected. No equipment is needed to scale the analog output; simply program the display values to the corresponding mA output signal. The Analog Output menu is used to program the 4-20 mA output based on display values.

Note: During the analog output scaling, the display value is always indicated with a decimal point regardless of the decimal point selection for the temperature display.

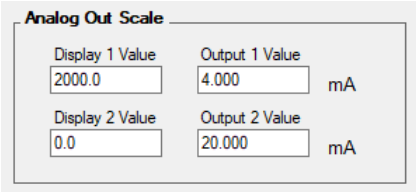


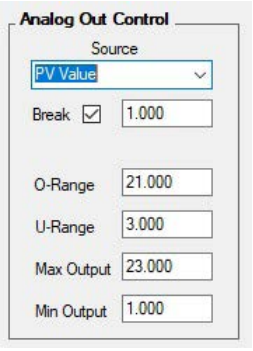
MeterView Pro Software Programming

When a meter is programmed as shown below, the output will be 4.00 mA when the display reads 0 and the output will be 20.00 mA when the display reads 2000.



The meter can be set up for reverse scaling as shown below: the output will be 4.00 mA when the display reads 2000 and the output will be 20.00 mA when the display reads 0.





Source: Source for generating the 4-20 mA output (e.g. PV)

Break: Analog output value when loop break is detected

Overrange: Analog output value with display in overrange condition

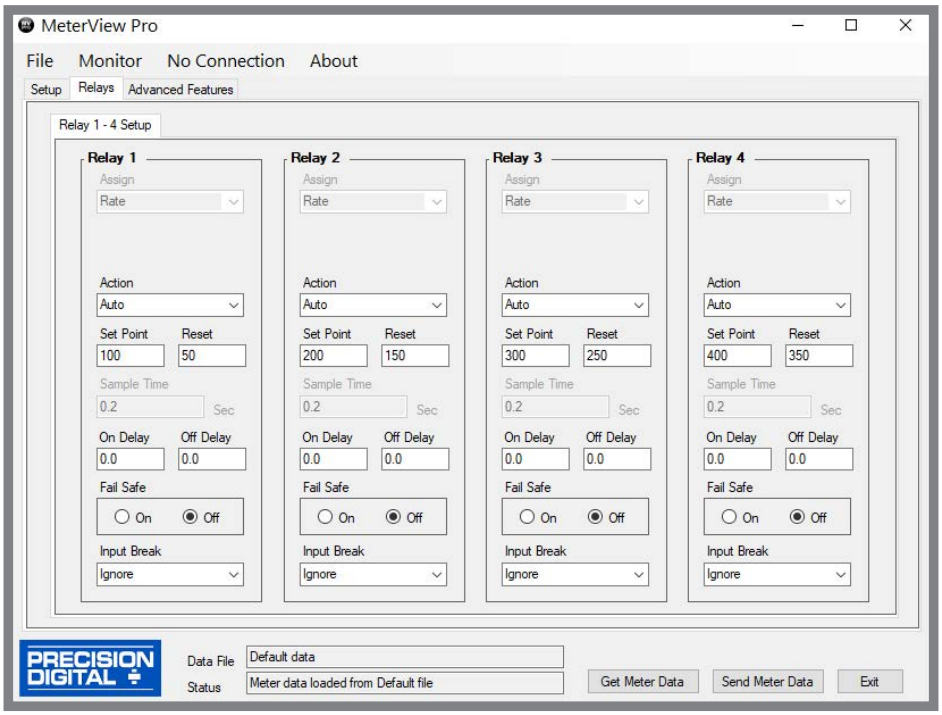
Underrange: Analog output value with display in underrange condition

Max: Maximum analog output value allowed regardless of input

Min: Minimum analog output value allowed regardless of input

Relays for Alarm & Control Applications

Adding relays to the PROVU meter turns it into a sophisticated alarm device as well as a powerful, yet simple, alternative to a more complicated PLC system for control applications. One such application would be pump control using the PROVU's relays in pump alternation mode. The PROVU can be equipped with up to four 3 A Form C (SPDT) internal relays and an additional four more 3 A Form A (SPST) external relays. Relays are highly user-configurable as the following screen shot from MeterView Pro indicates:



**Values are intended to show programming choices. They are not intended to represent an actual application.*

Setting Set and Reset Points (HI / LO Alarms)

All relays are independent of each other and may be programmed as high or low alarms with user desired set and reset points. Setting a set point above a reset point results in a high alarm and setting a set point below a reset point results in a low alarm. Alarms have 0 – 100% deadband and set and reset points may be set anywhere in the range of the meter.

Resetting the Relays (Action in MV Pro)

All relays are independent of each other and may be programmed to reset (*Action* in MV Pro) in the following ways:

- **Automatic:** Alarm will reset automatically once the alarm condition has cleared.
- **Automatic/Manual:** Alarm will reset automatically once the alarm condition has cleared but can also be reset using the F3 front panel button* at any time.
- **Latching:** Alarm must be reset manually and can be done so at any time. Press the F3 front panel button* at any time to clear the alarm.
- **Latching with Reset after Cleared:** Alarm must be reset manually and can only be done so after the alarm condition has cleared. Press the F3 front panel button* after the alarm condition has cleared to reset the alarm.

* Or by connecting an external switch to F4 terminal or with an optional digital input.

Time Delay (On and Off)

In many applications it is desirable to wait before turning off or on a relay – such as waiting for a process to settle before taking action. Each relay on the PROVU can be programmed with independent on and off time delays of 0 to 999.9 seconds to achieve this.

Relays Auto Initialization

When power is applied to the meter, the front panel LEDs and alarm relays will reflect the state of the input to the meter.

Signal Loss or Loop Break Relay Operation

When the meter detects a break in the 4-20 mA loop, the relay will go to one of the following selected actions:

1. Turn On (Go to alarm condition)
2. Turn Off (Go to non-alarm condition)
3. Ignore (Processed as a low signal condition)

User Selectable Fail-Safe Operation

All relays are independent of each other and may be programmed for user selectable fail-safe operation. With the fail-safe feature activated, the relays will transfer to the alarm state on power loss to the meter.

Front Panel LEDs

The meter is supplied with four alarm points that include front panel LEDs to indicate alarm conditions. This standard feature is particularly useful for alarm applications that require visual-only indication.

Manual Output Control

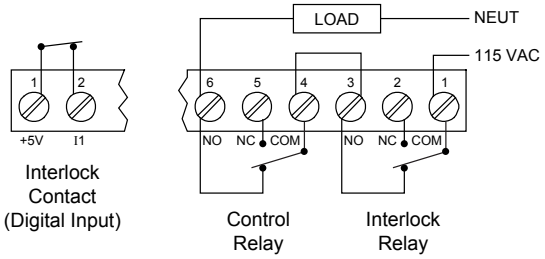
Take control of any output with this feature. All relays can be forced ON or OFF, and the 4-20 mA output signal can be set to any value within its range. When the relays and 4-20 mA output are controlled manually, an LED labeled "M" is turned on and the associated Alarm LEDs (1-8) flash every 10 seconds indicating that the meter is in manual control mode.

Sampling Function (PV Triggered Timed Relay)

The sampling function allows the operator to set a relay as a "sampling" relay. When the PV reaches that set point, it will close that relay's contacts for a preset period of time (0.1 to 5999.9 seconds). An example of its use may be for beer/ale fermentation. When the batch reaches a certain temperature, the relay contacts would close and by some means (light, horn, etc.) alert someone to take a sample, or provide the trigger to automatically take a sample of the batch. The utility of this function can, of course, be expanded beyond sampling and be used whenever a timed relay output closure is required when the PV reaches a certain set point.

Interlock Relay(s)

This function allows a process to use one or more very low voltage input signals or simple switch contacts to control the state of one or more internal "interlock" relays. A violation (i.e. loss of input, open switch, or open circuit) forces one or more N/O interlock relay contacts to open. One input can be used in series with a number of interlock switches, or up to eight inputs can be required to force-on one (or more) internal interlock relays. Requires PDA1044 Digital I/O module or use of on-board digital input F4. Please see *PROVU Series Safety Interlock Feature* whitepaper on our website for more information.



Switching Inductive Loads

The use of suppressors (snubbers) is strongly recommended when switching inductive loads to prevent disrupting the microprocessor's operation. The suppressors also prolong the life of the relay contacts. Precision Digital offers the PDX6901.

DIGITAL COMMUNICATIONS

Modbus® RTU Serial Communications

With the purchase of a serial communication adapter, PROVU meters can communicate with any Modbus Master device using the ever-popular Modbus communications protocol that is included in every PROVU. In addition to the typical Modbus capabilities of reading PVs and writing set points, below are some examples of other things that can be done with the meter's Modbus communications:

- Send a 6-character message to lower display upon an event
- Convert a digital value to a 4-20 mA signal
- Remote user control (i.e. change set points, acknowledge alarms)
- Input a Modbus digital PV (in place of analog input)
- Remote override of any or all relays and analog outputs

Modbus PV Input

Remote Message

Click here for more information on the PROVU's Modbus capabilities

Serial Communication Devices

Precision Digital provides a variety of serial communication devices to interface the PROVU meter with other devices. For more information visit predig.com/ProVuSerialDevices.

PDA1232 & PDA1485 Communication Modules

Serial communications on the PROVU meter can be added anytime with external PDA1232 (RS-232) or PDA1485 (RS-485) communication adapters. Free Modbus protocol is included for use with the PROVU serial communications modules.

Serial Adapters & Converters*

PDA1232
PROVU RS-232 Serial Adapter

PDA1485
PROVU RS-485 Serial Adapter

PDA7485-I
RS-232 to RS-422/485 Isolated Converter

PDA8232-N
USB to RS-232 Non-Isolated Converter

PDA8485-I
USB to RS-422/485 Isolated Converter

For more info on serial converters click here.

*All adapters and connectors supplied with appropriate cables.

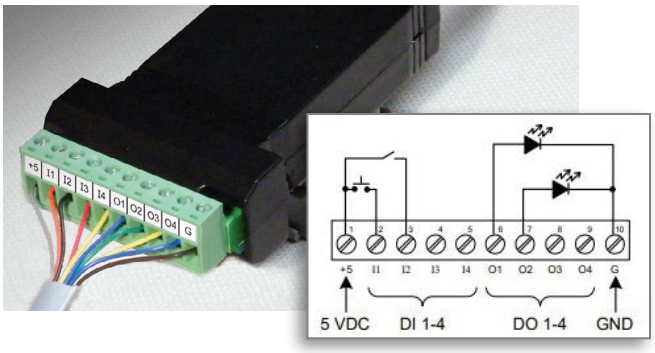
FIELD EXPANSION MODULES

Add functionality to the PROVU in the field with easy-to-install external expansion modules. Add RS-232 or RS-485 communications, I/O modules (up to 2), and 4-relay expansion module. The menu items for these modules do not appear until the module is connected, simplifying the basic menu. Relay and digital I/O modules are shown below with optional DIN rail mounting kit, P/N PDA1002.

PDA1044 I/O Expansion Module

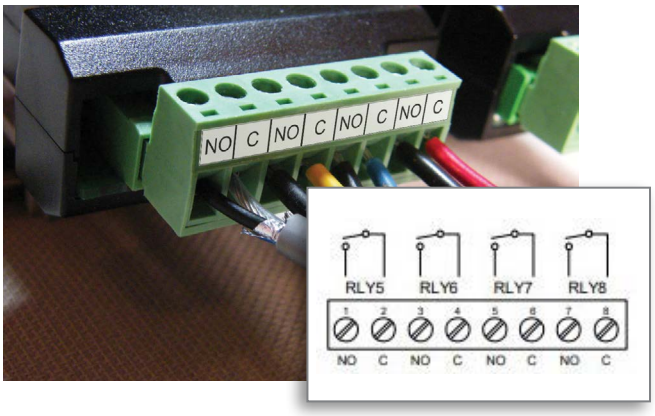
Four digital inputs and four digital outputs are available per expansion module. The PROVU meter will accept two of these modules. External digital inputs can function similarly to the front panel function keys or on-board digital input F4. They can be configured to trigger certain events (i.e. acknowledge/reset alarms, reset max and/or min values, disable/enable all output relays, and hold current relay states), provide direct menu access point, or mimic front panel keys. The I/O module can be used to configure the PROVU remotely, in essence giving the user control of the four front panel push buttons. This feature is particularly useful if the meter is mounted inside an explosion-proof enclosure.

Digital outputs can be used to remotely monitor PROVU's alarm relay output states, or the states of a variety of actions and functions executed by the meter.



PDA1004 Relay Expansion Module

An external module containing four 3 A Form A (SPST) relays can be added to the PROVU at anytime. Removable screw terminal blocks accept 12 to 22 AWG wire.



PHYSICAL FEATURES

The ProVu is designed for ease-of-use in industrial applications. Considerations include a UL Type / NEMA 4X front panel, wide operating temperature range, removable screw terminal connectors, snap in place mounting brackets, forgiving panel cutout requirement, and UL Listing for electrical safety. All of these features are backed by a 3-year warranty.

UL Type / NEMA 4X Front Panel

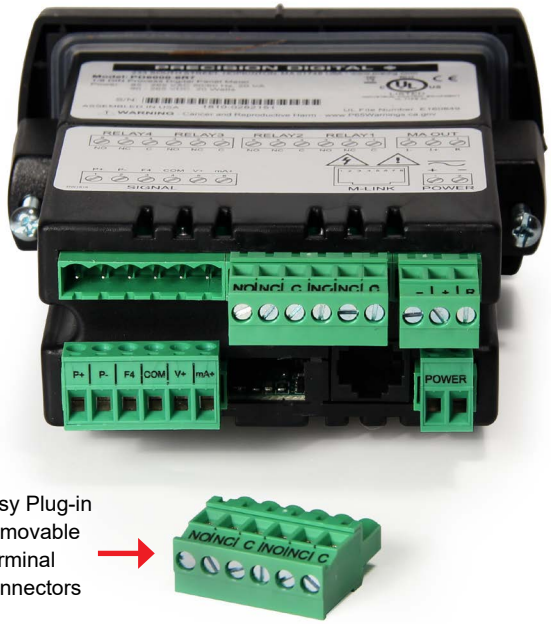
Not only does the ProVu's front panel UL Type / NEMA 4X approval indicate it is waterproof, but it also indicates it is rugged. Part of the UL Type / NEMA 4X test is to drop a 2 inch solid stainless steel ball from 8 feet on top of the meter's faceplate.

Wide Operating Temperature Range

The ProVu can operate from -20 to 65°C (-4 to 149°F) meaning it can be installed in a wide variety of indoor and outdoor industrial applications.

Removable Screw Terminal Connectors

Industrial applications require screw terminal connections for easy field wiring and the ProVu goes one step further in convenience by making them removable also.



Easy Plug-in Removable Terminal Connectors

Secured-in-Place Rugged Mounting Brackets

If you're installing the ProVu outdoors in the hot or cold weather, the last thing you want to do is fumble around with mounting brackets that don't stay in place. The ProVu's mounting brackets can be easily secured into place and then screwed down to the panel. These brackets are rugged so they can be tightened to the panel to provide a solid NEMA 4X seal.

Easy Secured-in-Place Mounting Brackets

Forgiving Panel Cutout Requirement

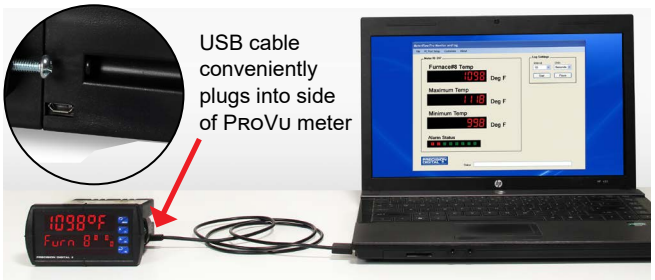
The ProVu's bezel has been oversized to allow for not perfectly executed panel cutouts where NEMA 4X seal is not required.

Over-Sized Bezel to Completely Cover Panel Cutouts

UL Listing for Electrical Safety

UL & C-UL Listed: USA & Canada
UL 508 Industrial Control Equipment
UL File Number: E160849
Front Panel: UL Type 4X, NEMA 4X, IP65; panel gasket provided
Low Voltage Directive: EN 61010-1:2010 Safety requirements for measurement, control, and laboratory use

USB Port for Easy Connection to MeterView Pro Free Software



USB cable conveniently plugs into side of ProVu meter

VIDEOS TO WATCH

PROVU Multi-Pump Alternation

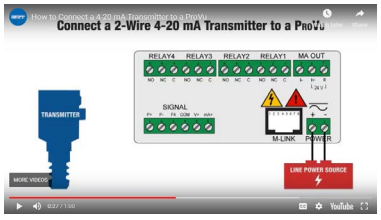
Learn How to Use the PROVU as a Pump Controller.

PROVU Function Keys

Learn How the PROVU's Function Keys Increase the Utility of the PROVU.

Connect a PROVU to a PC Using MeterView Pro

Learn How Easy it is to Use MeterView Pro Software.



Connect a 2-Wire 4-20 mA Transmitter to a PROVU

Learn How to Connect Your Transmitter to a PROVU.

Introduction to the Helios

Learn About the Large Display Version of the PROVU.

OPERATIONAL FEATURES

Function Keys, F4 Terminal, Digital Inputs

There are three ways the user can interact with the PROVU to perform a variety of useful functions:

1. Three Front Panel Function Keys

The default settings for the function keys are:

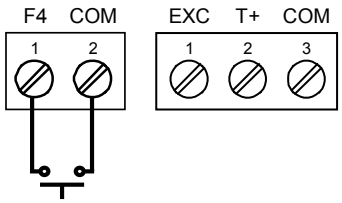
Reset Max/Min Reading

Display Max/Min Reading

Acknowledge Relays

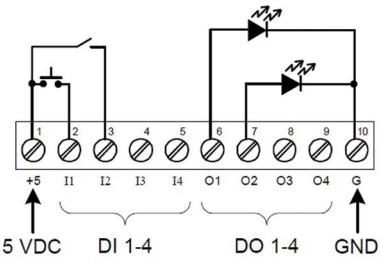
2. F4 On-Board Digital Input

The PD7000 includes a digital input as standard. This digital input can operate with the interlock relays feature, force relays on from a signal from a PLC or relay on other equipment, and much more. This is ideal for installations where the meter is inaccessible behind a cover, or where an additional function key is needed for customized operation.



The F4 terminal is particularly useful for wiring up a remote switch to reset the relays as shown here:

3. Optional 4 Digital Input/Output Module PDA1044



With these three methods, the PROVU can be programmed to trigger certain events (i.e acknowledge relays, reset max and/or min, disable/enable output relays, or hold current relay states), provide direct menu access points and more.

Function Key, Digital Inputs, & Digital Outputs Descriptions

The following table describes the actions that PROVU function keys and digital inputs can be programmed to perform. The table also describes how the digital outputs can be used to remotely monitor the PROVU's alarm relay states, or the states of a variety of actions and functions executed by the meter.

Display	Description	Item
rSt Hi	Reset the stored maximum display value	FK, DI, DO
rSt Lo	Reset the stored minimum display value	FK, DI, DO
rSt HL	Reset the stored maximum & minimum display values	FK, DI, DO
rELAY	Directly access the relay menu	FK, DI
SEt 1*	Directly access the set point menu for relay 1 (*through 8)	FK, DI
rLY d	Disable all relays until a button assigned to enable relays (rLY E) is pressed	FK, DI
rLY E	Enable all relays to function as they have been programmed	FK, DI
O Hold	Hold current relay states and analog output as they are until a button assigned to enable relays (rLY E) is pressed	FK, DI
d Hold	Hold the current display value, relay states, and analog output momentarily while the function key or digital input is active. The process value will continue to be calculated in the background.	FK, DI
Ln1 Hi	Display maximum display value on line 1	FK, DI
Ln1 Lo	Display minimum display value on line 1	FK, DI
Ln1 HL	Display maximum & minimum display values on line 1	FK, DI

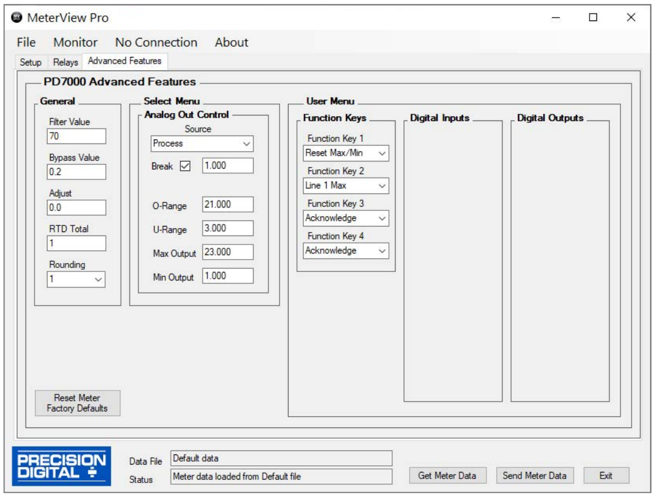
Display	Description	Item
Ln2 Hi	Display maximum display value on line 2	FK, DI
Ln2 Lo	Display minimum display value on line 2	FK, DI
Ln2 HL	Display maximum & minimum display values on line 2	FK, DI
F On 1*	Force relay 1 (*through 4) into the on state. This is used in conjunction with a digital input expansion module to achieve interlock functionality.	FK, DI
Contrl	Directly access the control menu	FK, DI
diSAbL	Disable the selected function key or digital I/O	FK, DI
AcK	Acknowledge all active relays that are in a manual operation mode such as auto-manual or latching	FK, DI, DO
rESEt	Directly access the reset menu	FK, DI
mnEnu	Mimic the menu button functionality (digital inputs only)	DI
rIGHt	Mimic the right arrow/F1 button functionality (digital inputs only)	DI
uP	Mimic the up arrow/F2 button functionality (digital inputs only)	DI
EntEr	Mimic the enter/F3 button functionality (digital inputs only)	DI
ALn1 1*	Provide indication when alarm 1 (*through 4) has been triggered (digital outputs only)	DO

FK: Function Keys DI: Digital Inputs DO: Digital Outputs

Watch video about the programmable function keys, digital inputs, and all the capabilities these features offer on the PROVU Series.

Remote Operation of Front Panel Buttons

The user can operate the front panel buttons from a remote location by using digital inputs programmed in the following manner:



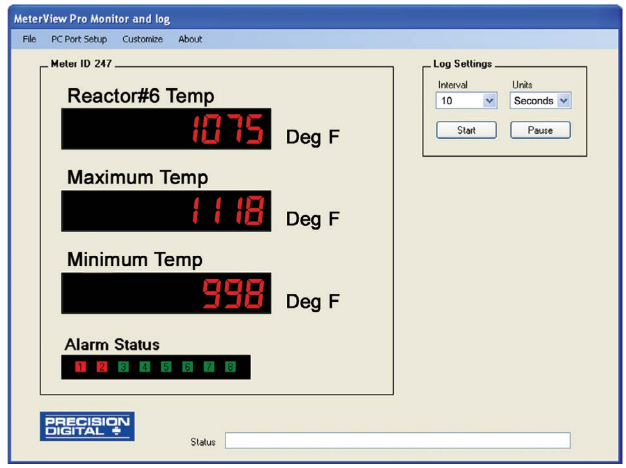
Click here to watch the Function Keys video

Max / Min Display

Max/Min (or Peak/Valley) is standard on the ProVu PD7000. Either display can be configured to show either maximum or minimum excursion since last reset. The displays can also be configured to toggle between Max and Min values. Both values can be simply reset from the front panel.

MeterView Pro Monitoring & Datalogging Software

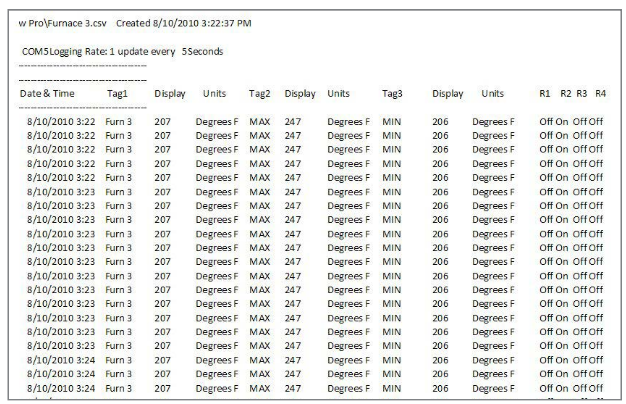
Not only does free MeterView Pro software greatly simplify setup and programming of the ProVu, it can also be used to monitor and datalog your process.



- Custom Tags: i.e. Furnace, Boiler, Freezer
- Custom Units: i.e. Fahrenheit, Celsius, Kelvin
- Alarm Status Indicators

Datalog Report

Collected data logger information can be sent to a CSV file for importing into a spreadsheet program. Below is an example of one such file. Of course, once within the spreadsheet, much can be done to customize the data.



w Pro\Furnace 3.csv Created 8/10/2010 3:22:37 PM

COM5Logging Rate: 1 update every 5Seconds

Date & Time	Tag1	Display	Units	Tag2	Display	Units	Tag3	Display	Units	R1	R2	R3	R4
8/10/2010 3:22	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:22	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:22	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:22	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:22	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:23	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:24	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:24	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off
8/10/2010 3:24	Furn 3	207	Degrees F	MAX	247	Degrees F	MIN	206	Degrees F	Off	On	Off	Off

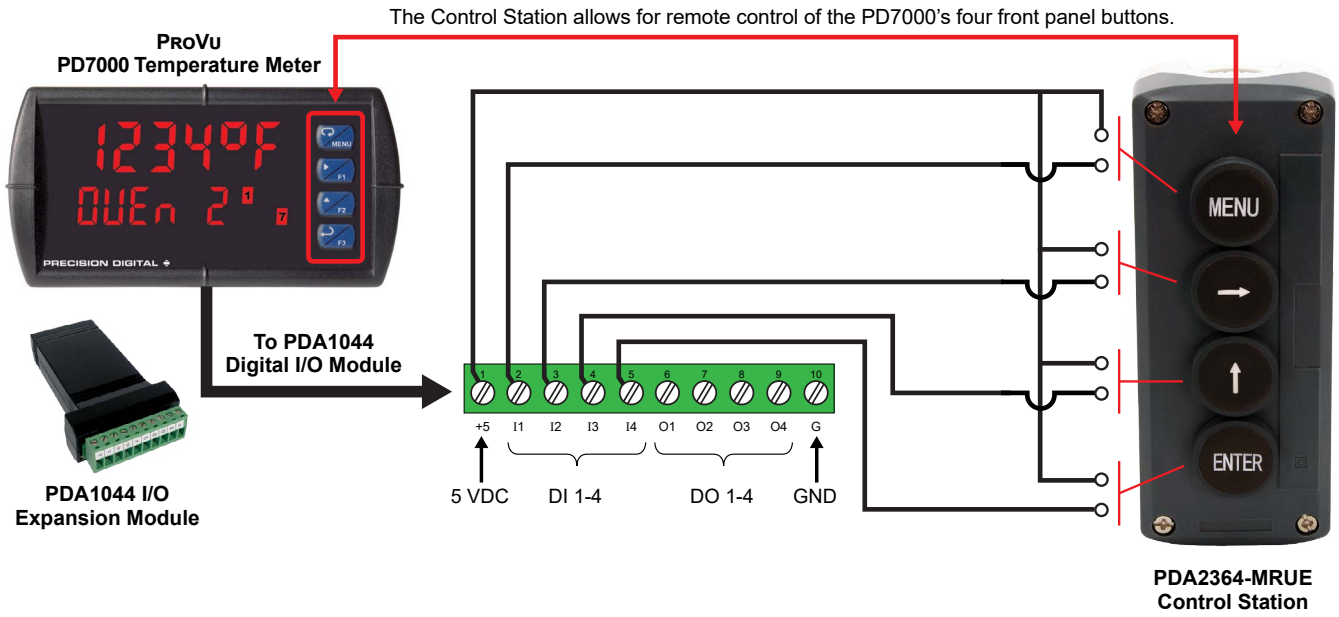
Relay Control

Relays can be controlled from MeterView Pro for testing purposes. This is commonly done to determine whether the relays are functioning properly. In the *Setup* window, under *Relay and Digital Out Test* you have the option of selecting the relays you want in an ON state or OFF state and also whether you want to leave the relays in manual control or to return them to automatic operation.

Click here to watch the Meterview Pro video

Four-Position Control Station for Remote Operation of PROVU Buttons

The PD7000's four programming and operations buttons can be remotely controlled by using the PDA2364-MRUE 4-button control station accessory as shown in the diagram below.



Plastic Control Stations For The PROVU PD7000

The PDA2360 series of plastic control stations provide a convenient way to remotely control devices such as Precision Digital's PROVU PD7000. The PDA2364-MRUE four-position control station mimics the PROVU's four front panel buttons: Menu, Right Arrow, Up Arrow, and Enter. The PDA2360-E is an emergency stop button, the PDA2361-A is used to acknowledge an alarm, and the PDA2361-Q is to silence an alarm.

PDA2364-MRUE

PDA2360-E

PDA2361-A

PDA2361-Q

- **Complete Pre-Assembled Stations**
- **Normally Open (NO) Spring Return Plastic Bezel Pushbuttons**
- **Trigger Action Turn to Release Pushbutton (PDA2360-E only)**
- **IP65 / NEMA 4, 4X and 13 Rated**
- **Four-Position Control Station for Remote Operation of PROVU Buttons**
- **Wall Mountable**

PDA2360 Series Control Stations	
Model	**Description**
PDA2360-E	Emergency Stop Button
PDA2361-A	1 Black Ack Button
PDA2361-Q	1 Black Silence Button
PDA2364-MRUE	4 Black Buttons: Menu, Right, Up, Enter

UL TYPE / NEMA 4 & 4X FIELD ENCLOSURES

Precision Digital offers a variety of rugged enclosures that provide a high degree of protection against harsh operating environments. Thermoplastic and stainless steel UL Type / NEMA 4X, and painted steel UL Type / NEMA 4 enclosures for up to 10 ProVu meters are available. In addition, Precision Digital offers a Light/Horn that can be mounted to most of these enclosures to provide visual and audible indication of alarms. Many enclosures also have sufficient space to house Precision Digital's model PDA1024-01 24 V power supply to provide power to the Light/Horn.

Need help selecting the right enclosure?
www.predig.com/esu

Download free 3-D CAD files of these instruments to simplify your drawings!
predig.com/documentation-cad

Plastic Enclosures (Externally Mounted)

PDA2300 Series (Covers with Hinge & Hasp)

This is Precision Digital's most economical line of enclosures for the ProVu. The meter mounts through a hinged cover with a SS hasp allowing for easy access to meter wiring. Enclosures are available for 1 through 10 ProVus. The enclosure is large enough to mount the PDA1024-01 24 V transmitter supply in.

PDA2301

PDA2310

PDA2800 Series (Covers with Screws)

This is Precision Digital's smallest line of enclosures for the ProVu. The meter mounts through the cover that screws to the base of the enclosure. Available for 1 and 2 ProVus.

PDA2811

PDA2812

Plastic Enclosures (Internally Mounted)

PDA3400 Series (Covers with screws)

This is Precision Digital's only line of enclosures for the ProVu where the meter is fully housed inside the enclosure. Enclosures are available for 1, 2 and 3 ProVus.

PDA3407

PDA3412

Stainless Steel Enclosures (Externally Mounted)

PDA2600 Series (Covers with Hinge & Hasp)

This is Precision Digital's stainless steel line of enclosures for the ProVu. The meter mounts through a hinged cover with a SS hasp allowing for easy access to meter wiring. Enclosures are available for 1 through 6 ProVus.

PDA2604-1

PDA2606

Steel Enclosures (Externally Mounted)

PDA2700 Series (Covers with Hinge & Hasp)

This is Precision Digital's painted steel line of enclosures for the ProVu. The meter mounts through a hinged cover with a hasp allowing for easy access to meter wiring. Enclosures are available for 1 through 6 ProVus.

PDA2704-1

PDA2706

LIGHT/HORN & BUTTON MOUNTED TO ENCLOSURE

ProVu Meter in a PDA2301 Enclosure with MOD-LH Light/Horn and Button.
Enclosure & MOD-LH Sold Separately. Assembly Required.

Overview

Precision Digital offers a wide variety of UL Type / NEMA 4 & 4X enclosures that can be equipped with MOD-LH Light/Horn and Button. When MOD-LH is ordered, the accompanying enclosure on the order comes with the holes pre-drilled for the Light/Horn and the Button and the user performs the mounting and wiring. Meter and enclosure are sold separately. The Light/Horn and the Button can also be ordered as separate items and the user performs all hole-drilling, mounting and wiring as desired. The light and horn can be controlled independently of each other via separate relays on the ProVu meter; and since the meter's relays can be reset in a variety of ways, there are several ways the Light/Horn option can operate. For instance, the horn can be programmed to silence at any time via the Button or F3 front panel button on the ProVu, and light to reset automatically when the alarm clears as the following table illustrates:

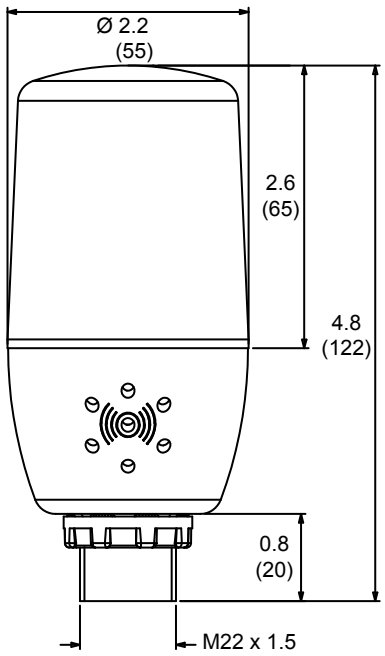
Relay #	Connected to	Default Reset Mode
1	Flashing Light(1)	Auto reset
2	Horn	Silence with Button at any time
3	User Device	As user desires
4	User Device	As user desires

1. Light can be wired to flash or stay steady on.
2. See page 9 for additional ways the relays can be programmed

Note: The Light/Horn accessory requires 24 VDC power that can be supplied by the model PDA1024-01 24 V power supply. See MOD-LH Light/Horn, Transmitter Power Supply specification on page 26 for details.

Dimensions

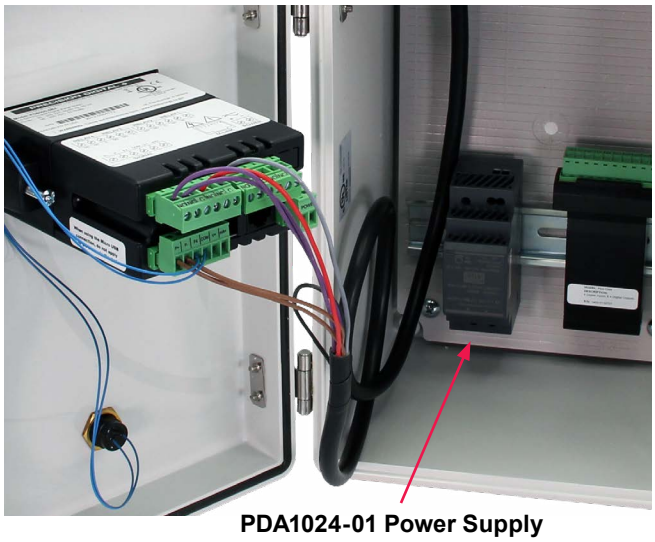
Units: Inches (mm)



Click here to watch the Light/Horn Video

PDA1024-01 24 VDC DIN Rail Power Supply

Precision Digital's PDA1024-01 24 VDC power supply can be used to power the Light/Horn or other customer supplied devices as shown here.



PDA1024-01 Power Supply Installed in a PDA2301 Enclosure

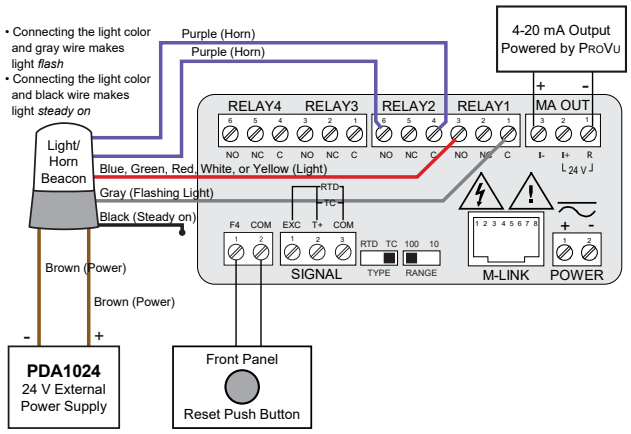
PDA1024-01
24 VDC Power Supply

Input Voltage	85 ~ 264VAC 120 ~ 370VDC
Output Voltage	24 VDC ±10% @ 1.5A rated current
Input Frequency	47 ~ 63Hz
AC Current	0.88A/115VAC 0.48A/230VAC
Connections	Two terminals provided for +V and -V to simplify wiring of multiple devices
Operating Temperature	-20° to 60°C
Safety Standards	UL60950-1, TUV EN60950-1 Approved, Design refer to EN50178
EMC	Compliance to EN55011, EN55022 (CISPR22) Class B, EN61000-3-2, -3 EN61000-4-2, 3, 4, 5, 6, 8, 11, ENV50204, EN55024, EN61000-6-1, EN61204-3 Light industry, Criteria A
Dimensions	1.40" x 3.50" x 2.10" (35 mm x 90 mm x 54.5 mm) (W x H x D)

Wiring Connections for MOD-LH Models

The following diagram is for MOD-LH models with a single color light. See MOD-LH manual for wiring connections for MOD-LH5CB1 and MOD-LH3CB1-RYG models.

Using External Power Supply (PDA1024-01)



Complete Product Line of Displays and Controllers

IN ALL SHAPES, SIZES & LOCATIONS

- Big, Bright Displays For Indoor or Outdoor in Bright Sunlight
- Large Dual-Line 6-Digit Display
- 24 VDC Transmitter Power Supply
- MeterView Pro USB Programming Software
- Universal 85-265 VAC or 12-24 VDC Input Power Options
- 4-20 mA, 0-10 V, Thermocouple, RTD, Strain Gauge, High Voltage, & Modbus Inputs
- Up To Four 3 A Form C Relays (SPDT)

IECEx

EXPLOSION-PROOF
ProtEX-MAX Series

- NEMA 4X, IP68 Rated Enclosure
- CapTouch Through-Glass Buttons
- Operating Temperature of -55 to 65°C
- Worldwide Approvals

LARGE DISPLAYS
Helios Series

- 1.8" Digits Readable From 100 Feet
- UL Type / NEMA 4X, IP65 Rated Enclosure
- Operating Temperature of -40 to 65°C
- UL and C-UL Approved

PANEL METERS
ProVu Series

- UL Type / NEMA 4X, IP65 Rated Front
- Programmable Function Keys
- UL, C-UL, and CE Approvals
- 1/8 DIN Size

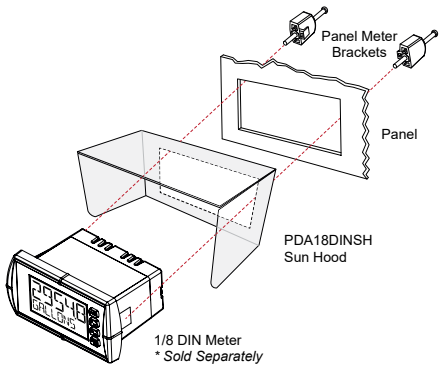
Go to PREDIG.COM for details on ProVu, ProtEX-MAX and Helios Series Meters

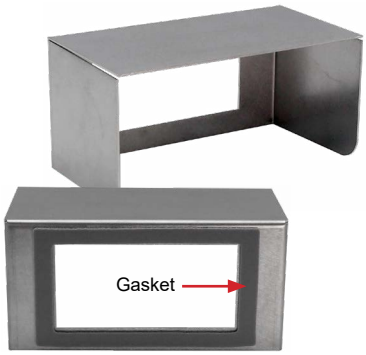
No More Sun Glare On Your Panel Meter Display!

NEW PDA18DINSH Sun Hood

The PDA18DINSH Sun Hood improves the readability of 1/8 DIN digital panel meters when they are mounted in direct sunlight by shading the instrument from the sun.

The Sun Hood is made from 18 gauge 316 stainless steel and mounts between the 1/8 DIN digital panel meter and the panel. In addition, a gasket is provided that installs between the Sun Hood and the panel to provide a NEMA 4X seal to the panel. The whole assembly is held in place by the panel meter's mounting brackets.





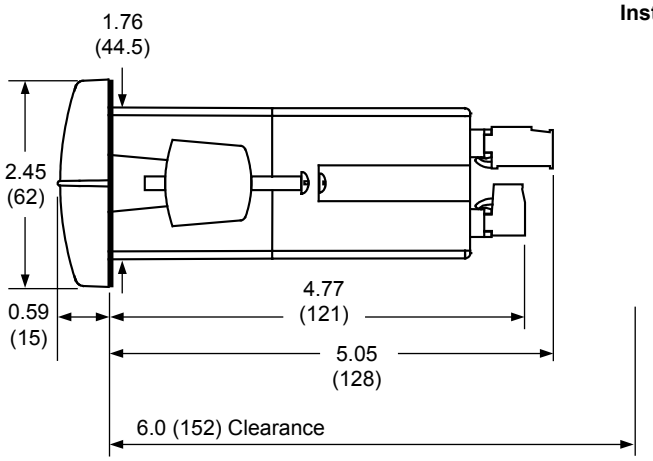
- Provides Shade for 1/8 DIN Digital Panel Meters
- Made from 18 Gauge 316 Stainless Steel
- Easy Mounting Requires no Drilled Holes in the Panel
- Includes Gasket to Maintain NEMA 4X Seal

SPECIFICATIONS

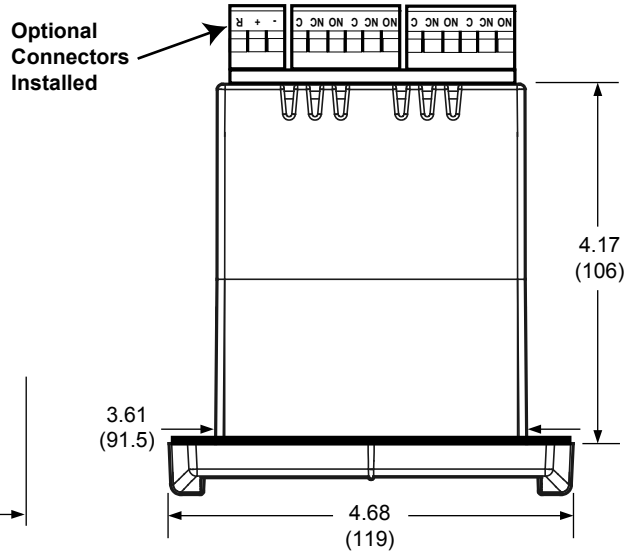
Model	PDA18DINSH
Material	18 gauge 316 stainless steel
Overall Dimensions	2.99" x 5.68" x 2.99" (H x W x D) (75 mm x 144 mm x 75 mm)
Weight	0.9 lb (0.4 kg)
Gasket Material	Silicone Foam

DIMENSIONS

Units: Inches (mm)



Side View

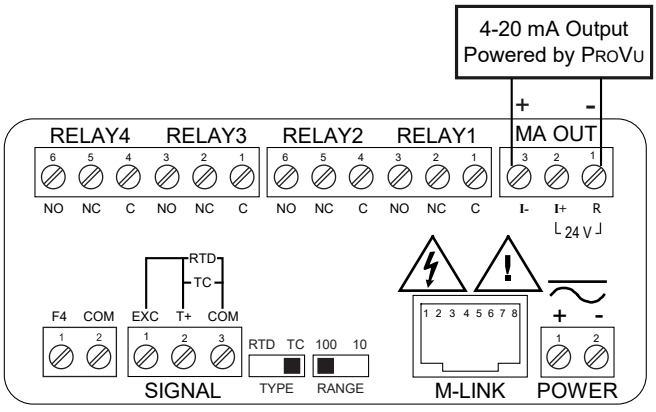


Top View

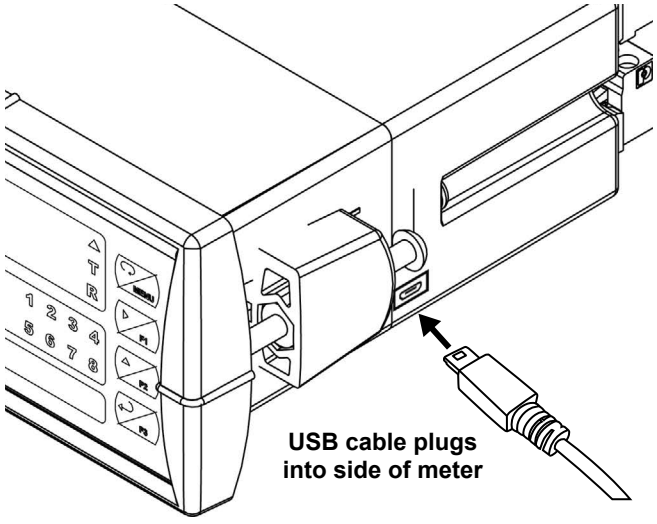
Notes:
1. Panel cutout required: 1.772" x 3.622" (45 mm x 92 mm)
2. Panel thickness: 0.040 - 0.250" (1.0 mm - 6.4 mm)
3. Mounting brackets lock in place for easy mounting
4. Clearance: Allow 6" (152 mm) behind the panel

Download free 3-D CAD files of these instruments to simplify your drawings!
predig.com/documentation-cad

CONNECTIONS



- Form C (SPDT) relays
- Isolated supply available even on 12/24 VDC input power models
- Removable terminal blocks
- 2 or 4 relays + isolated 4-20 mA output option
- Universal 85-265 VAC or 12/24 VDC input power
- Thermocouple or RTD inputs
- M-Link for adding expansion modules
- Digital Input (F4)



Click here to watch video on how to connect a 2-wire transmitter to a PROVU

SPECIFICATIONS

Except where noted all specifications apply to operation at +25°C.

General

Display	Display Line 1: 0.60" (15 mm) high, red LEDs Display Line 2: 0.46" (12 mm) high, red LEDs 6 digits each (-99999 to 999999), with lead zero blanking Temperature displayed on line 1 with four or five-digits and F/C indication, based on configuration. Example 2347.2F with 0.1° resolution and 2347°F with 1° resolution.
Resolution	1° or 0.1° for all thermocouple and RTD inputs
Display Intensity	Eight user selectable intensity levels. Default value is six.
Display Update Rate	5/second (200 ms)
Overrange	Display flashes 999999
Underrange	Display flashes -99999
Programming Methods	Four front panel buttons, digital inputs, PC and MeterView Pro software, or Modbus registers.
Noise Filter	Programmable from 2 to 199 (0 will disable filter)
Filter Bypass	Programmable from 0.1 to 99.9% of calibrated span
Recalibration	All ranges are calibrated at the factory. Recalibration is recommended at least every 12 months.
Max/Min Display	Max/min readings reached by the process are stored until reset by the user or until power to the meter is turned off.
Rounding	Select 1, 2, 5, or 10 (e.g. rounding = 10, value = 123.45, display = 123.50)
Password	Three programmable passwords restrict modification of programmed settings. Pass 1: Allows use of function keys and digital inputs Pass 2: Allows use of function keys, digital inputs and editing set/reset points Pass 3: Restricts all programming, function keys, and digital inputs
Non-Volatile Memory	All programmed settings are stored in non-volatile memory for a minimum of ten years if power is lost.
Power Options	85-265 VAC 50/60 Hz; 90-265 VDC, 20 W max; 12-24 VDC, 12-24 VAC, 15 W max. Powered over USB for configuration only.
Fuse	Required external fuse: UL Recognized, 5 A max, slow blow; up to 6 meters may share one 5 A fuse
Normal Mode Rejection	Greater than 60 dB at 50/60 Hz
Isolation	4 kV input/output-to-power line 500 V input-to-output
Overvoltage Category	Installation Overvoltage Category II: Local level with smaller transient overvoltages than Installation Overvoltage Category III.
Environmental	Operating temperature range: -20 to 65°C (-4 to 149°F) Storage temperature range: -40 to 85°C (-40 to 185°F) Relative humidity: 0 to 90% non-condensing
Connections	Removable screw terminal blocks accept 12 to 22 AWG wire, RJ45 for external relays, digital I/O, and serial communication adapters.
Enclosure	1/8 DIN, high impact plastic, UL 94V-0, color: black
Front Panel	NEMA 4X, IP65
Mounting	1/8 DIN panel cutout required: 3.622" x 1.772" (92 mm x 45 mm) Two panel mounting bracket assemblies are provided.
Tightening Torque	Screw terminal connectors: 5 lb-in (0.56 Nm)
Overall Dimensions	4.68" x 2.45" x 5.64" (119 mm x 62 mm x 143 mm) (W x H x D)
Weight	9.5 oz (269 g)
Warranty	3 years parts & labor. See Warranty Information and Terms & Conditions on www.predig.com for complete details.

Temperature Inputs

Inputs	Thermocouple: J, K, T, E, R, S, B, N, C RTD: 100 Ω platinum (0.00385 & 0.00392 coefficients), 10 Ω copper, 120 Ω nickel, 1000 Ω platinum (0.00385 & 0.00392 coefficients)
Cold Junction Reference	Automatic, fixed, no user calibration needed
Temperature Drift	±2°C maximum from 0 to 65°C ambient temperature ±4°C maximum from -20 to 0°C ambient temperature
Offset Adjustment	User programmable offset adjust ±50.0 degrees. This parameter allows the user to apply an offset value to the temperature being displayed.
Input Impedance	Greater than 100 kΩ
Sensor Break Detection	Open TC or RTD sensor indicated by display flashing oPEn, relays can be programmed to go "On", "Off", or to "Ignore" (**Note:** Ignore is detected as an upscale condition). Analog output goes to the programmed sensor break value.
RTD Averaging	Up to 10 RTDs connected in parallel can be averaged.

Accuracy & Ranges

Type	Range (°F)	Accuracy	Range (°C)	Accuracy
J	-200 to 2000	±1.8°F	-129 to 1093	±1°C
K	-200 to 2400	±1.8°F	-129 to 1316	±1°C
T	-200 to 752	±1.8°F	-129 to 400	±1°C
E	-200 to 1800	±1.8°F	-129 to 982	±1°C
R	-50 to 3000	±3.6°F	-46 to 1649	±2°C
S	-50 to 3000	±3.6°F	-46 to 1649	±2°C
B	752 to 3300	±3.6°F	400 to 1816	±2°C
N	-100 to 2300	±3.6°F	-73 to 1260	±2°C
C	32 to 4100	±3.6°F	0 to 2260	±2°C
10Ω	-328 to 500	±0.2°F	-200 to 260	±0.1°C
100Ω	-328 to 1562	±0.7°F	-200 to 850	±0.4°C
120Ω	-110 to 500	±0.2°F	-79 to 260	±0.1°C
1000Ω	-328 to 900	±0.7°F	-200 to 482	±0.4°C
All ranges capable of 1° or 0.1° resolution.				

Relays

Rating	2 or 4 SPDT (Form C) internal and/or 4 SPST (Form A) external; rated 3 A @ 30 VDC and 125/250 VAC resistive load; 1/14 HP (≈ 50 W) @ 125/250 VAC for inductive loads
Noise Suppression	Noise suppression is recommended for each relay contact switching inductive loads.
Deadband	0-100% of span, user programmable
High or Low Alarm	User may program any alarm for high or low trip point. Unused alarm LEDs and relays may be disabled (turn off).
Relay Operation	• Automatic (non-latching) and/or manual reset • Latching (requires manual acknowledge) with or without clear • Pump alternation control (2-8 relays) • Sampling (based on set point and time) • Off (disable unused relays and enable Interlock feature) • Manual on/off control mode
Relay Reset (Acknowledge)	User selectable via front panel button, F4 terminal at back of meter, external contact closure on digital inputs, or through serial communications.
Time Delay	0 to 999.9 seconds, on & off relay time delays. Programmable and independent for each relay
Fail-Safe Operation	Programmable and independent for each relay **Note:** Relay coil is energized in non-alarm condition. In case of power failure, relay will go to alarm state.
Auto Initialization	When power is applied to the meter, relays will reflect the state of the input to the meter
Additional Relays	An external module, model PDA1004, is available to add 4 SPST 3 A relays to the meter.

Isolated 4-20 mA Transmitter Output

Output Source	PV (temperature), max, min, set points 1-8, Modbus PV input, or manual control mode
Scaling Range	1.000 to 23.000 mA for any display range
Calibration	Factory calibrated: 0.0 to 2000.0 = 4-20 mA output
Analog Out Programming	23.000 mA maximum for all parameters: Overrange, underrange, max, min, and break
Accuracy	± 0.1% of span ± 0.004 mA
Temperature Drift	0.4 µA/°C max from 0 to 65°C ambient, 0.8 µA/°C max from -20 to 0°C ambient **Note:** Analog output drift is separate from input drift.
Power Supply for Analog Output Loop or Other Uses	Terminals I+ & R: 24 VDC ± 10%. May be used to power the 4-20 mA output or other devices. All models rated @ 40 mA max.
External Loop Power Supply	35 VDC maximum

Output Loop Resistance

Power Supply	Minimum	Maximum
24 VDC	10 Ω	700 Ω
35 VDC (external)	100 Ω	1200 Ω

Additional 4-20 mA Outputs	The PD659-1MA-2MA can split the optional 4-20 mA output into two isolated 4-20 mA outputs
0-10 VDC Output	The PD659-1MA-1V can convert the optional 4-20 mA output to a 0-10 VDC output

USB Connection

Function	Programming only
Compatibility	USB 2.0 Standard, Compliant
Connector Type	Micro-B receptacle
Cable	USB A Male to Micro-B Cable
Driver	Microsoft® Windows® 10/11
Power	USB port provides power to the meter. **DO NOT** apply AC or DC power to the meter while the USB port is in use.

On-Board Digital Input (F4)

Function	Remote operation of front-panel buttons, acknowledge/reset relays, reset max/min values.
Contacts	3.3 VDC on contact. Connect normally open contacts across F4 to COM.
Logic Levels	Logic High: 3 to 5 VDC Logic Low: 0 to 1.25 VDC
Additional I/O	Up to 2 external modules, model PDA1044 with 4 digital inputs and 4 digital outputs each can be added.

Modbus RTU Serial Communications

Slave Id	1 – 247 (Meter address)
Baud Rate	300 – 19,200 bps
Transmit Time Delay	Programmable between 0 and 199 ms
Data	8 bit (1 start bit, 1 or 2 stop bits)
Parity	Even, Odd, or None with 1 or 2 stop bits
Byte-To-Byte Timeout	0.01 – 2.54 second
Turn Around Delay	Less than 2 ms (fixed)

Note: Refer to the PROVU Modbus Register Tables located at www.predig.com for details.

MeterView Pro Software

Availability	Download directly from meter or from www.predig.com/download_software
System Requirements	Microsoft® Windows® 10/11
Communications	USB 2.0 (for programming only) (Standard USB A to Micro USB B) RS-232 adapter, RS-485 adapter and RS-485 to USB converter (programming, monitoring, and data logging)
Configuration	Configure meters one at a time
Power	USB port provides power to the meter. ***DO NOT** apply AC or DC power to the meter while the USB port is in use.*

Digital I/O Expansion Module

Channels	4 digital inputs & 4 digital outputs per module
System	Up to 2 modules for a total of 8 inputs & 8 outputs
Digital Input Logic	**High:** 3 to 5 VDC **Low:** 0 to 1.25 VDC
Digital Output Logic	**High:** 3.1 to 3.3 VDC **Low:** 0 to 0.4 VDC
Source Current	10 mA maximum
Sink Current	1.5 mA minimum
+5 V Terminal	To be used as pull-up for digital inputs only.

4-Relay Expansion Module

Relays	Four Form A (SPST) rated 3 A @ 30 VDC and 125/250 VAC resistive load; 1/14 HP (≈ 50 watts) @ 125/250 VAC for inductive loads.

MOD-LH Light/Horn

Light Colors	MOD-LHRB1: Red MOD-LHGB1: Green MOD-LHYB1: Yellow MOD-LHBB1: Blue MOD-LHWB1: White MOD-LH5CB1: User selectable: red, green, yellow, blue, white MOD-LH3CB1-RYG: 1 layer each of red, yellow, green (consult factory for other colors available)
Light Action	Can be wired to flash (not available on MOD-LH5CB1) or stay steady on
Light/Horn & Button Installation	When MOD-LH is ordered with an enclosure, the user performs installation and wiring of Light/Horn and Button in pre-drilled holes.
Horn	85 dB
Rating	IP 65
Light/Horn Independence	Light and horn can be controlled via separate relays
Power Requirement	24 VDC; such as Precision Digital model PDA1024-01 24 V power supply

MOD-LH and MOD-LH5CB1 Models:

Color	Power Required	Color	Power Required
Red	17 mA	Blue	15 mA
Green	15 mA	White	42 mA
Yellow	23 mA	Horn	20 mA

Example: 17 mA (Red Light) + 20 mA (Horn) = 37 mA total current

MOD-LH3LCB1-RYG:

Power Requirement for the horn and each color that is turned on:

Color	Power Required	Color	Power Required
Red	34 mA	Yellow	33 mA
Green	29 mA	Horn	38 mA

Example: 33 mA (Yellow Light) + 38 mA (Horn) = 71 mA total current

Reset / Silence Button	NEMA 4X; may be wired to F4 terminal on PROVU. F3 front panel button can also be used to reset relays.
Button Labels	The Light/Horn accessory comes with 9 pre-printed message labels the user can affix under the red button: RESET, BATCH, ACK, TARE, SILENCE, STOP, START, PAUSE, START/STOP
Light/Horn Mounting Connection	M22
Hole Sizes	Light/Horn: 0.875" (22 mm) Button: 0.630" (16 mm)
Cable Length:	3.28 feet (1 meter)
Operating Temperature Range	-5 to 40°C (23 to 104°F)

Compliance Information

Safety

UL & C-UL Listed	USA & Canada UL 508 Industrial Control Equipment
UL File Number	E160849
Front Panel	UL Type 4X, NEMA 4X, IP65; panel gasket provided
Low Voltage Directive	EN 61010-1 Safety requirements for measurement, control, and laboratory use

Electromagnetic Compatibility

Emissions	EN 55022 Class A ITE emissions requirements
Radiated Emissions	Class A
AC Mains Conducted Emissions	Class A
Immunity	EN 61326-1 Measurement, control, and laboratory equipment EN 61000-6-2 EMC heavy industrial generic immunity standard
RFI - Amplitude Modulated	80 -1000 MHz 10 V/m 80% AM (1 kHz) 1.4 - 2.0 GHz 3 V/m 80% AM (1 kHz) 2.0 - 2.7 GHz 1 V/m 80% AM (1 kHz)
Electrical Fast Transients	±2kV AC mains, ±1kV other
Electrostatic Discharge	±4kV contact, ±8kV air
RFI - Conducted	10V, 0.15-80 MHz, 1kHz 80% AM
AC Surge	±2kV Common, ±1kV Differential
Surge	1KV (CM)
Power-Frequency Magnetic Field	30 A/m 70%V for 0.5 period
Voltage Dips	40%V for 5 & 50 periods 70%V for 25 periods
Voltage Interruptions	<5%V for 250 periods

Note: Testing was conducted on meters installed through the covers of grounded metal enclosures with cable shields grounded at the point of entry representing installations designed to optimize EMC performance.

EU Declaration of Conformity

For shipments to the EU and UK, a Declaration of Conformity was printed and included with the product. For reference, a Declaration of Conformity is also available on our website www.predig.com/docs.

PD7000 ProVu Temperature Meter

ORDERING INFORMATION

ProVu PD7000 • Standard Models		
85-265 VAC Model	**12-24 VDC Model**	**Options Installed**
PD7000-6R0	PD7000-7R0	None
PD7000-6R2	PD7000-7R2	2 Relays
PD7000-6R3	PD7000-7R3	4-20 mA Output
PD7000-6R4	PD7000-7R4	4 Relays
PD7000-6R5	PD7000-7R5	2 Relays & 4-20 mA Output
PD7000-6R7	PD7000-7R7	4 Relays & 4-20 mA Output

ProVu PD7000 • SunBright Display Models		
85-265 VAC Model	**12-24 VDC Model**	**Options Installed**
PD7000-6H0	PD7000-7H0	None
PD7000-6H2	PD7000-7H2	2 Relays
PD7000-6H3	PD7000-7H3	4-20 mA Output
PD7000-6H4	PD7000-7H4	4 Relays
PD7000-6H5	PD7000-7H5	2 Relays & 4-20 mA Output
PD7000-6H7	PD7000-7H7	4 Relays & 4-20 mA Output

Accessories	
Model	**Description**
MOD-LHRB1	Red[2] Light/Horn and Button with Holes Drilled for Light/Horn and Button in Enclosure[1]
PDA-BUTTON1R	Button
PDA-LHR	Red[2] Light/Horn
PDA1002	DIN Rail Mounting Kit for Two Expansion Modules
PDA1004	4-Relay Expansion Module
PDA1024-01	24 VDC Power Supply for DIN Rail
PDA1044	4 Digital Inputs & 4 Digital Outputs Module
PDA1232	RS-232 Serial Adapter
PDA1485	RS-485 Serial Adapter
PDA18DINSH	Stainless Steel Sun Hood
PDA7485-I	RS-232 to RS-422/485 Isolated Converter
PDA8232-N	USB to RS-232 Non-Isolated Converter
PDA8485-I	USB to RS-422/485 Isolated Converter
PDX6901	Suppressor (snubber): 0.01 µF/470 Ω, 250 VAC

1. The enclosure comes pre-drilled with holes for Light/Horn and Button to be installed by user. Meter / controller and enclosure are sold separately. The Light/Horn hole is located on the top in the back left corner of the enclosure and the button hole is centered on the front of the enclosure about an inch off the bottom of the door. For mounting in different locations, order items separately and drill holes and mount as desired.
2. For other light color options see the MOD-LH Series manual (LIMMODLH).

ProVu Upgrade Cards	
Model	**Description**
PD1102	2 Relays
PD1103	4-20 mA Output[1]
PD1104	4 Relays
PD1105	2 Relays + 4-20 mA Output[1]
PD1107	4 Relays + 4-20 mA Output[1]
Note: These upgrade cards are intended for customers who already have a meter and want to upgrade its functionality.	

1. Output calibration required by user.

PDA2360 Series Control Stations	
Model	**Description**
PDA2360-E	Emergency Stop Button
PDA2361-A	1 Black Ack Button
PDA2361-Q	1 Black Silence Button
PDA2364-MRUE	4 Black Buttons: Menu, Right, Up, Enter

Your Local Distributor is:

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⚠ WARNING
Cancer and Reproductive Harm - **www.P65Warnings.ca.gov**

LDS7000_F 12/24

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