METERVIEW SOFTWARE

Instruction Manual



REMOTE PROGRAMMING

MeterView software allows all setup parameters to be programmed remotely from a PC and saved to a file for reporting or programming other meters.

DATA ACQUISITION

MeterView software provides a convenient way to collect the data generated by the Trident's serial output. The user can select the logging time interval. Data can be written to a file, which can then be imported into a spreadsheet or other application.

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SPECIFICATIONS

SYSTEM REQUIREMENTS	Windows [®] 95/98/ME/2000/XP
COMMUNICATION	RS-232 adapter or RS-422/485 adapter may be used for communicating with one meter at a time
NUMBER OF METERS	One meter at a time with addressing capability
BAUD RATE	Fixed 2400 bps
REPORTS	Data logging: log to Comma Separated Values (CSV) or HTML file formats
	Configuration: Save configuration in HTML file for printing, cloning or restoring meter settings
CONFIGURATION	Configure one meter at a time

Disclaimer

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ORDERING INFORMATION

Meters

85-265 VAC* Model	12-36 VDC* Model	Description		
PD765-6R0-0	PD765-7R0-0	No Options		
PD765-6R0-1 24 VDC Output Option				
PD765-6R2-0 PD765-7R2-0 2 Relays Option				
PD765-6R2-1 2 Relays + 24 VDC Output Option				
*All models may be AC or DC powered, see PD765 Instruction Manual for details.				

Accessories

Model	Description
PDA7420	7' (2.1 m) Standard Modular Cable
PDA7232	RS-232 Serial Adapter (includes PDA7420)
PDA7422	RS-422/485 Serial Adapter (includes PDA7420)
PDA7502	MeterView 2.0 Software

MeterView Installation

- Load the MeterView software CD-ROM into your CD-ROM drive. The MeterView splash screen will automatically load onto the screen and the installation program will follow. If it doesn't start automatically, click on the **Start** button on the Windows[®] taskbar, then click **Run**. Enter *x:\setup.exe* (where *x* is your CD-ROM drive) and press enter.
- 2. Follow the on-screen instructions to install MeterView.
- 3. During installation, the MeterView program icon is placed on the Windows Desktop and in the Start Menu.
- 4. Afterwards, Windows[®] Explorer may be used to browse the rest of the CD-ROM, including: this manual, a *readme* file containing important information about MeterView, and free Adobe Acrobat software for viewing PDF files.

Notice:

This software may only be installed on a single computer. It may not be shared over a network or otherwise used on more than one computer at a time, except for the purpose of remote programming of meters.

Running MeterView for the First Time

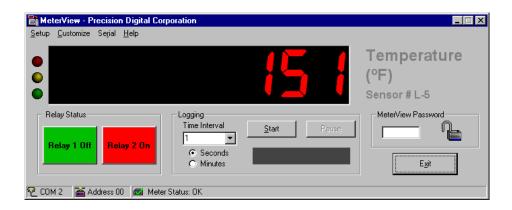
The first time MeterView is run it is necessary to setup the Serial Communications. Select the meter address and communication port to which the meter is connected.

📑 Serial Setup 🛛 🗙			
00	•	Meter Addre	ss
COM 1	•	COM Port	OK I
2400	-	Baud	Cancel

Main MeterView Window

The main MeterView window shows the present reading, selected engineering units, and tag number, along with other information. The graphic below indicates the different parts of the main MeterView window.

Main Window	Function/Submenus
Setup	Read, restore, and/or clone meter's configuration, Open and/or save configuration file to disk
Customize	Relay Tags, Display Units, Tag Number, Font Color, Background Color, Enable Sound
Serial	Adjust the serial connection settings
Help	About
Relay Status	Displays relay status. This is also used to remotely acknowledge either relay
Logging Time Interval	Click on arrow to select from 1-60 from drop-down menu, or type number from 1-1440; select Minutes or Seconds
Start/Stop Button	Click to start/stop logging to a file
Pause Button	Click to pause logging
MeterView Password	Enter password to lock or unlock MeterView
Exit	Click to exit MeterView program



General Notes

- Use left mouse button or tab key on the keyboard to navigate within a window.
- Parameters not available within a window appear grayed-out.
- An arrow next to a box indicates a drop-down menu. Click on arrow to display the drop-down menu.

Setup Menu

Click on the **Setup** menu to load the meter configuration window. The following settings can be programmed from this window:

- 1. Input type (4-20 mA, 0-10 V, RTD, or TC).
- 2. Decimal point for process inputs (dd.dd).
- 3. Temperature scale (F or C) for temperature inputs.
- 4. Values for Adjust (temperature only), Bypass, Filter, Password, and scaling for process inputs.

PD765 Configuration Manager		×
File Meter Factory Values		
Meter Address 🔟 💌	ource of Configuration Data: Last saved settings	Save to Meter
_ Input	-4-20mA Scaling	Cancel
4 to 20 mA 💌 degrees F 💌	MA Input Display 04.00 04.00	Password
dd.dd 🔽 Type J	20.00 20.00	
Adjust,° Filter	Bypass, % 00.2	Trans. Delay
Relay Settings		
Relay 1	Rela	y 2 Change <u>R</u> elays
Action Automatic Reset	Action Automatic Rese	t
Fail Safe Off	Fail Safe Off	
Set 07.00 Turn-On Time Delay	000 Set 10.00 Turn-Or	n Time Delay 000
Reset 06.00 Turn-Off Time Delay	000 Reset 09.00 Turn-Of	f Time Delay 000

- 5. Relay settings: see Page 13 for more information.
- 6. After the last change has been made, click the "Save to Meter" button or press Enter on the keyboard to send the new settings to the meter, or click on Cancel to abandon changes. Before sending the new settings, MeterView will ask to confirm that the meter's current settings should be overwritten. Click Yes to overwrite the settings, or No to abandon the changes and return to the configuration window.

Notes

- When any menu is accessed, communication between meter and computer is stopped.
- Transmit and receive status indicators on Serial Adapter stop blinking while changes are made to configuration.
- Before saving settings to the meter, make sure that the correct Meter Address is selected to avoid making changes to the wrong meter.

File Menu

The following options are available from the File menu:

- **1. Open** to open saved configuration files.
- 2. **Save** and **Save as** to save the current settings to a configuration file.
- 3. **Quit** to close the configuration window and return to the main window.

Meter Menu

The following options are available from the Meter menu:

- 1. **Read** to import the current settings from the meter into MeterView.
- 2. **Restore** to restore a meter to settings previously saved in a configuration file. The restore operation will only work with the meter whose settings were originally saved to the configuration file.

It is recommended to create a configuration file before changing any setting and before any calibration operation.

3. **Default** to load the factory default settings into the setup window.

Factory Values Menu

The following option is available from the Factory Values menu:

1. **Display** to show or hide calibration values and factory programmed information (Firmware, Version, and Serial Number).

📑 PD765 Co	nfiguration M	anager			X
<u>File Meter</u>	actory Values				
Meter Addı	 <u>D</u>isplay Ctrl+ 	-	ce of Configuratio Meter @ address		Save to Meter
0 to 10 Volts	 degree Type J 	es F	0-10V Sca V Input 00.00 10.00	Display	<u>Cancel</u>
Adjust,		Filter 010	By 00.2		rans. Delay 00
Relay Set	tings Relay	1		Relay 2	Change <u>R</u> elays
Fail Safe () Set () Reset ()	utomatic and Ma ff 7.00 Turn-On 5.00 Turn-Off alibration Va <i>Gain</i>	Time Delay 0 Time Delay 0	Fail Safe	Automatic Reset Off 10.00 Turn-On Time 09.00 Turn-Off Time	-
I	0.0338849	0.1280518			
V	0.0171166	-0.5369873		Firmware SFT013	Version 02.000
Test	0.0169000	-0.0507000			02.000
Type J	0.8702448	7647.735	35203.38	Serial Nu	
Туре К	1.0454054	7579.483	35302.56	200106131	531210
Туре Т	1.0422516	7592.872	35287.81		
Type E	1.0450538	7946.097	35272.25		
100/385	1.0443524	6351.660			
100/392	1.0443524	6351.660			

Note

• In order to display the Factory Calibration Values, the settings must first be read from the meter or loaded from a saved configuration file.

Setup Input Configuration

In the configuration window, click on the arrow under Input and select the appropriate input from the drop-down menu. Make all desired changes to Input configuration then click on "**Save to Meter**" or press Enter on the keyboard to send changes to meter.

Eile Meter Factory Values Meter Address 00 Source of Configuration Data: User defined Save to Meter Input 4 to 20 mA Gancel 4 to 20 mA degrees F Adjust,° 0 to 10 Volts pe J 20.00 Adjust,° 010 00.2 00.0 Filter Bypass, % 00.2 Change Relay 1 Relay 2	PD765 Configuration Manager		×
Input Juser defined Input 4 to 20 mA Input Imput In			
Imput 4 to 20 mA degrees F mA input Display 4 to 20 mA degrees F mA input Display 0 to 10 Volts RTD pe J 20.00 20.00 Adjust,° 010 00.2 Trans. Delay 00.0 010 00.2 Change Relays	Meter Address 00 💌 Sou	-	Save to Meter
4 to 20 mA e grees F 04.00 04.00 4 to 20 mA e J 20.00 20.00 Adjust,° 010 02.00 20.00 Adjust,° 010 00.2 000 Relay Settings Relay 1 Relay 2 Change Relays	Input		Cancel
A to 20 mA De J 20.00 20.00 O to 10 Volts RTD De J 20.00 20.00 Thermocouple Filter Bypass, % Trans. Delay O 0.0 O 10 O 0.2 O 000 Relay Settings Relay 1 Relay 2 Change Relays	4 to 20 mA 💌 degrees F 💌		Password
BTD Filter Bypass, % Adjust, ° 010 00.2 Relay Settings Relay 1 Relay 2			
Adjust,° Filter Bypass, % Trans. Delay 00.0 010 00.2 000 Relay Settings Relay 1 Relay 2			
Relay Settings Relay 1 Relay 2 Change Relays	Adjust,° Filter		
	Relay 1	Rel	ay 2 Change Relays
Action Automatic and Manual Reset Action Automatic Reset	Action Automatic and Manual Reset	Action Automatic Res	et
Fail Safe Off Fail Safe Off	Fail Safe Off	Fail Safe Off	
Set 07.00 Turn-On Time Delay 000 Set 10.00 Turn-On Time Delay 000	Set 07.00 Turn-On Time Delay		
Reset 06.00 Turn-Off Time Delay 000 Reset 09.00 Turn-Off Time Delay 000	Reset 06.00 Turn-Off Time Delay	000 Reset 09.00 Turn-0)ff Time Delay 000

Setup Decimal Point

Click on the arrow next to the *dddd* box then click on desired decimal point position. Decimal point selection is available for 4-20 mA and 0-10 V inputs only.

PD 765 Configuration Manager	E
File Meter Factory Values	
Meter Address 00 💌	Source of Configuration Data: Save to Meter
- Input	4-20mA Scaling <u>Cancel</u>
4 to 20 mA degrees F	Password 04.00 04.00 04.00 04.00
dd.dd Type J	
dd.dd Filt d.ddd 010	er Bypass, % Trans. Delay 00.2 000
Relay Settings	
Relay 1	Relay 2
Action Automatic and Manual Res	et Action Automatic Reset
Fail Safe Off	Fail Safe Off
Set 07.00 Turn-On Time De	ay 000 Set 10.00 Turn-On Time Delay 000
Reset 06.00 Turn-Off Time De	ay 000 Reset 09.00 Turn-Off Time Delay 000

The display scale and relay set/reset points are adjusted according to the decimal point selection.

Setup 4-20 mA Input

- 1. Click on **Setup**.
- 2. Click on **4 to 20 mA**.
- 3. Change any other desired parameter within this window, then click "Save to Meter" to send changes to meter.

📸 PD765 Configuration Manager		×
File Meter Factory Values		
Meter Address 00 💌 So	urce of Configuration Data: User defined	Save to Meter
Input	4-20mA Scaling	<u>C</u> ancel
4 to 20 mA 💌 degrees F 💌	mA Input Display	Password
	04.00 04.00	
dd.dd 💌 Type J 🔽	20.00 20.00	° 🖕
Adjust,° Filter	Bypass, % 00.2	Trans. Delay
Relay Settings		
Relay 1	Relay 2	2 Change <u>R</u> elays
Action Automatic and Manual Reset	Action Automatic Reset	
Fail Safe Off	Fail Safe Off	
Set 07.00 Turn-On Time Delay	000 Set 10.00 Turn-On T	-
Reset 06.00 Turn-Off Time Delay	000 Reset 09.00 Turn-Off 1	fime Delay 000

Setup 0-10 V Input

- 1. Click on **Setup**.
- 2. Click on **0 to 10 Volts**.
- 3. Change any other desired parameter within this window, then click "Save to Meter" to send changes to meter.

📸 PD765 Configuration Manager		×
File Meter Factory Values		
Meter Address 00 💌 So	arce of Configuration Data: User defined	Save to Meter
Input	0-10V Scaling	<u>C</u> ancel
0 to 10 Volts 🔻 degrees F 🔻	V Input Display	Password
	00.00 00.00	<u> </u>
dd.dd 💌 Type J 💌	10.00 10.00	
Adjust,° Filter	Bypass, % 00.2	Trans. Delay
Relay Settings		
Relay 1	Relay 2	Change <u>R</u> elays
Action Automatic and Manual Reset	Action Automatic Reset	
Fail Safe Off	Fail Safe Off	
Set 07.00 Turn-On Time Delay	000 Set 10.00 Turn-On T	-
Reset 06.00 Turn-Off Time Delay	000 Reset 09.00 Turn-Off T	fime Delay 000

Setup RTD Input

- 1. Click on Setup.
- 2. Click on **RTD**.
- 3. Select degrees F or degrees C.
- 4. Select 100 ohm RTD, 385 or 100 ohm RTD, 392.
- 5. Change any other desired parameter within this window, then click "Save to Meter" to send changes to meter.

PD765 Configuration Manager		×
Eile Meter Factory Values		
Meter Address 00 💌	Source of Configuration Data: User defined	Save to Meter
Input		Cancel
RTD degrees F	-	Password
dddd 🔽 100 ohm RTD, 385 💽	3	
Adjust,° Filte	r Bypass, % 00.2	Trans. Delay
Relay Settings		
Relay 1	R	elay 2 Change <u>Relays</u>
Action Automatic and Manual Reset	Action Automatic R	eset
Fail Safe Off	Fail Safe Off	
Set 0007 Turn-On Time Delay	y 000 Set 0010 Turn	-On Time Delay 000
Reset 0006 Turn-Off Time Dela	y 000 Reset 0009 Turn	-Off Time Delay 000

Setup Thermocouple Input

- 1. Click on Setup.
- 2. Click on **Thermocouple**.
- 3. Select degrees F or degrees C.
- 4. Select thermocouple type (**Type J**, **Type K**, **Type T**, **Type T0.1**, or **Type E**).
- 5. Change any other desired parameter within this window, then click "Save to Meter" to send changes to meter.

PD765 Configuration Manager	×
File Meter Factory Values	
Meter Address 00 💌 So	burce of Configuration Data: Save to Meter
Input	Cancel
Thermocouple 💌 degrees F 💌	Password
dddd 🔽 Type J 🔽	
Adjust,° Filter	Bypass, % Trans. Delay 00.2 000
Relay Settings	
Relay 1	Relay 2 Change Relays
Action Automatic and Manual Reset	Action Automatic Reset
Fail Safe Off	Fail Safe Off
Set 0007 Turn-On Time Delay	000 Set 0010 Turn-On Time Delay 000
Reset 0006 Turn-Off Time Delay	000 Reset 0009 Turn-Off Time Delay 000

Password

To lock the meter, enter a password in the **Password** box. The password must be a four-digit number; "0000" is not allowed. Change any other desired parameter within this window, then click "**Save to Meter**" to send changes to meter and lock it.

To unlock the meter, enter the password used to lock the meter in the **Password** box. Change any other desired parameter within this window, then click "**Save to Meter**" to send changes to meter and unlock it.

The meter may also be locked, unlocked or the password changed by clicking on the lock icon next to the password box.

Note

• See the PD765 Instruction Manual for more information on locking and unlocking the meter.

Relay Setup

To change relay settings, click on "Change Relays". In the Relay Setup window, select the desired Mode, Fail Safe operation, Set Point, Reset Point, Turn-On Time and Turn-Off Time for each relay, and click on "OK". Change any other desired parameters within the configuration window, then click "Save to Meter" to send changes to meter.

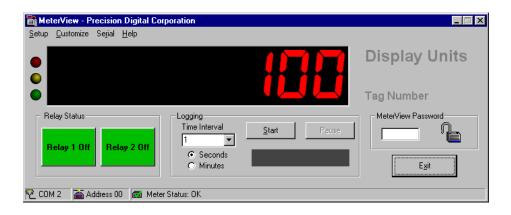
Customize Menu

From the Customize menu, the following options are available:

- 1. **Relay Tags** to change the text label and color of the Relay Status buttons.
- 2. **Display Units** to show text next to the display indicating the units being measured.
- 3. **Tag Number** to show text next to the display indicating identifying information about the meter.
- 4. Font Color to change the font color used for the meter display.
- 5. **Background Color** to change the color used for the background of the meter display.

Note

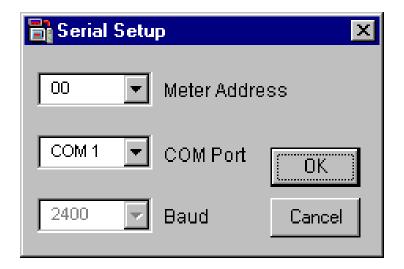
• These settings are NOT saved to the meter's memory.



Serial Communication Setup

Addresses for Trident Meter and MeterView are set to 00 at the factory

Click on **Serial** to access the Serial communication setup. The meter address selected must match the address programmed in the meter using the front panel buttons. Select correct communication port used for Serial Adapter. If timeout error is received, try another serial port selection or check meter's address.



Note

• Baud rate is fixed at 2400 bps.

About

The **About** window provides the product number and version information. You should have this information available in the event you must contact Precision Digital Technical Support.

Relay Status and Acknowledgement

The **Relay Status** section of the main MeterView window displays the current status of the relays, and allows remote acknowledgement of relays, if applicable. The text labels and colors for the status buttons many be customized by using the **Relay Tags** item in the **Customize** menu.

Note

• See the PD765 Instruction Manual for more information about relay modes and acknowledgement.

Logging Meter Data to File

- 1. Click on the arrow next to the Logging Time Interval box to select an interval from 1-60, or type a number from 1-1440 into the Logging Time Interval box.
- 2. Select seconds or minutes.
- 3. Click the **Start** button on the main MeterView window to start logging to a file.
- 4. Select file location, file type (HTML or CSV), and enter a file name. Click **OK**. MeterView will begin logging data to the file.

Logging may be paused or stopped at any time. MeterView will indicate logging and paused status with corresponding message flashing in the display below the Start/Stop and Pause buttons.

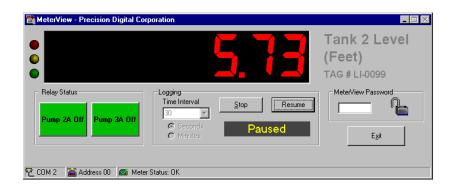
Logging Data

This window shows logging is in progress.



Paused Logging

This window shows logging has been paused.



The meter continues displaying the process, but no data is being logged to the file while logging remains paused.

Click on **Stop** to stop logging process. **Start** button reappears.

Log File Samples

The HTML log file format contains pertinent information related to the meter and logging selections. Each log entry includes date and time, display value, units and relay status.

HTML log file:

Eile Edit View Favorites Iools Help ↔ • → · ② ④ ☆ ③ Address @ C:\WINDOWS\DESKTOP\LI-0099.htm						
		PD	765 Log F	`ile		
Name: C:\WINDOWS\DESKTOP\i-0099.htm Created: 4/18/02 11:44:20 AM						
Meter Addre	ss: 00 Connection: 3	2400 Bai	ud on COM 2	Logging rate	e: 1 update eve	ry 30 seconds
	Date & Time	Display	Units	Relay 1	Relay 2	
	4/18/02 11:44:20 AM	5.73	Tank 2 Level (Feet)	Pump 2A Off	Pump 3A Off	
	4/18/02 11:44:50 AM	6.32	Tank 2 Level (Feet)	Pump 2A Off	Pump 3A Off	
	4/18/02 11:45:20 AM	6.49	Tank 2 Level (Feet)	Pump 2A Off	Pump 3A Off	
	4/18/02 11:45:50 AM	7.13	Tank 2 Level (Feet)	Pump 2A On	Pump 3A Off	
	4/18/02 11:46:20 AM	8.64	Tank 2 Level (Feet)	Pump 2A On	Pump 3A Off	
	4/18/02 11:46:50 AM	10.19	Tank 2 Level (Feet)	Pump 2A On	Pump 3A On	
	4/18/02 11:47:20 AM	9.03	Tank 2 Level (Feet)	Pump 2A On	Pump 3A On	
	4/18/02 11:47:50 AM	7.26	Tank 2 Level (Feet)	Pump 2A On	Pump 3A Off	
		6.21	Tank 2 Level (Feet)		D	

The CSV log file format includes date and time, display value, units and relay status for each log entry.

CSV log file:

冒 L	-0099	.csv - No	otepad						_ [×
<u>F</u> ile	<u>E</u> dit	<u>S</u> earch	<u>H</u> elp							
Date	e,Tim	ne,Disp	lay,U	nits,Relay	1	,Relay	2			1
4/18	8/02,	11:59:	30 AM	1,5.43,Tank	2	Level	(Feet),Pump	2A	Off,Pump 3A Off	
4/18	8/02,	12:00:	:00 PM	1,5.98,Tank	2	Level	(Feet),Pump	2A	Off,Pump 3A Off	
									Off,Pump 3A Off	
									On,Pump 3A Off	
									On,Pump 3A Off	
4/18	8/02,	12:02:	:00 PM	1,7.10,Tank	2	Level	(Feet),Pump	2A	On,Pump 3A Off	
4/18	8/02,	12:02:	30 PM	1,5.91,Tank	2	Level	(Feet),Pump	2A	Off,Pump 3A Off	
										∇

MeterView Password

In the **MeterView Password** section of the main MeterView window, a four-digit numeric password may be entered to lock or unlock MeterView. To enter a password, type the four-digit number and press the enter key or double-click the lock icon next to the password field.

Locking MeterView disables all controls, preventing any settings from being changed. This is useful for preventing any changes from being made or preventing logging from being stopped by unauthorized users while MeterView is running unattended.

Note

• Locking MeterView and locking the meter itself are two different features. Locking one does not automatically lock the other.

Status LEDs

The three status LEDs shown to the left of the display in the main window indicate the status of the connection between the meter and the computer.



LED	Meaning
Green	MeterView has detected the meter and is functioning correctly.
Yellow	MeterView is attempting to detect the meter.
Red	MeterView failed to detect the meter. MeterView will continue attempting to detect it. Check that the correct serial port and meter address are selected.

How to Contact Precision Digital

- For Technical Support please call: (800) 610-5239 fax: (508) 655-8990 e-mail: <u>support@predig.com</u>
- For Sales Support or to place an order please call: (800) 343-1001 fax: (508) 655-8990 e-mail: <u>sales@predig.com</u>
- For an online version of this Instruction Manual please visit

www.predig.com

For Interactive VirtualMeter Demo visit
 www.predig.com

