



**Application Note 51583**  
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Original Instructions

# **ProTech TPS Software Upgrade Procedure Math Enhanced Version**

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# ProTech®TPS Software Upgrade Procedure

## Introduction

This publication provides owners/users of old-style ProTech®TPS models with the necessary hardware and software requirements and instructions to convert them in the field to Woodward's latest ProTech®TPS models. Refer to Woodward Product Change Notification 06947 for a list of all related product improvements.

The following files are needed to update the ProTech®TPS software to the math-enhanced version with voted input functionality. These files are loaded on the ProTech®TPS Software Upgrade Kit CD (BCD85293).

- 5418-7350 (TPS).wapp (ProTech®TPS application file)
- 9927-2500 (TPS Defaults for 5418-7350).wset (factory settings file)
- 9927-1684\_F.exe (ProTech Service Tool Installer)
- 9927-2146\_C.exe (Tool to clear the service tool password)
- 35059V1 and 35059V2 (ProTech®TPS Product Manual)

### **WARNING**

If these instructions are not followed, the configurations settings of the device will be lost.

### **NOTICE**

Make sure your laptop PC is electrically isolated from earth ground, by either powering the laptop PC from its internal battery or by disconnecting the earth ground portion of the laptop PC's power cord.

### **IMPORTANT**

This procedure simply converts software and settings based on the current device configuration. It does not enable or activate any new functionality. Refer to the Woodward Product Change Notification 06947 for changes from the previous release. Refer also to the Product Manuals 35059V1 and 35059V2 for details on configuration of the new features.

## Steps to Update the Software

1. Install the tools provided on the CD (9927- 1684\_F.exe and 9927-2146\_C.exe).
2. Connect a regular serial cable (not a null modem cable) between the system Module A service port on the ProTech and the computer. Note: the system module must be tripped before you can load software.
3. Open/Run the ProTech TPS Service Tool.
4. Establish communications with the ProTech by selecting the Connect icon. Chose the appropriate COM port and select 'Auto Detection' for baud rate.
5. If the ProTech has been previously configured and you want to keep the settings, save the current device settings to a file. Otherwise go to step 6.
  - a. Select the 'Save from Device to File' option from the Settings menu. These settings can then be restored at the end of this procedure. Follow the steps in this wizard to create the previous settings backup file. Once saved, it can be viewed using the 'Settings| Edit Settings File' menu option.
  - b. Convert these previous settings for compatibility with this new firmware by selecting 'Associate Settings File with Application' from the Settings menu. Browse to the saved file.
  - c. In the Application Selection window, chose 'ProTech®TPS 5418-7350- Version 9' for the Specification Name and click Next.

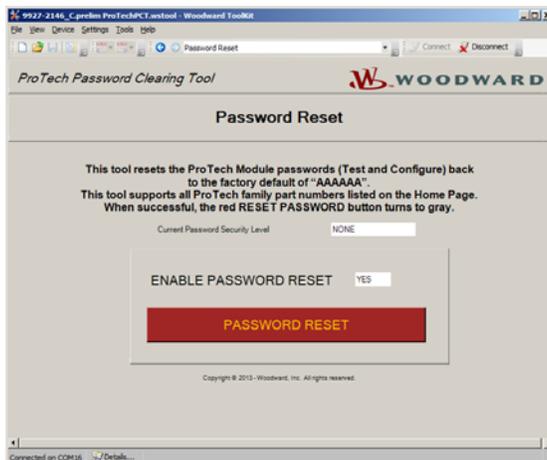
- d. In the New File Selection window, click Browse and create a new file name for the updated settings file. This is recommended, thereby retaining a copy of the previous settings.
- e. Any changes or updates made will be presented on the Conversion Information window. A screen capture is the best option for retaining this information.

**Note:** this conversion process simply converts the existing settings to similar values in the newer firmware. If utilization of new features is desired, the settings file(s) must be updated by the User.

6. Select "File| Load Application". Follow the screen prompts. Note that you must uncheck the 'Restore Settings' box. Browse to the .wapp file provided with the CD and select. Load the .wapp software on the ProTech.
  - a. **Note:** after loading the .wapp file, the ProTech screen will display PARAMETER ERROR. This is normal.
  - b. Select Disconnect then Connect. A security login screen will appear. Set Security Level to 'Config Level' and enter the password (default value is AAAAAA).  
**Note:** if the password is not accepted, this is an indication that the password handling is incompatible and that steps 11-12 need to be performed to rectify this issue. If the password is accepted, continue on with step 7.
7. Select "Settings| Load Settings File to Device". Follow the screen prompts selecting either the file from step 5 or '9927-2500 rev- (TPS Defaults for 5418-7350).wset' provided on the CD. If prompted, set Security Level to Config Level and enter the password (default value is AAAAAA).  
**Note:** if the password is not accepted, this is an indication that the password handling is incompatible and that steps 10-11 need to be performed to rectify this issue. If the password is accepted and the settings file loads successfully, continue on with step 8.
8. Cycle power on the Module. The ProTech front panel should display the Home screen.
9. Repeat the steps above for system Modules B and C on the ProTech. When completed, go to step 12 below.
10. If the previous firmware was older than 5418-6348 (ie a smaller number), then an additional steps are required to make the password handling compatible. Connect to each module and use the ProTech Password Clearing Tool to reset all the passwords on the unit.  
**Note:** both passwords (Configuration password and Test password) will be reset. There is no option for resetting just one password.
  - a. Open the Password Clearing Tool; the initial screen will appear.



- b. Press the “Connect” button on the tool. The following screen will appear.



The Current Password Security Level should read NONE, indicating that the ProTech is not in Configuration mode. This is the correct reading for resetting the ProTech passwords.

- c. To reset the passwords, select “YES” for ENABLE PASSWORD RESET.
  - d. The “PASSWORD RESET” button will change from gray to red.
  - e. Click on the “PASSWORD RESET” button. After the passwords have been reset, the button will turn from red to gray, indicating the passwords have been reset for the module.
  - f. Select Disconnect to free up the COM port. Note this tool will be needed to clear all three ProTech Modules.
11. On the ProTech TPS Service Tool, establish communications with the ProTech by selecting the ‘Connect’ icon. Once connected, go back to step 7 and continue from there.
  12. After the setting file has been loaded into all three modules, power cycle all modules. The ProTech should go into normal operation. Check the module information under the monitor menu and verify that each module is at software part number 5418-7350.
  13. Lastly update/change device settings to utilize the new functionality following the product manual. At this point the device has been converted to the new firmware with the same settings as before, or default values, depending on what was loaded. The new features need to be added to the configuration and loaded into the device before they will become active.

## IMPORTANT

**A functional test of the TPS is required after making any changes that affect the safety system. Follow the Safety Management procedures in the product manual (chapter 5 of 35059V1).**

## Update the Identification Labels

As part of the software upgrade process, Woodward has recorded the serial number of the ProTech(s) that the software is being upgraded on. In this instance, that also means that the part numbers of the system modules and the ProTech itself have been changed. To keep all records accurate and up to date, it is very important that the Identification labels on the system modules and the ProTech itself be changed. The upgrade kit contains four labels, one for each system module and one for the ProTech.

## System Modules Identification Labels

These labels have the serial number of the existing system modules in addition to the new system module part number printed on them. When the old system module Identification labels are replaced, it is very important that the serial number of the old module and the serial number of the new module are the same. When replacing these labels, check that the serial numbers match. The identification labels are located on the right side of each system module.

## ProTech Identification Label

This label has the serial number of the existing ProTech in addition to the new ProTech model part number printed on it. When replacing this label, check that the serial numbers match.

- For ProTech panel-mount units, the Identification label is on the back of the front panel.
- For bulkhead mount ProTech units, the Identification label is on the lower left mounting leg of the unit.

Table 1. Part Number Conversion Table

ProTech Part Number		System Module Part number	
From	To	From	To
8237-1248 Rev D or Newer or 8237-1602	8237-2602	5437-1117 or 5437-1130	5437-2130
8237-1249 Rev D or Newer or 8237-1603	8237-2603	5437 -1118 or 5437-1131	5437-2131
8237-1250 Rev D or Newer or 8237-1604	8237-2604	5437-1115 or 5437-1128	5437-2128
8237-1251 Rev D or Newer or 8237-1605	8237-2605	5437-1116 or 5437-1129	5437-2129
8237-1371 Rev D or Newer or 8237-1606	8237-2606	5437-1117 or 5437-1130	5437-2130
8237-1372 Rev D or Newer or 8237-1607	8237-2607	5437-1118 or 5437-1131	5437-2131
8237-1373 Rev D or Newer or 8237-1608	8237-2608	5437-1115 or 5437-1128	5437-2128
8237-1374 Rev D or Newer or 8237-1609	8237-2609	5437-1116 or 5437-1129	5437-2129

# Appendix.

## ProTech Software Upgrade Form

\*\* Customer is required to affix new identification labels sent with the upgrade kit. Please fill out the new information below and send to your respective Customer Support Representative when completed.

Four blank identification labels will be sent; one for the ProTech and one for each of the three modules.

Customer Name: \_\_\_\_\_

Contact information: \_\_\_\_\_

Customer Address: \_\_\_\_\_

PO Number: \_\_\_\_\_

Current Woodward P/N of ProTech: \_\_\_\_\_

Current Rev of ProTech: \_\_\_\_\_

Serial Number of ProTech: \_\_\_\_\_

Current Woodward P/N for three modules: \_\_\_\_\_

Current Rev of three modules: \_\_\_\_\_

Serial Numbers of three modules: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

New Woodward P/N of ProTech: \_\_\_\_\_

New Rev of ProTech: \_\_\_\_\_

New Woodward P/N for three modules: \_\_\_\_\_

New Rev of three modules: \_\_\_\_\_

Date identification labels applied: \_\_\_\_\_

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