



Application Note 51584
(Revision -, 12/2017)
Original Instructions

MicroNet Safety Module (MSM) Software Upgrade Procedure Math Enhanced Version

**Optional Supplemental
Information**

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MSM Software Upgrade Procedure

Introduction

This publication provides owners/users of MicroNet Safety Module (MSM) models with the necessary hardware and software requirements and instructions to convert them in the field to Woodward's latest MSM models. Refer to Woodward Product Change Notification 06948 for a list of all related product improvements.

The following files are needed to update the MSM software to the math-enhanced version with voted input functionality. These files are loaded on the MSM Software Upgrade Kit CD (BCD-85293).

- 5418-7351 (MSM).wapp (MSM application file)
- 9927-2501 (MSM Defaults for 5418-7351).wset (factory settings file)
- 9927-1838_D.exe (MicroNetSM Service Tool Installer)
- 9927-2146_C.exe (Tool to clear the service tool password)
- 35060V1 and 35060V2 (MSM Product Manuals)



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 06948 for changes from the previous release. Refer also to the Product Manual 35060V1 and 35060V2 for details on configuration of the new features.

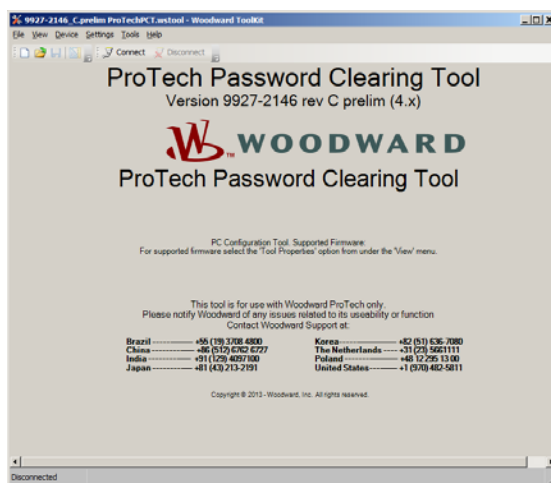
Steps to Update the Software

1. Install the tools provided on the CD (9927-1838_D.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 MSM and the computer. Note: the system module must be tripped before you can load software.
3. Open/Run the MicroNetSM Service Tool.
4. Establish communications with the MSM by selecting the Connect icon. Chose the appropriate COM port and select 'Auto Detection' for baud rate.
5. If the MSM 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 'MSM 5418-7351- Version 9' for the Specification Name and click Next.

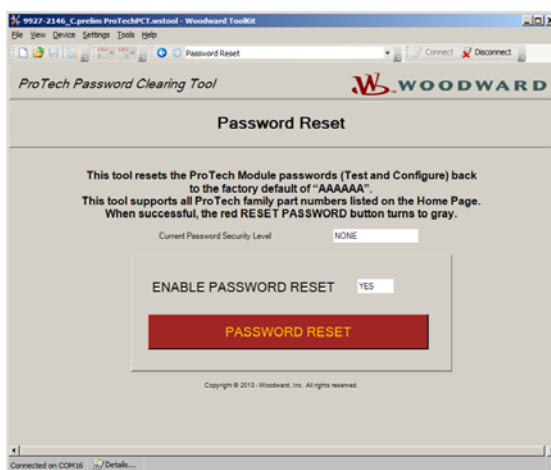
- d. In the New File Selection window, click Browse and create a new file name for the updated settings file. This is recommended, thereby retaining a copy of the previous settings.
- e. Any changes or updates made will be presented on the Conversion Information window. A screen capture is the best option for retaining this information. Each error must be addressed before proceeding. Errors typically indicate blocks or functions no longer available in the newer firmware. Each warning should be analyzed to ensure the action was appropriate.

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 MSM.
 - a. **Note:** after loading the .wapp file, the MSM 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: that 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". If prompted, set Security Level to Config Level and enter the password (default value is AAAAAA). Follow the screen prompts selecting the default settings '9927-2501 rev- (MSM Defaults for 5418-7351).wset' provided on the CD.
- 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 and the settings file loads successfully, continue on with step 8.
8. Select 'Disconnect' on the Service Tool. Cycle power on the Module. The MSM front panel should display the Home screen.
 9. Optionally load the settings from step 5 following these steps:
 - a. Select Connect and log in with Config Level password.
 - b. Select the 'View Configuration Error Log' button. This allows viewing of any warnings or errors detected.
 - c. "Settings| Load Settings File to Device". Follow the screen prompts and select the file from step 5. If the file fails to load due to a configuration error, then correct/edit the issues with the settings file and retry. The Configuration Error Log should be checked for warnings/errors.
 10. Repeat the steps above for system Modules B and C on the MSM. When completed, go to step 12 below.
 11. If the previous firmware was older than 5418-6349 (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 that 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 MSM is not in Configuration mode. This is the correct reading for resetting the MSM 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.
 - f. Select ‘Disconnect’ to free up the COM port. Note this tool will be needed to clear all three MSM Modules.
12. On the MicroNetSM Service Tool, establish communications with the MSM by selecting the ‘Connect’ icon. Set Security Level to ‘Config Level’ and enter the password (default value is AAAAAA). Once connected, go back to step 7 and continue from there.
 13. After the setting file has been loaded into all three modules, power cycle all modules. The MSM should go into normal operation. Check the module information under the monitor menu and verify that each module is at software part number 5418-7351.
 14. 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 MSM is required after making any changes that affect the safety system. Follow the Safety Management procedures in the product manual (chapter 5 of 35060V1).

Update the Identification Labels

As part of the software upgrade process, Woodward has recorded the serial number of the MSM(s) that the software is being upgraded on. In this instance, that also means that the part numbers of the system modules and the MSM 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 MSM itself be changed. The upgrade kit contains four labels, one for each system module and one for the MSM.

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.

MSM Identification Label

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

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

Table 1. Part Number Conversion Table

MSM Part Number		System Module Part number	
From	To	From	To
8237-1492	8237-2492	5437-1132	5437-2132
8237-1493	8237-2493	5437-1133	5437-2133
8237-1494	8237-2494	5437-1134	5437-2134
8237-1495	8237-2495	5437-1135	5437-2135
8237-1496	8237-2496		
8237-1497	8237-2497		
8237-1498	8237-2498		
8237-1499	8237-2499		

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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Please reference publication **51584**.



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