ABB

TOTALFLOW
Technical Bulletin 96

Levelmaster Sensor Electronic Board Replacement Procedure (2018580-002 thru 004)

Totalflow Technical Bulletin

Version 1.0, Revision AA (01 August 2002)

ABB Inc.

Background:
When a sensor board is to be replaced in the field due to failure or upgrade, the calibration/configuration file for that sensor must be loaded into the replacement board. Calibration/configuration files contain the multi-point calibration data as well as defining the configuration of application (number of floats etc.). The 2018580-004 boards stocked for spare parts do not have the calibration/configuration data loaded in them. The calibration/configuration data must be downloaded on to the board before it will function.

When the board is ordered from Bartlesville and the sensor serial number is supplied by either the ABB Field office, Field Service personnel, or by the Customer the board will be programmed by manufacturing before it is shipped.   If the board is not programmed in Bartlesville then it must be programmed in the field either using the Calibration/configuration file saved by the customer, or by customer service personnel downloading it off the network. These files are available from the server in Bartlesville Under "tffiles on tffs1\CustomerSvc\Levelmaster\Sensorfiles".

The Master link software is setup to assist in uploading and downloading software (configuration files) to and from the sensor board.

Scenario #1

If the Sensor Board has been programmed with the configuration files at the factory then the steps for installation are as follows:

1. Disconnect Power from the sensor (green plug on the end of the board).

2. Remove old board and install the new board.

3. Measure Level(s) in Tank using Gauging Tape

4. Connect laptop to sensor and start Masterlink program (Cable 2100241-002 will supply power).

5. Click on the "Setup Levelmaster" button

6. Select the "Setup" tab

7. Enter the value for Level 1 obtained from Gauging Tape

8. Click on the "Set Tank Level 1" button

9. When the calibration is complete press "OK"

10. If you only have one level go to step 14

11. Enter the value for Level 2 obtained from Gauging Tape

12. Click on the "Set Tank Level 2" button

13. When the calibration is complete press "OK

14. Select the "Upload/Download" Tab to download current configuration to Laptop for backup.

15. Verify that the name of the file is correct for this sensor

16. Click on the "Read and Save Data to File" Button

17. Disconnect Laptop and reconnect green plug

This completes installation of the new sensor board

Scenario #2

If the Sensor Board has not had the configuration/calibration files for the sensor loaded at the factory, please use one of the following procedures.

Note: You must determine the version of the PIC on the old and new board before proceeding.   The PIC is the large IC chip mounted in the socket on the board, it has a sticker with a part number on it.   If the part number is 2018561-001 then this is a 5018 PIC if the part number is 2100623-001 then it is a 6019 PIC.

To replace a defective sensor board with 6019 PIC (2100623-001) with a new board with 6019 PIC

1. Disconnect Power from the sensor (green plug on the end of the board.

2. Remove old board and install the new board.

3. Connect laptop to sensor and start Masterlink program.

4. Click on the "Setup Levelmaster" button

5. Select "Setup" Tab

6. Click on the "Hardware Change" button

7. Select "I just Installed a new Electronic Board" and follow the step by step instructions (make sure the data file is the one previously saved for this sensor).

8. Measure the Level(s) in Tank using Gauging Tape

9. Enter the value for Level 1 obtained from gauging tape .

10. Click on the "Set Tank Level 1" button
11. When the calibration is complete press "OK"
12. If you only have one level go to step 16)
13. Enter the value for Level 2 obtained from gauging tape.
14. Click on the "Set Tank Level 2" button
15. When the calibration is complete press "OK
16. Select the "Upload/Download" Tab
17. Verify that the name of the file is correct for this sensor
18. Click on the "Read and Save Data to File" Button
19. Disconnect Laptop and reconnect green plug

This completes installation of the new sensor board

Scenario #3

To replace a defective sensor board with 5018 PIC (2018561-001) with a new board with 6019 PIC(2100623-001)

1. Disconnect Power from the sensor (green plug on the end of the board.

2. Remove old board and install the new board.

3. Connect laptop to sensor and start Masterlink program.

4. Click on the "Setup Levelmaster" button

5. Select "I just Installed a new Electronic Board" and follow the step by step instructions (make sure the data file is the one previously saved for this sensor).

6. Again Click on the Select the "Hardware Change" button

7. This time Select "I want to Install New Electronic Board Software" and follow the step by step instructions.

8. Measure the Level(s) in Tank using Gauging Tape

9. Select the "Setup" tab

10. Enter the value for Level 1 obtained from Gauging Tape

11. Click on the "Set Tank Level 1" button (If you only have one level go to step 16)

12. When the calibration is complete press "OK"

13. Enter the value for Level 2 obtained from the Gauging Tape

14. Click on the "Set Tank Level 2" button

15. When the calibration is complete press "OK

16. Select the "Upload/Download" Tab

17. Verify that the name of the file is correct for this sensor

18. Click on the "Read and Save Data to File" Button

19. Disconnect Laptop and reconnect green plug

This completes installation of the new sensor board

Scenario #4

To replace a defective sensor board with 6019 PIC (2100623-001) with a new board containing a 5018 PIC

This is not a possible option, you cannot replace sensor board with a 6019 PIC with one containing a 5018 PIC the calibration/configuration files are not backward compatible. Please contact ABB Totalflow Customer Service at 1-800-442-3097 option 1, 1 to obtain a New sensor board with 6019 PIC the part number is 2018580-004.

Customer Service requires serial number of the Levelmaster to enable the factory to properly configure your new electronic board.