ModMAG®
M-Series® | B-MAG Electromagnetic Flow Meters

M-Series® M5000

Data Logging

FIRMWARE COMPATIBILITY

The Data Logging feature requires firmware version 2.06 or later to support the logging intervals listed in the table below. Firmware versions earlier than version 2.06 support only the 1-hour interval. See the *M5000 Firmware Upgrade User Manual* for firmware upgrade instructions.

DESCRIPTION

The Data Logging kit (P/N 67354-008) includes:

- Software CD
- RS232 cable
- IrDA USB adapter
- IrDA bracket
- USB-to-serial cable

The Data Logging feature records three types of events:

- Totalizer/error events
- Configuration change events
- Startup events (power up or reset events)

Each type of event is recorded into three separate files stored on internal memory.

NOTE: Over time the data logging will reach the capacity of the memory. Any new events to be recorded will overwrite the oldest event on record.

Totalizer/Error Events

With firmware version 2.06 and later, you can choose the logging intervals. The capacity of the logging memory is 7224 messages. The table below defines the capacity of the memory configured for data logging. On each interval the totalizers are recorded in addition to any errors that have occurred from the last interval. To program the interval (available only on firmware version 2.06 or later), go to *Miscellaneous* > *Datalog*.

Interval	Totalizer / Error Events
1 minute	7224 minutes (5 days)
15 minutes	75-1/4 days
1 hour	301 days
6 hours	1806 days
12 hours	3612 days
24 hours	7224 days

Configuration Events

Each *Configuration event* identifies the parameter that was modified and to what value the parameter was changed. A total of 20 configuration events can be recorded.

Startup Events

Each *Startup event* identifies the time and reason of the event. The M5000 does not record the date and time of a power off. A total of 20 startup events can be recorded.

EXTRACTING THE EVENT FILES

All logged events can be extracted from the meter using the supplied Flow Meter Tool software, which connects the laptop to the meter via the supplied RS232 cable or an IrDA adapter.

RS232 Link File Extraction

1. Identify / Configure the meter's communication settings:
    a. Navigate to *Communications* > *Interface*.
    b. Set the interface to **SERIAL**.

NOTE: The interface must be set to SERIAL. All other settings can be set as desired by the operator and must match those settings of the software tool.

    c. Record or change other interface parameters (parity and baud rate).

4. Connect the supplied RS232 cable into the RS232 connector of the meter. Either connect the serial connector to a COM port or connect it to the USB adapter.

5. Open the Flow Meter Tool installed on the laptop or PC. Go to *Start* > *All Programs* > *Badger Meter* to open the Flow Meter Tool application.

6. To configure the Flow Meter Tool software communication settings:
    a. Select **Communication Settings**.

Badger Meter

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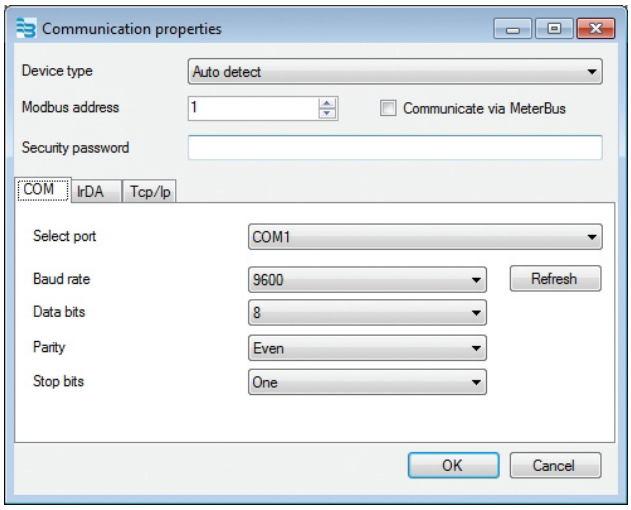


b. Change the following parameters as necessary to align with the meter settings:
   - MODBUS ADDRESS (Node Address)
   - BAUD RATE (9600)
   - DATA BITS (default is 8)
   - PARITY
   - STOP BITS (default is 1)

c. Select **OK** to confirm the configuration of the communication port. Make sure you select the correct COM port.

NOTE: The M5000 communicates via the COM port and IrDA. TCP/IP is not supported.

4. To extract the event files:
   a. Select **Download Flowmeter Data**.
   b. Select the **Totalizer and Error Log** tab.
   c. Select **Download**.
   d. Optional: Select **Save as Excel file…** for each event file to save the history of events.
   e. Select the **Startup Log** tab.
   f. Select **Download**.
   g. Optional: Select **Save as Excel file…** for each event file to save the history of events.
   h. Select the **Configuration Event Log** tab.
   i. Select **Download**.
   j. Optional: Select **Save as Excel file…** for each event file to save the history of events.
   k. Select **Cancel** to exit this application window.

IrDA Link File Extraction

1. Identify / Configure the meter's communication settings:
   a. Navigate to *Communications* > *Interface*.
   b. Set the interface to **IrDA**.

NOTE: The interface must be set to IrDA. All other settings can be set as desired by the operator and must match those settings of the software tool.

3. On the M5000 enclosure, install the IrDA bracket, then install the IrDA cable.

4. Connect the IrDA cable from the M5000 to the laptop.

5. If necessary, install the IrDA link drivers from the CD. The IrDA link uses a USB/IrDA converter and drivers. You may have to restart your computer after installing the drivers.

When the IrDA communication is activated, an icon appears on the lower part of your screen.

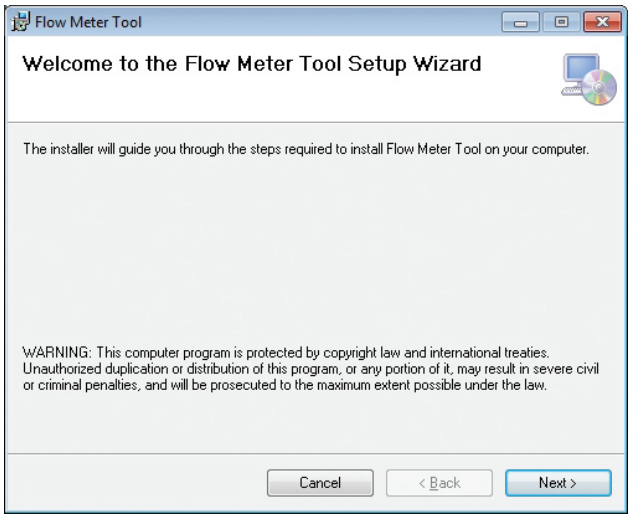
The Wireless Link icon in the taskbar is a function of Windows®, not the Flow Meter Tool.

6. In the Flow Meter Tool, select **IrDA** from the *Communication Settings* menu. If there are multiple IrDA interfaces, make sure you select the right one.

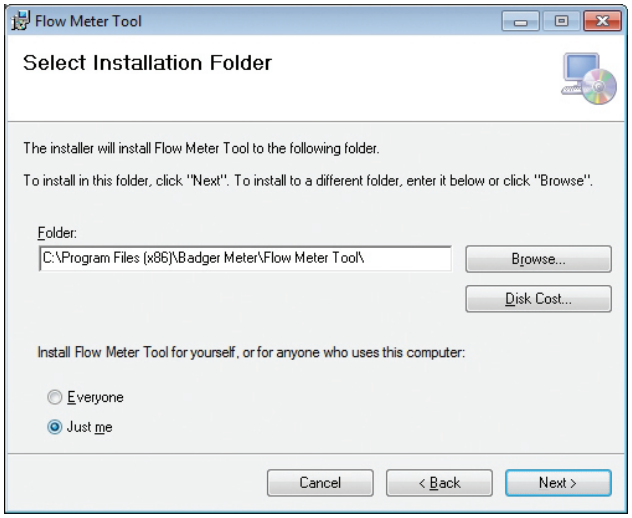
7. To extract the event files:
   a. Select **Download Flowmeter Data**.
   b. Select the **Totalizer and Error Log** tab.
   c. Select **Download**.
   d. Optional: Select **Save as Excel file…** for each event file to save the history of events.
   e. Select the **Startup Log** tab.
   f. Select **Download**.
   g. Optional: Select **Save as Excel file…** for each event file to save the history of events.
   h. Select the **Configuration Event Log** tab.
   i. Select **Download**.
   j. Optional: Select **Save as Excel file…** for each event file to save the history of events.
   k. Select **Cancel** to exit this application window.

INSTALLING THE FLOW METER TOOL

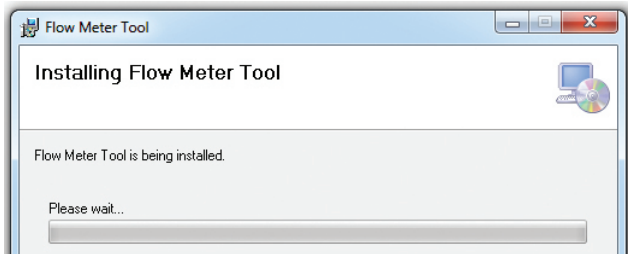
1. Insert the CD containing the Flow Meter files.
   The autorun tool displays the Welcome screen.
2. Click **Next** to confirm that you want to install the tool.



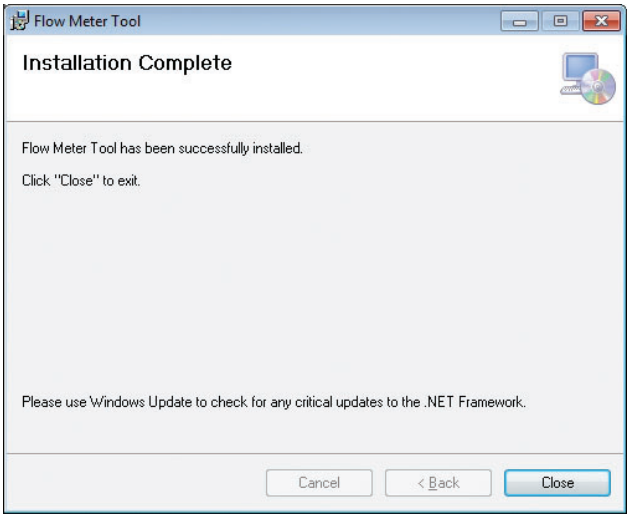
3. On the *Select Installation Folder* screen, select the folder where you would like the tool installed. Click **Next**.



4. Wait while the tool installs.



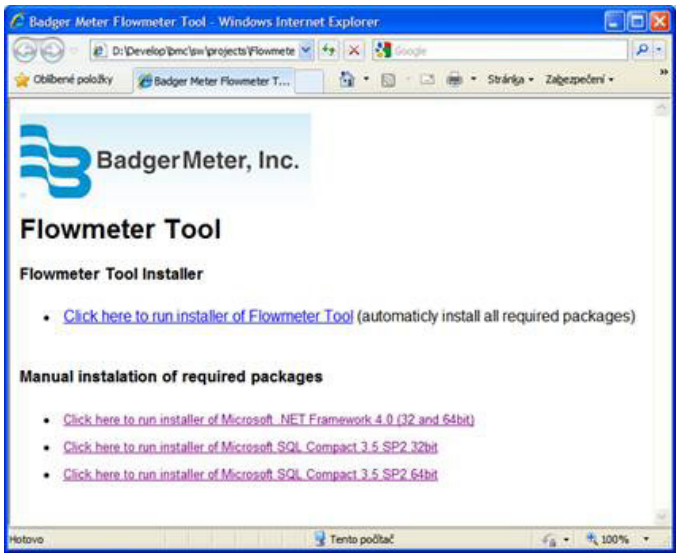
5. When the installation is complete, click **Close**.



ALTERNATE FLOW METER TOOL INSTALLATION METHOD

If the CD does not automatically open:

1. Navigate to the CD disk location.
2. Click on the **Badger Meter Flow Meter Tool** folder to open it.
3. Double-click the **index.htm** file to open it.
4. On the *Flow Meter Tool* window, select **Click here to run installer of Flow Meter tool**.



5. Perform Steps 3 through 5 under *"Installing the Flow Meter Tool" on page 3* in this document to complete the installation.

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