

# User's Guide



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## **FMA-7400/7500 Series Configurator**

## **For use with the Omega**

## **FMA-7400/7500 Series**



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The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.

**WARNING:** These products are not designed for use in, and should not be used for, human applications.

## FMA-7400/7500 Series Configurator

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The Configurator is a downloadable software package for the easy programming of mass flow controllers and meters across a wide variety of gases and ranges without sacrificing accuracy and reliability.

Before using the tool, we recommend that you read the following Quick Start guide to learn more about the hardware options and requirements, Configurator software installation process, and steps required to configure your specific thermal mass flow device. The Configurator software is downloadable from [www.Omega.com/ftp/flowgroup/products/](http://www.Omega.com/ftp/flowgroup/products/).

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# FMA-7400/7500 Series Configurator

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## 1.1 Purpose

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Omega Configurator Quick Start Guide provides specific installation instructions for the easy programming of mass flow devices across a wide variety of gases and ranges without sacrificing accuracy and reliability.

Thermal Mass Flow model families supported by the Omega Configurator include:

FMA-7400  
FMA-7500

## 1.2 System and Hardware Requirements

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The Omega Configurator can be installed on a Windows PC under the following requirements:

- Microsoft® WindowsXP™ or Windows 7™ 32 or 64 bit operating systems
- Serial COM Port

Configurator Accessory Kits:

### **FMA745-CK Basic Configurator Kit**

(Includes software, Configurator Cable Assembly 2.5 mm, Converter 232/485)

### **FMA745-CK-P Basic Configurator Kit w/Power Supply and Adaptor Cables**

(Includes Configurator Cable Assembly 2.5 mm, Converter 232/485, Power Supply 24 Vdc with DB-15 female)

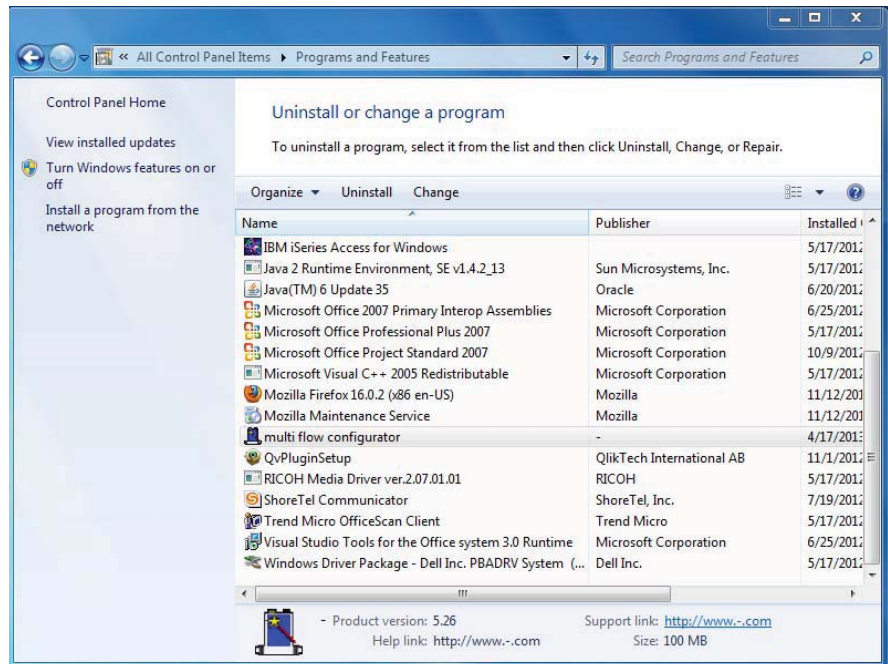
\* Configurator Software is available on the Omega Engineering website at: [www.Omega.com/ftp/flowgroup/products/](http://www.Omega.com/ftp/flowgroup/products/)

- Estimated time required for installation: 10-15 minutes

## Section 1 Installation

### FMA-7400/7500 Series Configurator

#### 1.3 Uninstall Previous Configurator



#### **IMPORTANT NOTICE**

Ensure the previous version of Configurator is completely **UNINSTALLED** before proceeding to the new installation process. For any issues with this uninstall process please contact technical support or your regional support contact.

1. If necessary, go to the **Control Panel - Add/Remove Programs** and remove any previous version of the Configurator.

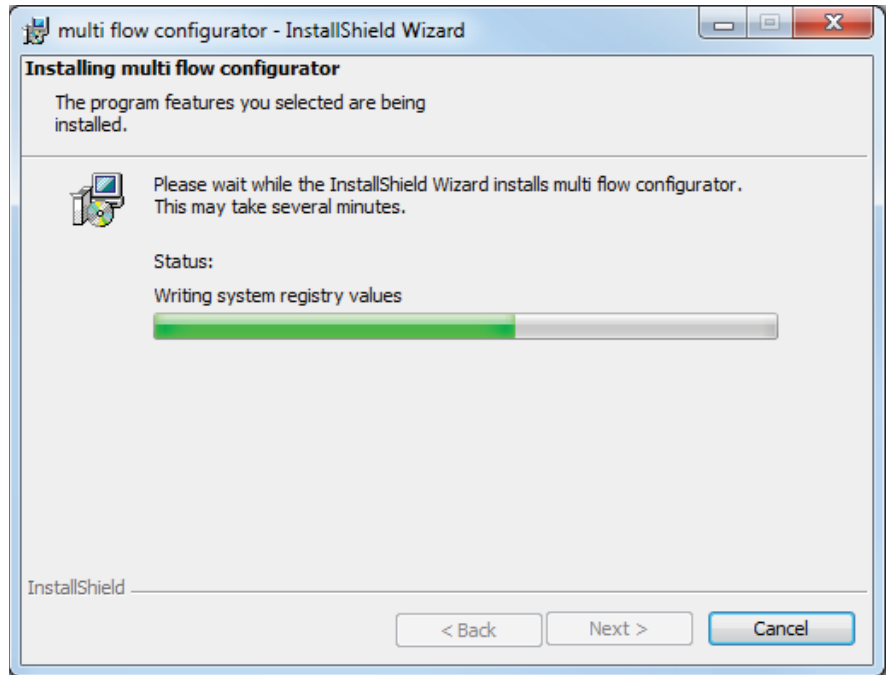
Click on **Click here for support information** to check version number. Click **Remove** and follow the remove instructions. Ignore any error message about failing to unregister a file.

#### 1.4 Install the Omega Configurator

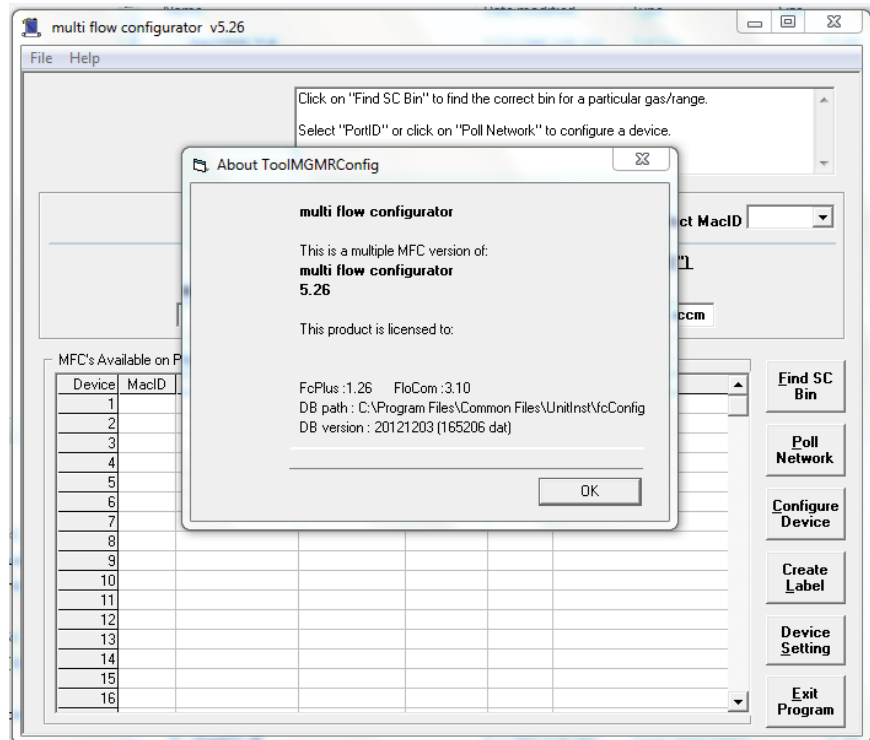
1. Download the latest version of Configurator software and **Save** it to a new folder on your computer, e.g., desktop\Omega.

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- Admin privileges required. Open the folder and run the installation file:  
**Multi Flow Configurator\_X\_XX\_setup.exe.**  
 Where X\_XX is the version number. Click **Run** when prompted. Accept the terms of the license agreement and accept all other defaults. This package will also install the latest Gas Databases. The software will take up to 5 minutes to install (depending on the speed of the computer). Once the installation is complete the program will create a shortcut on the desktop and a program file menu



- To update the databases open Configurator software from the shortcut on the desktop or the menu **Start All Programs → Multi Flow Configurator.** Click **Help → About.** Note the location of the database files: C:\Program Files\Common Files\Unitinst\FcConfig. For non-English Operating system the location may be different from the example.

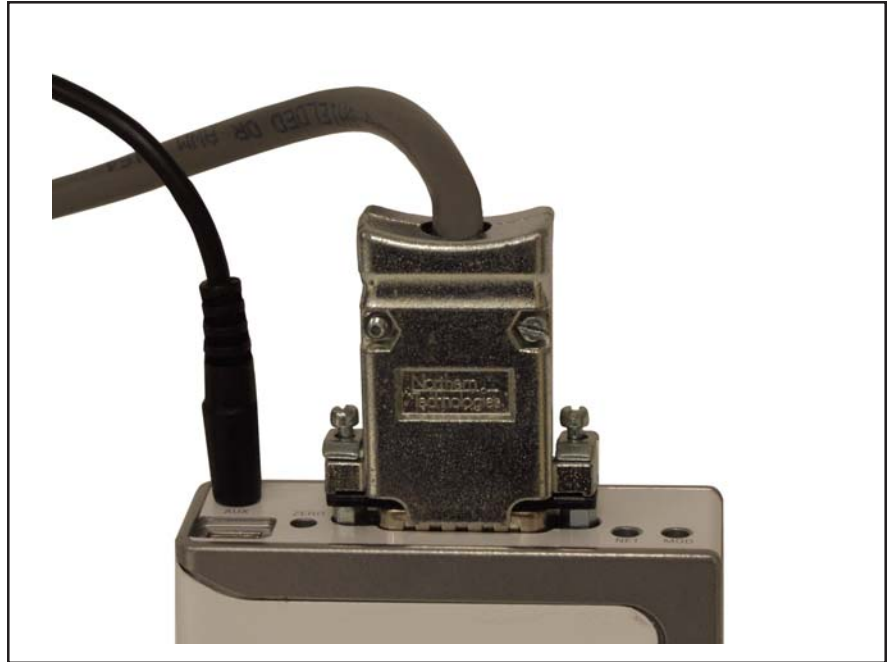


## Section 1 Installation

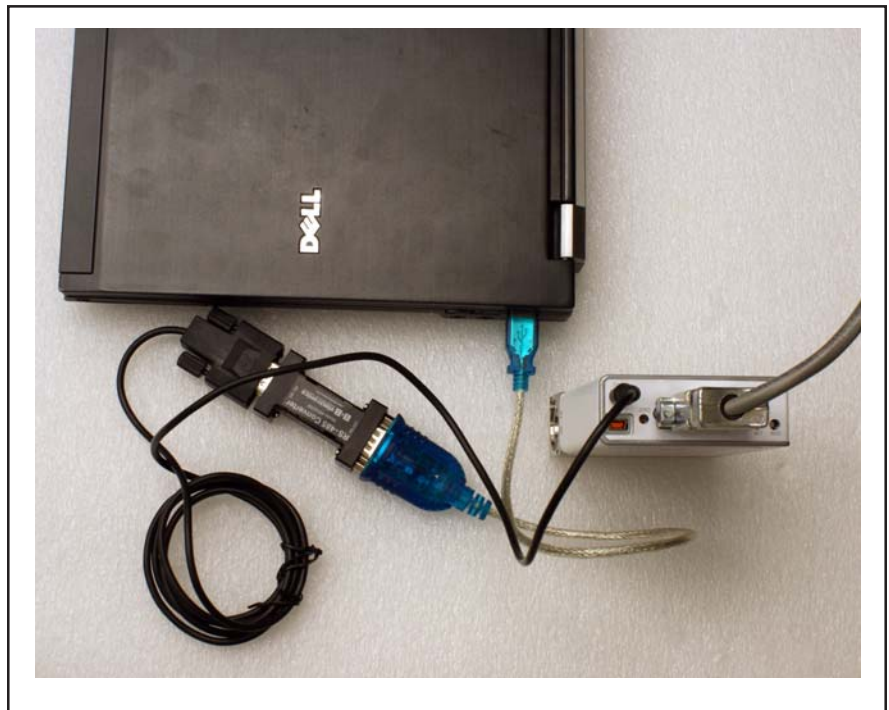
### FMA-7400/7500 Series Configurator

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4. To configure a mass flow device first make all electrical connections to the device. For **DeviceNet** devices use a standard DeviceNet +24 Vdc power supply. The Net LED may indicate red if there is no terminator on the network. If there is more than one device connected then the NET LED may blink. **RS485/D-sub** devices use a  $\pm 15$  Vdc power supply. Pins required to be connected are pins 3  $\rightarrow$  +15 Vdc, 5  $\rightarrow$  -15 Vdc, 4  $\rightarrow$  Power Common and 7  $\rightarrow$  Signal Common. URS-20 (now obsolete) is part of kit FMA-745-CK-P. Shown to the right is the basic RS485 connections.



5. Connect communication cable. There are various ways to connect the device regardless of device configuration. Devices may be connected through the diagnostic port using cables in the Basic Configurator Kit FMA-745-CK (Cable Assembly 2.5mm and Converter 232/485) for RS485 communications.

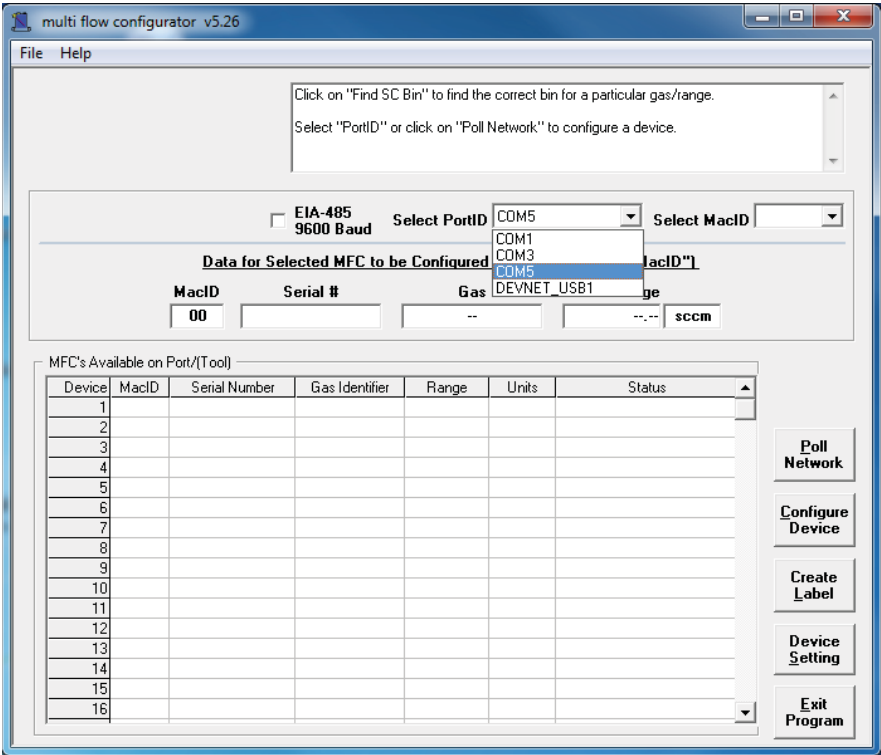




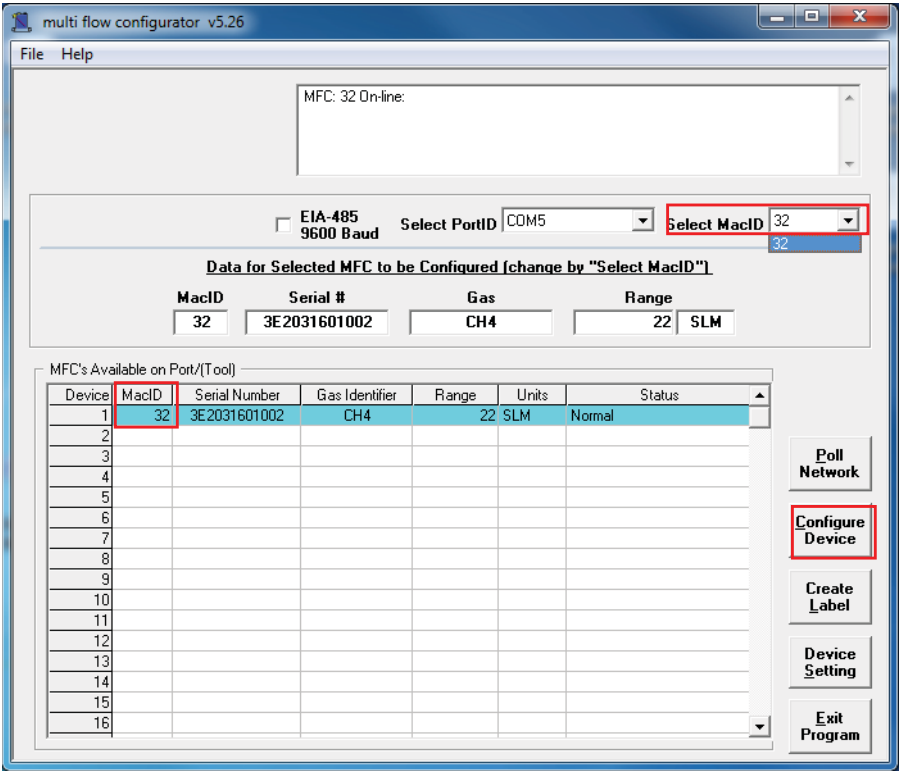
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- 6. From the Configurator main page select the communication port used to connect between the device and PC (**Select PortID**). If using a USB-COM port adapter or USB-RS485 adapter, these must be connected before starting the Configurator software. Click **Poll Network**. The following status messages will be displayed:

Opening Port. Please Stand by  
Searching for available MFCs...  
Found 1 MFCs Connected to this Port.  
Please stand by while data is being read.  
MFC: 33 On-line:



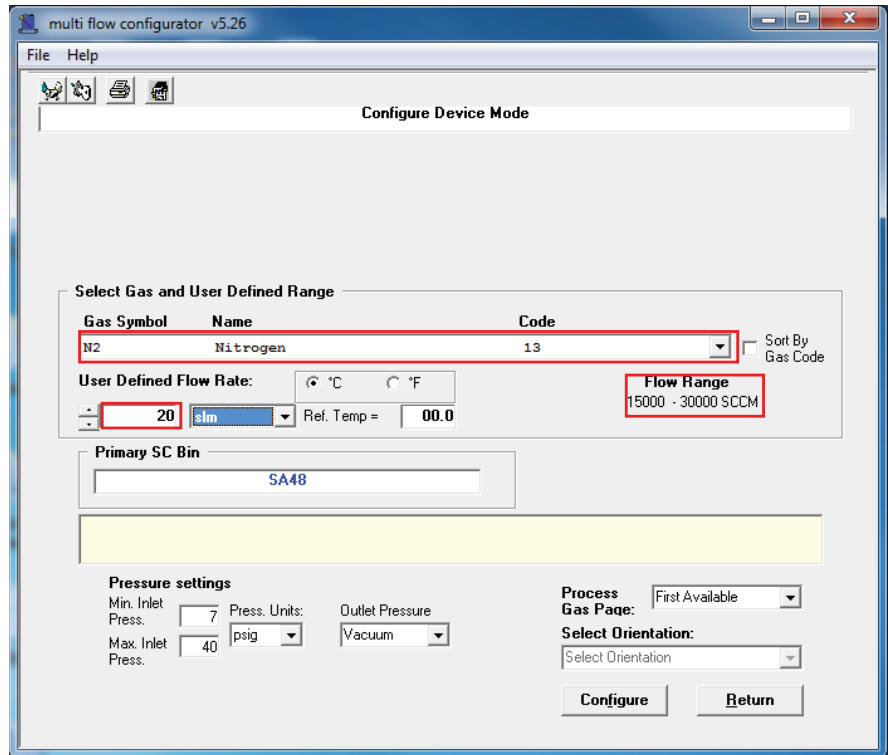
- 7. If there are multiple devices connected to the bus a short summary will appear in the **MFCs Available on Port(Tool)** section listed in MacID order. **Select MacID** drop down list box will automatically display the first available device but can be changed to any desired device on the connected bus. Click on **Configure Device** to proceed to the configuration page.



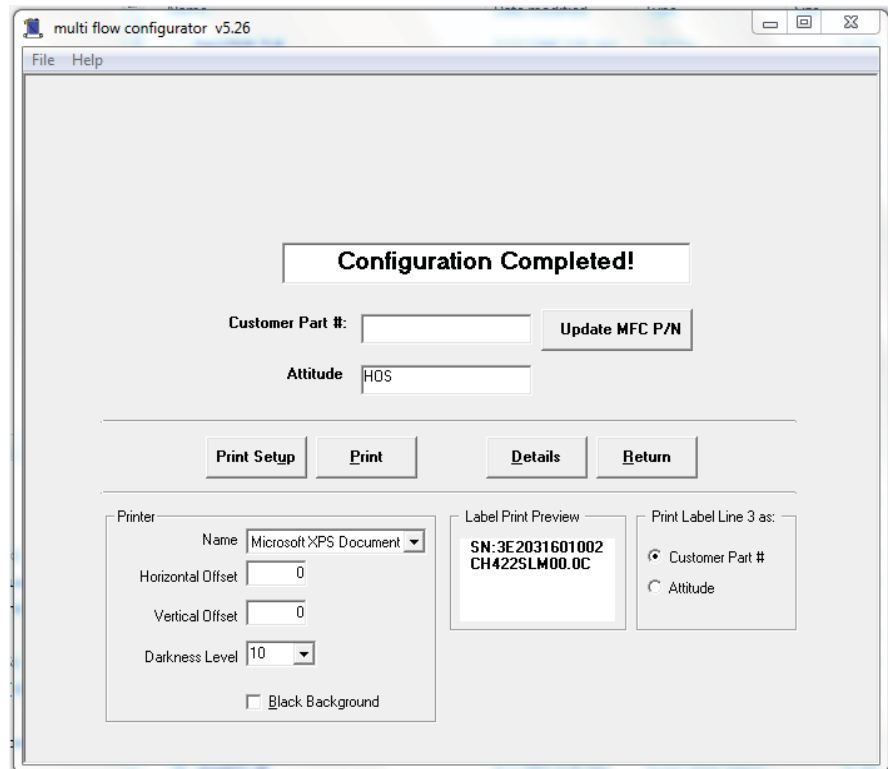
## Section 1 Installation

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8. In the **Select Gas and User Defined Range** section select the required gas type from the drop down list. Enter the required Full Scale flow for the gas in **User Defined Flow Rate**. As you type the User Defined Flow Rate the **Primary SC Bin** value may change. The user defined flow range must be within the flow range on the right hand side of the screen. Press **Configure** to update the unit with the selected gas details.



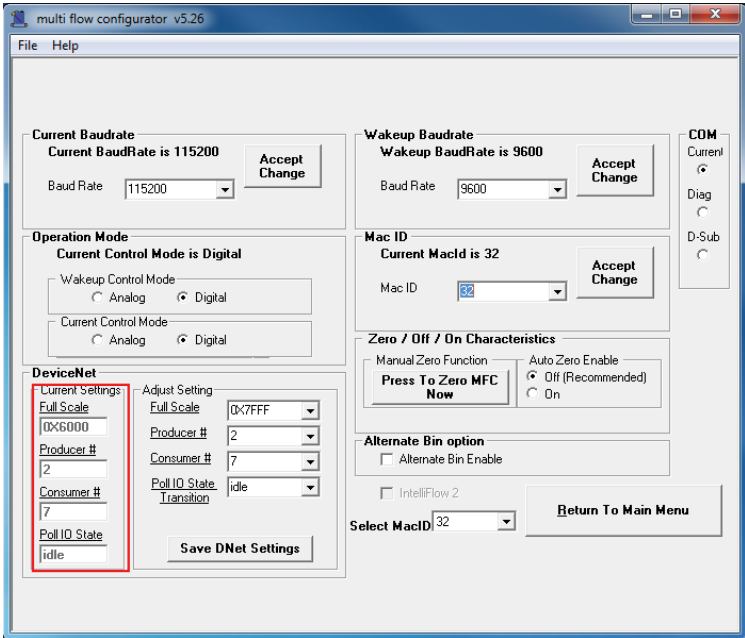
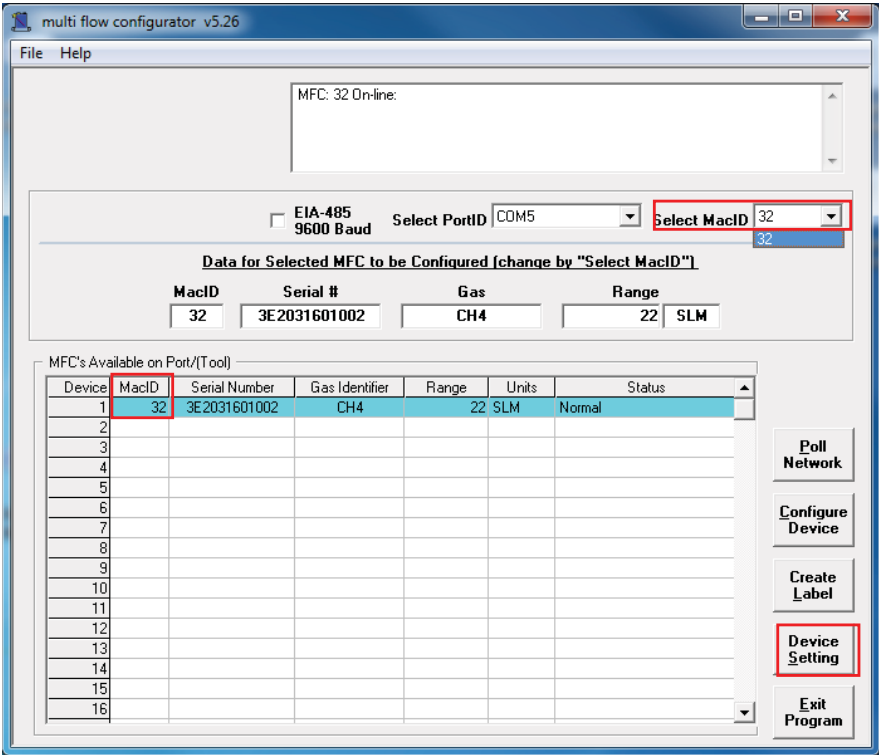
9. As the software reads the device calibration and writes a new process gas page to the device the status will show progress. When complete the **Configuration Completed** screen will appear. A new **Customer Part Number** can be entered into the unit. **Top Labels** can be printed for the new configuration or you can view **Details** of some older configurations in the device. When completed click **Return** to go back to the Main screen. The network will be rescanned to update the scan list.



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10 To Adjust the DeviceNet or RS485 settings select **Device Setting** from the Main screen. A Password is required. Enter **cel123** as the password

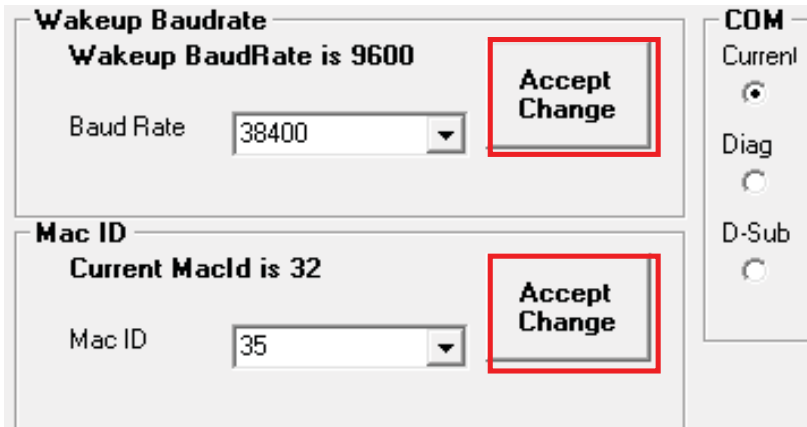
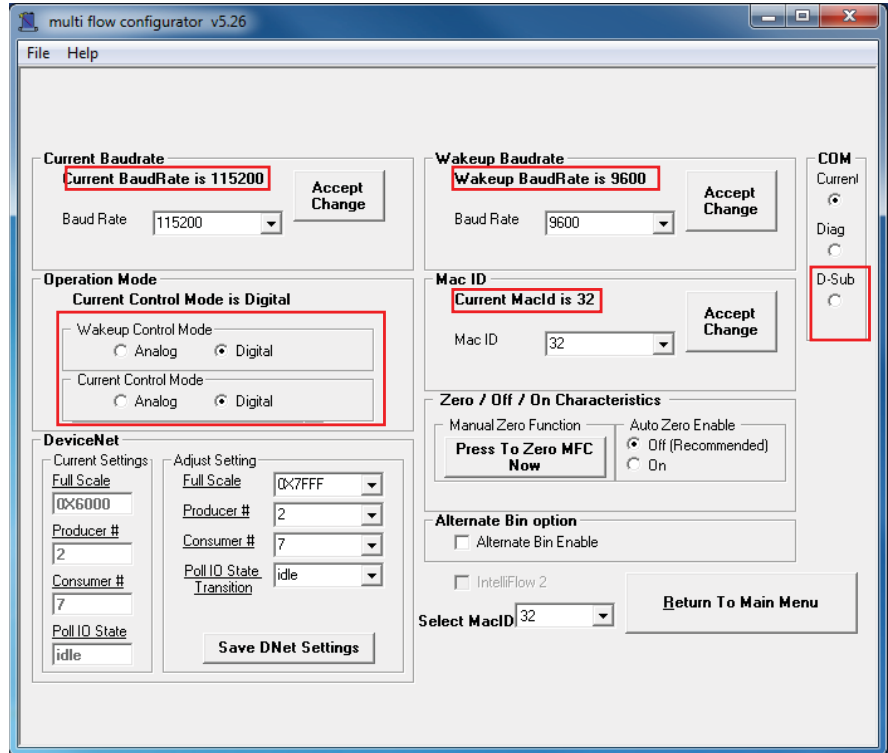
11. **This step is for DeviceNet devices only.**  
To view the current DeviceNet configuration note the **Full Scale, Producer #** and **Consumer #** settings of the **DeviceNet – Current Settings** section.  
To adjust the DeviceNet settings to match the tool configuration select **DeviceNet – Adjust Settings** – **Full Scale, Producer#** and **Consumer#**  
Common configurations are:



## Section 1 Installation

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12. To view the current RS485 configuration for the 15 pin connector select **D-sub** and note **Current BaudRate, Wakeup BaudRate, Control Mode** and **Mac ID**.
13. To configure the mass flow controller or meter for the most common RS485 digital communication settings select: **D-sub, Wakeup Control Mode = Digital, Current Control Mode = Digital, Wakeup Baud Rate-4 = 38400, Mac ID** as required by the position on the gas panel. Click on the **Wakeup BaudRate Accept Change** button before the **Mac ID Accept Change** Button. If the Wakup Baud Rate is changed the device must be repowered for the new settings to take effect. If the Mac ID of the currently connected communication port is changed the device must be rescanned to re-establish communications.
14. If you have any questions please contact Omega Engineering Technical Support.



## WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

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The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
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3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

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