

Program Mode

To configure any parameter of the MFT B-Series meter you must go into *Program mode*. You enter *Program Mode* by pressing the **P** key and one of the two access codes following the **E** key. To exit *Program Mode* or any menu without making changes, just press **C** once or more depending on how deep into the menus you were. A complete diagram of all the menus is found in the state [menu diagram](#). This section covers some basics about how the meter works in *Program Mode*.

1. View only *Program Mode* access code 123456.
2. *Program Mode* access, or Tech code 654321.

The advantage of view only mode is you can open up the meter and look at its settings without much concern with changing its settings or freezing its output while the meter is online for some process, in feedback control.

```
OUT UPDATE STOP!  
CONTINUE?      YES
```

The above screen will be prompted when in *Program Mode* as needed. Most menu areas can be accessed and the meter continues operating normally. Of course, if a coefficient is changed which will affect the reported output, its response will jump as soon as the new parameter is entered or the output update is resumed.

```
OUTPUT UPDATE  
RESUMED . . . . .
```

Any changes made to the meter configuration remain in memory but are not stored permanently (EEPROM copy of the configuration data) unless you confirm it to be saved. A prompt will be presented every time you exit program mode if changes have been made without saving to EEPROM.

```
SAVE CONFIG DATA  
TO EEPROM?      NO
```

You press the **^** key then **E** to make a change to Yes and save your changes. Alternately, press **C** or **E** at the NO option to not save the changes.

Program Mode Major Categories

A full layout of the meter menus are found in the menu diagram [342042](#). Within the program area, we have the following areas and general description.

| Menu Categories | Description |
|-------------------------------|--|
| Set System Units | Select English or Metric flow and mass rate units. |
| Set Totalizer | Clear the accumulated total and elapsed time or configure the auto-roll over to zero value. |
| Set Meter #1, Flow | Select the meter type, insertion or in-line, correction factors, probe blockage, area, meter ID tags etc. for the flow meter, high or low flow kickouts, low flow cutout. |
| Set Flow Cal Data | Set the flow or velocity calibration data (data sets for VTM), reference pressure and temperature of the standard conditions, gas MW for mass flow calculation |
| Set Meter #2, Temp | Set a meter ID tag, correction factors or low and high kickouts for the temperature meter. |
| Set Meter Filter TC | Set the damping coefficients or time constants for the meters. |
| Set Exec Mode Scroll | Set the kind of data shown in the startup scroll and how long each screen is held before the next scroll. |
| Set Analog Output | Assign a AO channel to a meter or function and set the zero and span scale for the AO channel. |
| Calib 4-20 mA Outputs | Electrically match the meters intended output to the actual 4-20 mA current based on an external reference meter. The NE43 alarms may also be tested and you can force the outputs to a mA value. |
| Set Alarms | Define the alarm type and set points, associated a relay or SSR output to an alarm and set the NE-43 alarm type (high or low). |
| Set Totalizer Pulse Outputs * | Specified the accumulated flow or mass per output pulse, relay assignments and pulse width. |
| Set Purge Timer Data * | Define the purge cleaning parameters: valve open time, interval between purges for the internal timer, and output hold time. |
| Set USB COMM | Enable or disable the USB data logging function, and set its rate. |
| Set Modbus COMM | Set the Modbus address, serial protocol, baud rate, and floating point byte order. |
| Set Relay Assignments * | Allocate the physical relay or SSR to an alarm, Totalizer Pulse Output or Purge Output. |
| Set External Input * | Designate the one external analog input (AI) to be used for: PID reference, remote correction factors, calibration curve selection, and velocity mapping reference. Scale it's 4-20 mA range and set it's input filtering. |

| | |
|-----------------------|--|
| Set PID Data | Sets the parameter for use as a flow controller. Selection of manual/automatic control, set-point reference, proportional gain, integral time constant, differential time constant, and high-low limits. |
| Manual Control PID | Select the positional output of the 4-20 mA output in % for the control valve, damper or variable frequency drive signal. |
| Check Zero-Span Drift | Configure the zero, mid and span % output of the 4-20 mA outputs, duration in seconds, and interval timer. Manually initiate these functions and review the most recent tests differences from programmed values as a voltage or % difference. |
| Change Tech Code | Change the technician code for program mode. |
| See Diagnostic Data | View or extract the error codes, min-max log or monitor the live values for input voltages, sensor resistance, temperatures, sensor leakage, currents and power. |
| Load Data From EEPROM | Forces a read of the configuration data from the EEPROM memory into the current RAM or operating memory of the flow meter. CAUTION: All unsaved Program Mode changes will be lost upon a load from the EEPROM. |

* Menus not available on basic [versions](#) of the sensor electronics.