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# Supplement to MFT 4000/4005/4010 User's Manual

Reference MFC 4000:440-6 User's Manual, November 2006

The purpose of this Supplement is to provide corrections, clarifications or additions to the user information contained in MFC 4000:440-6 User's Manual. The following supplemental corrections, clarifications or additions have no impact on the Intrinsically Safe documentation in the manual.

**Please disregard section 3.0 "User Re-Calibrate" on page 84.**

If you need to calibrate the TIO0110 module, please go to https://www.meriam.com/resources/repair-calibration-authorization/rma-request/ to complete the online **Request for Material Authorization (RMA)** form so you can have Meriam calibrate it.

**Corrections on page 90, section 5.0 "Resolution, Range, Accuracy for VMA0055 Module"**

1. Add ambient temperature range: -10º C to +50º C (+14º F to +122º F)

2. Add temperature range limitation to VMA0055 factory specifications; range limit is 18º C to 28 º C (64.4º F to 82.4º F).

3. Add temperature coefficients to be applied to factory specification when used at temperatures below 18º C (64.4º F) or above 28 º C (82.4º F).

4. Change accuracy specification for V dc Measure Mode section:
   from ± (0.01% of reading + 0.005% FS),
   to ± (0.025% of reading + 0.005% FS)

5. Removed resolution and accuracy terms from "Regulated Loop Power" section.

**See the page 2 of this Supplement for corrected VMA0055 specification table.**

**Dec. 2009: Added degree F equivalents above and to VMA0055 specification table – see page 2 of this Supplement.**

## Resolution, Range, and Accuracy Specification for VMA0055 Module

Ambient temperature limits: -10°C to +50°C (+14°F to +122°F)
Accuracy statements are for ambient temperatures of 18°C to 28°C (64.4°F to 82.4°F)
Apply the Temperature Coefficient for ambient temperatures below 18°C (64.4°F) and above 28°C (82.4°F)

### VMA0055 DC Current (mA) Measure and Source Modes

| Specification | Measure Mode | Source Mode (No External Power) |
|---|---|---|
| Resolution | .001 mA | .001 mA |
| Range | ±100.000 mA (55 Vdc compliance) | 0 - 22.000 mA (See Note 3 below) |
| Accuracy | ± (0.01% of reading + 0.015% FS) | ± (0.01% of reading + 0.015% FS) |
| Open Circuit Voltage | | 24 VDC |
| Output Drive | | 15 VDC minimum @ 24 mA, Resistive load |
| Temperature Coefficient | ± (0.001% Rdg +0.002% FS) / °C | ± (0.003% Rdg +0.003% FS) / °C |

### VMA0055 Volts DC Measure and Source Modes

| Specification | Measure Mode | Source Mode (No External Power) |
|---|---|---|
| Resolution | 1/100,000 counts: .001 mV; .001 V | 1/100,000 |
| Range | 500 mV; 1, 2, 4, 8, 15, 30, 55 V | 0 - 24.000 VDC |
| Accuracy | ± (0.025% of reading + 0.005% FS) | ± (0.01% of reading + 0.05% FS) |
| Open Circuit Voltage | | 24 VDC |
| Output Drive | | 15 VDC minimum @ 24 mA, Resistive load |
| Temperature Coefficient | ± (0.001% Rdg +0.0015% FS) / °C | ± (0.0025% Rdg +0.0035% FS) / °C |

### 2-Wire Transmitter Simulation Mode

| Specification | Simulation (External Power) |
|---|---|
| Resolution | .001 mA |
| Range | 0 – 24.000 mA |
| Accuracy | ± (0.01% of reading + 0.015% FS) |
| Loop Voltage Limits | 1 VDC min., 55 VDC max. |
| Temperature Coefficient | ± (0.003% Rdg +0.003% FS) / °C |

### Loop Power Mode

| Specification | Regulated Power Source |
|---|---|
| Range | 24 VDC |
| Open Circuit Voltage | 24 VDC |
| Output Drive | 15 VDC Min. @ 24mA, Resistive load |

### Ordering Information

VMA0055-11-1 VMA Module

### Accessories

P/N A900529-00015: VMA Test Lead Kit: banana plugs on 9" breakouts (both ends), assorted connectors (required for source and simulate functions)

Notes:
1. Nominal resistance at VMA current terminal is 10 – 15 Ω
2. Output load line is linear
3. Unit operating time de-rated at high temp and high current as follows:
- Continuous operation @ 50°C and 20mA
- 15 minutes typical @ 50°C and 24mA (unit will shut down to prevent thermal damage)

VMA4000:215-4

## Corrections on page 97, section 2.1 “Connectors and Wiring Configurations” RIO Measure Cable

Replace “**White clips**” with “**Black boots**” in each of these four paragraphs:

1. P/N A900028-90500 general-purpose connector is used for connecting to RTD wires or terminals to obtain temperature measurements directly from RTD devices. One pair of **Black boots** and one pair of red Alligator clips are suitable for connecting to 2-, 3-, or 4-wire RTDs.

2. 2-wire RTDs

   Connect the two Red clips to one wire/terminal of the RTD. Connect the two **Black boots** to the other wire/terminal.

3. 3-wire RTDs

   3-wire RTDs have two wires/terminals that are the same color. Connect the two Red clips to the wires/terminals of the same color. Connect the two **Black boots** to the remaining wire/terminal

4. 4-wire RTDs

   4-wire RTDs have two wires/terminals of one color and two of another color. Connect the Red clips to each of two wires/terminals of the same color. Connect the **Black boots** to each of two wires/terminals that are the other color.