



# MFT 4010

## Modular Calibrator with HART® Communicator

The MFT 4010 is a break-through combination calibrator / HART® communicator that truly reduces the time spent on field calibrations. The MFT 4010 Series delivers the versatility of a calibrator and the convenience of HART® communications in one handheld unit. Users can view up to four measurements simultaneously on the high resolution LCD or compare HART® PV and AO values to corresponding values measured by the NIST traceable MFT. Documentation of calibration results and HART® configurations is standard.

Available modules include differential, gauge, vacuum and absolute pressure as well as temperature, and voltage/current. A voltage and current meter is integral to the base unit. All HART® field devices can be configured, polled, and trimmed using HART® communications. Device Specific commands for supported devices are included with the MFT.

**All-In-One Tool** – Takes the place of multiple handheld instruments, simplifies workload and improves productivity.

**Automation for HART® Field Devices** - Calibration is automated through auto setup of the calibrator based on the device settings; digital trims automate the device adjustment steps.

**Calibration Types Supported** – Pressure, t/c, RTD, I/P, P/I, Switch, Loop and mA/V for conventional or HART® transmitter or local indicators.

**Document As found/As left Calibration Results** – Create calibration procedures on the handheld or download them from compatible device management software. Save results to non-volatile memory.

**Field Updates** – Uses Internet downloads to update and add capability / HART® support.

**Modules** – Select from a variety of positive-lock measurement modules for excellent versatility.

**Field Recertification** – Sensor modules and integral V / I can be recalibrated for zero, span, & linearity via the MFT.

**User Interface** – 2.1" x 2.1" display, four soft keys (definitions change with mode requirements) and eight hard keys provide user interface. Display is configurable for 1 to 4 simultaneous measurements.

**User Convenience** – Auto shut off, Damping, Min/Max value capture, display Hold, sensor Zero, direct Contrast adjustment.

**Security Lockout** – Lockout specific MFT settings or all at one time.

**Diagnostics** – MFT 4010 self-tests upon power up and upon installation of sensor modules. Advisories are posted on the display.

**Dedicated DOF Memory** – Memory for 500 HART® device drivers. DOFs current as of 2013.





## Models & Descriptions

MFT 4000 Calibrator – Base unit for calibration work with selected NIST traceable sensor modules & integral voltage/current meter. Documenting included.

MFT 4010 Calibrator with HART® - Base unit for modules and full Device Specific HART® communications. Quick Cal displays HART® PV and AO along with MFT's NIST traceable measurements. User can identify needed trim(s) and access the trim function(s) from same display. Smart Trim allows selection of analog or digital trims without navigating through menu trees. Documenting included.

Documenting – Documenting memory stores up to 200 HART® configuration files and over 100 calibration results (as-found & as-left data [up to 21 points each], time/date info, tag). Communicate with PC via DB-9 connector.

## Standard Accessories

2 Blank inserts for open sensor bays  
AC Power adapter, 100 - 240 Vac for US plug,  
International plug kit  
HART® lead kit with 250 ohm shunt adaptor for HART®  
communication (MFT 4010) Test lead kit  
RS-232 Serial communications cable  
Hard copy user's manual  
Protective rubber boot  
DPC Manager utility - updates firmware and HART®  
drives

## Optional Accessories

Pressure Modules (See data sheet PRESS4000:215-1)  
RIO Module (See data sheet RIO4000:215-3)  
TIO Module (See data sheet TIO4000:215-2)  
VMA Module (See datasheet VMA4000:215-2)  
Soft carrying case with shoulder strap carries base unit,  
modules, pump, lead kits and fittings/ tubing.  
Hard carrying case with handle – foam insert for base  
unit with 3 installed modules/fittings, 4 additional  
modules, lead kits, hand pump, RTD probe, fittings.

## Specifications

### Base Unit

9.00"L x 4.70"W x 3.58"D ABS plastic case with shock absorbing boot, 28 oz, three bays for measurement modules

### Keypad

Overlay keypad with 10 dome contact style buttons and 4 soft keys

Alpha entry based on LCD alpha matrix;  
numeric entry with buttons

### Display

128 x 128 pixel graphic display, 2.1" x 2.1" viewable area, 5-digit resolution

### Power

6 AA alkaline or NiMH batteries, optional  
100 – 240 Vac power adapter

### Connections

Standard banana jacks (3/4" center) for  $\pm 50$  mA/Volts DC and for HART®



### Certifications

CE Approval.

Intrinsically Safe, Class I, Div I areas per CSA  
22.2 & UL 913 by MET Laboratories

### NIST Traceable Accuracy

Current / Voltage:  $\pm 0.025\%$  of F.S.  $\pm 0.001\%$  of  
Span per ° F (ref. temp. 70° F). (see Modules  
datasheet for accuracy)

### Modules

2.3"L x 1.3"W x 2.6"D, 8.3 ozs or less. Positive  
lock with spring latch. Depress latch to release.  
Electrical connections are PC board contacts to  
spring loaded receivers on base unit. Blank  
inserts protect any empty bay(s). (see Modules  
datasheet)