



# 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 and 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.



Rely on the trusted leader in measurement and calibration equipment

# MFT 4010 HART® Calibrator / Communicator

## Models & Descriptions

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

**MFT 4005 Calibrator with HART® Trims** – MFT 4000 with HART support limited to analog and digital trims for calibration support. 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.

## Ordering Information

### Model numbers:

MFT 4000-11-1-00 CE

MFT 4000-11-1-01 CE & IS

MFT 4005-11-1-00 Limited HART, CE

MFT 4005-11-1-01 Limited HART, CE, IS

MFT 4010-11-1-00 HART, CE

MFT 4010-11-1-01 HART, CE, IS

## 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-233 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.

Device Management System (see below)

## 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

### Data Transfer

DB-9 for RS-232C

### Certifications

CE Approval.

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



### Temperature Specifications

Storage: -40° F to 140° F (-40° C to 60° C)

Operating: 23° F to 122° F (-5° C to 50° C)

### 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)

## Companion Products

### Device Management System (DMS)

Full calibration and configuration management database featuring secure device history, report generation, search functions and calibration scheduling.

### MFC 4100 HART Communicator

The most reliable, most useful and fastest connecting HART communicator available.



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