



Modular Calibrator with HART® Communicator Option

The MFT 4000 is a break-through combination calibrator / HART communicator that truly reduces the time spent on field calibrations. The MFT 4000 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. 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.

MFT 4000 Advantage

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. Also, digital trims automate the device adjustment steps.

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. All modules can be “hot swapped”; remove or install sensor modules at any time (restrictions apply for Intrinsically Safe units).

Field Recertification – sensor modules and integral V / I can be recalibrated for zero, span, & linearity through the base unit.

User Interface – 2.6” x 2.6” 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 – MFT 4000 settings can be locked out entirely or by specific feature.

Diagnostics – MFT 4000 self-tests upon power up and upon installation of sensor modules. Advisories are posted on the display.

Dedicated DOF Memory – memory for 600 HART device drivers.

Measurement Units – customary English and Metric System units are selectable



Specifications

Base Unit

9.00”L x 4.70”W x 3.58”D ABS plastic case with shock absorbing boot, 28 ozs, 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, 2.6” x 2.6” viewable area, 5-digit resolution

Power

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

Connections

Electrical: Std. banana jacks (3/4” center) for ± 50 mA/Volts, HART & Loop test leads

Data transfer

DB-9 for RS-232C

Models & Options

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

MFT 4010 Calibrator with HART® – Base unit for modules and 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 – Documenting memory and firmware for use with Meriam DMS software. 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.

Companion Products

Device Management System (DMS)

Full management database, history, reports, online ready, use with MFT/MFC



MFC 4100 HART communicator
A more reliable, more useful and more available HART handheld communicator

Certifications

CE Approval. 
Intrinsically Safet, Class I, Div I areas per CSA 22.2 & UL 913 by MET Laboratories - MFT 400X & 401X only.



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 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).

Ordering Information

Model numbers:

MFT 4000-11-1-00 CE
MFT 4000-11-1-01 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

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
Kits – Consult factory for details