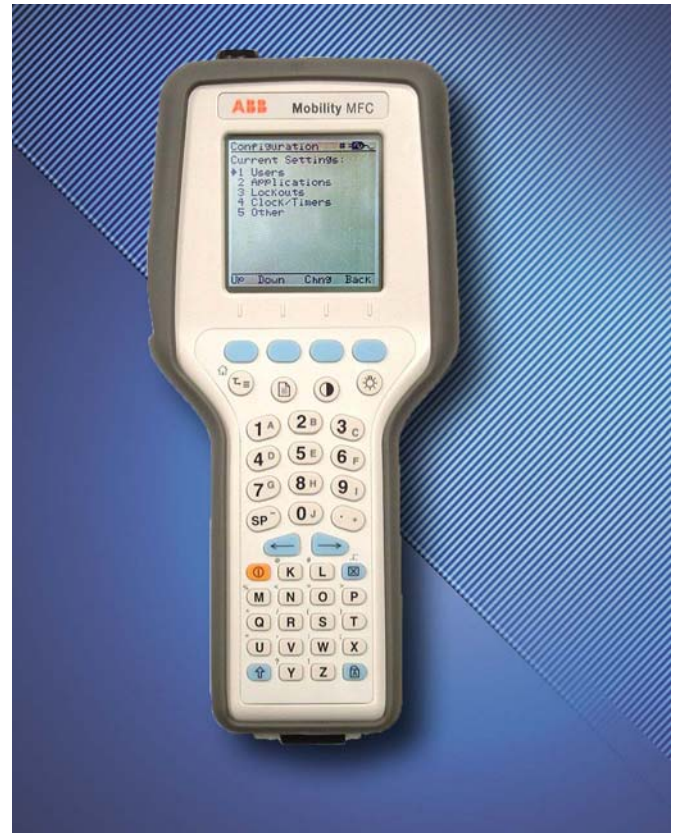# Fieldbus Tools
Hand-Held Configuration Devices
Mobility DHH801-MFC
Configuration Device with HART® Communications

■ **Hand-Held Terminal -** for HART® device configuration, commissioning, and maintenance operations

■ **Supported Devices** - ABB instruments with an option for third party suppliers

■ **Supported HART Commands** - Universal, Common Practice, and Device Specific

■ **On-Site Updates** - update new device profiles and firmware via Internet connection

■ **Extensive Memory** - dedicated memory for 560 HART device profiles

■ **Extensive Storage** - document and store more than 200 device configurations.

■ **Time Saving Engineering** - clone/upload/ download configurations

■ **Remote Configuration** - off-line mode for developing/reviewing configuration.

■ **Record Keeping** - as found/as left history using DHH820-DMS software

■ **User Interface** - 13-line, 128 x 128 pixel graphic, backlit display

■ **User Convenience** - edit directly from Review/Edit mode

DHH801-MFC

HART®
COMMUNICATION PROTOCOL

ABB

Mobility DHH801-MFC
with HART® Communications

As part of ABB's Mobility line of device hand-helds, the DHH801-MFC is a hand-held terminal for device configuration of HART® instruments. It interfaces to a wide range of devices supporting ABB instruments with an option to support those from third party suppliers. All supported HART field devices can be configured, polled, and trimmed using the Mobility DHH801-MFC. As a full function HART communicator, the Mobility MFC supports Universal, Common Practice, and Device Specific commands for commissioning, configuration, and maintenance operations. The Mobility DHH801-MFC provides a full view of information in a 13-line 16k pixel based display. It's easy to navigate parameter scrolling capability eliminates the need to memorize menus for online or offline device configuration.

The Mobility DHH801-MFC is designed for optimum convenience and usability. It's sleek, easy to grasp contour with thumb key access makes the Mobility DHH801-MFC especially suitable for single-handed operation.

Design Features

- Update new device profiles and firmware via Internet connection
- Dedicated memory for 560 HART device profiles
- Document and store more than 200 device configurations
- Clone / Upload / Download configurations
- Off-line mode for developing / reviewing configurations
- Upload, download and document device configurations with DHH820-DMS
- Upload and document device configurations with option for DPC Manager
- 13-line, 128x128 pixel graphic, backlit display
- Full alpha-numeric keypad
- Edit directly from Review/Edit mode
- Quick Menu access key
- HART menu Home key
- Dedicated text edit keys
- Programmable lock-out settings
- Contrast key for direct adjustment from any mode
- Elastic hand strap and adjustable, detachable hanging strap
- Thumb keys (left hand) for menu Up, Down, and Select
- Custom "use-in-place" soft case with lead kit compartment

The Mobility DHH801-MFC supports all HART devices at the Universal and Common Practice command levels plus a large and growing list of ABB and non-ABB devices at the Device Specific command level (greater than 250 as of 1 August 2008). The up-to-date device list can be found at www.abb.com/instrumentation in the Fieldbus & Tools product area of Instrumentation & Analytical products. Every Mobility DHH801-MFC comes with a 3 year download subscription allowing users to keep up-to-date with the latest device revisions/definitions for an extended time. Updates under this subscription are readily downloaded from the Internet. The Mobility DHH801-MFC supports many transmitter types including Analytical, Flow, Level, Pressure, and Temperature.

Specifications

- Base Unit Data:
  Length = 10.375" (26.4cm)
  Width = 4.125" (10.48cm) to 2.5" (6.35cm)
  Depth = 1.875" (4.76cm) to 1.3" (3.30cm)
  Housing = ABS plastic case
  Weight = 27 oz (765 g) (with batteries)
- Keypad: single sheet molded dome switches with tactile feedback:
  4 soft, 8 single function,
  30 dual function, 3 thumb keys
- Display: 13 line, 128 x 128 pixel graphic display, 2.6" (6.6cm) x 2.6" (6.6 cm) viewable area, backlight
- Power: Six AA alkaline, or NiMH batteries (external charge); and 100 – 240 Vac power adapter
- Temperature:
  Storage: -40º F to 140º F
  (-40º C to 60º C)
  Operating: 14º F to 140º F
  (-10º C to 60º C)
- Connections: Standard HART banana jacks (¾" (1.9 cm) center-to-center) for HART ac adapter jack DB-9 for data transfer
- Intrinsically Safe Option:
  cULus Ex ia Class 1, Div. 1,
  Groups A,B,C & D: T4
  -5º C < Ta < + 50º C (+23º F<Ta<+122º F)
  ATEX ⟨Ex⟩ II 1G; EEx ia IIC T4
- Electrical Compliance:
  All units CE marked

Use Cases

The Mobility DHH801-MFC supports a wide range of functions that can help to reduce costs by saving time in start-up, day-to-day operations, and maintenance activities. It powers up quickly, typically in less than 2 seconds, and it easily connects with device terminals and/or wiring, making it readily available to begin configuration and/or troubleshooting. On power-up, the Mobility DHH801-MFC searches for a connected device, and upon finding it, the DHH801-MFC display identifies the device and reveals a wealth of information about the device in its large 13 line display area including the device's key variables and status. The large 200-device memory capacity allows the Mobility DHH801-MFC to be used in the field for long periods of time without having to return back to upload it's saved data. The Mobility DHH801-MFC includes a Review/Edit function that allows a user to scroll online or offline through every HART accessible parameter without having to memorize varying menu structures from different instrument suppliers. This time saving feature along with thumb key access and the Mobility DHH801-MFC's ergonomic design that allows it to comfortably fit in your hand, makes single-handed operation in any location, including hard-to-access places, the often preferred method of use. Below are some of the typical ways that the Mobility DHH801-MFC can be used.

- Commission devices
    - Step-by-step configuration
    - Document as-left configuration
    - Electronic Birth Certificate

- Operations
    - Reconfiguration for process changes
    - Reconfiguration for batch runs
    - Document as-found and as-left configurations
    - Populate DHH820-DMS database software

- Device Maintenance
    - Troubleshoot devices with HART
    - View device error messages
    - Clone devices to commission replacements
    - Preventive review of device status

The Mobility DHH801-MFC provides HART users with a more useful, reliable, and comprehensive communication tool. Combine it with our Mobility DHH810-MFT Modular Calibrator with HART Communications and Mobility Device Management System (DHH820-DMS) documenting software to provide the only single-source device management solution capable of meeting continually changing documentation requirements.

DHH801-MFC Configurable Model Number

Mobility DHH801-MFC HART® Communicator - Includes CE Mark, HART Lead Kit, Batteries, Communication / AC Adapter Dongle, RS-232 Serial Cable, Universal Power Adapter, Protective Boot, Soft Carrying Case, Adjustable Shoulder Strap, User's Manual, CD (includes Manuals, DMS Trial Demo, and DPC Manager Utility) and 3 Year Download Subscription	**DHH801-MFC**
1 : Model Type	
All Supported HART devices (ABB and non-ABB)	**12**
Only Supported ABB HART Devices	**22**
2 : Hardware Version	
Design Level B	**B**
3 : Certification	
CE Mark (Standard on All Units)	**0**

Instrinsically Safe:
 	
    cULus Listed Ex ia Class 1, Div. 1, Groups A,B, C, D:T4
        -5º C < Ta < +50º C   (+23º F < Ta < +122º F)
    ATEX ⟨Ex⟩ II 1G; EEx ia IIC T4
	1

DHH801-MFC Non-Configurable Parts

MFC ACCESSORIES

Part Number	*Carrying Accessories*
3KXD311801L0001	Protective boot provides degree of protection against drop related damage; slip on, gray - included w/ MFC (Z4150-7)
3KXD311801L0002	MFC carrying case - custom soft case with adjustable shoulder strap and HART lead / spare battery compartment - included w/ MFC (Z4150-13)
3KXD311800L0003	Adjustable, detachable hanging strap - clips directly to MFC attach points - included w/ MFC (A36937)

Part Number	*Communication Accessories*
3KXD311800L0011	HART Lead Kit (inc'd w/ MFC) - std banana plugs, mini-grabbers, 250 ohm resistor - included w/ MFC (A900529-00014)
3KXD311800L0012	Std size 250 ohm shunt resistor (inc'd w/ MFC) - req'd for HART low resistance loops - included w/ MFC (A36821)
3KXD311800L0013	DB-9 cable, Male x Female, 6 ft (1.83 meter) length - included w/ MFC (A900447-00052)
3KXD311801L0014	Communication / AC Adapter Dongle - included w/ MFC (Z4150-10A)
3KXD311800L0115	Keyspan USB to Serial Converter, includes 35" (0.89 m) USB cable (Z1078)

Part Number	*Power Accessories*
3KXD311801L0121	AA Alkaline Batteries, 6-pack - included w/ MFC (ZA36800)
3KXD311801L0122	AA NiMH Batteries, 6-pack (ZA36843) **- Not Approved for ATEX Intrinsically Safe units**
3KXD311810L0222	Energy 8 NiMH battery Charger, 100-240 AC/50 or 60 Hz, Univ. Plug Kit (A37134)
3KXD311800L0036	Power adapter, 100 V AC to 240 V AC, 50 - 60 Hz and Universal Plug Adapters - included w/ MFC (9B000007)

Part Number	*DPC Manager Software Options* *(Each license covers unlimited DPC's for installation on one Computer)*
3KXD311820L0001	DPC Manager for Configuration Management (DPCMAN-CFG)
3KXD311820L0003	DPC Manager for Configuration and Calibration Management (DPCMAN-ALL)
3KXD311820L0004	Upgrade DPC Manager to Configuration and Calibration Management (DPCMAN-ALL-UPGRD)

Part Number	*DLS - DOF Download Subscription*
3KXD311800L0051	3 year download subscription per MFC for 1 MFC - included w/ MFC: must provide S/N of MFC (DLS 01)
3KXD311800L0052	3 year download subscription per MFC for 2 to 4 MFCs - price is per unit: must provide S/N of MFCs (DLS-02)
3KXD311800L0053	3 year download subscription per MFC for 5 to 9 MFCs - price is per unit: must provide S/N of MFCs (DLS-03)
3KXD311800L0054	3 year download subscription per MFC for 10 to 19 MFCs - price is per unit: must provide S/N of MFCs (DLS-04)
3KXD311800L0055	3 year download subscription per MFC for 20 or more MFCs - price is per unit: must provide S/N of MFCs (DLS-05)

Part Number	*Media Accessories*
3KXD311801R4301	Mobility MFC Operations Manual, printed hard copy - one copy supplied with order at no charge and pdf instructions included on CD (694A198U02)
3KXD311801L0041	Mobility Interface Software CD set, latest version - one copy supplied with order at no charge (698B277U02)

Part Number	*Handheld Upgrade*
3KXD311801L0042	Upgrade from DHH801-MFC22 - ABB HART devices only to DHH801-MFC12 - all available HART devices; must provide S/N of MFC (DPCLICUPG-22X)

Notes