Additel 760A

Automatic Handheld Pressure Calibrator

Automatic Handheld Pressure Calibrator

Quick start guide

[Version: 2605V04]

Additel Corporation

CE

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Statement

This user manual provides operating and safety instructions for Additel 760A Automatic Handheld Pressure Calibrator. To ensure correct operation and safety, please follow the instructions in this manual. Additel Corporation reserves the right to change the contents and other information contained in this manual without notice.

Safety Symbols and Notices

- ⚠This Symbol Indicates that the user must consult the operating instructions before using the instrument.
- ⚠This Symbol Indicates that hazardous voltage may be present at the terminals or sockets. Avoid direct contact.

WARNING identifies conditions or actions that may pose a hazard to the user.

CAUTION identifies conditions or actions that may damage the product or the device under test.

Warnings

- Read this user manual before using the product, paying particular attention to the safety instructions.
- Do not apply more than 30 V between any two electrical terminals. Excessive voltage may damage the calibrator's electrical protection components and create a safety hazard.
- Before using the calibrator, make sure the battery is fully inserted and securely locked in place.
- During pressure venting, do not point the VENT port toward personnel.
- Recharge the calibrator promptly when the low-battery warning appears. Insufficient battery power may cause an unexpected pressure release and create a safety hazard.
- Do not use the product if it is damaged or malfunctioning. Do not disassemble it. Contact Additel for service.
- Do not use the product in an environment containing explosive gases, vapors, or dust.

Cautions

- Do not use the calibrator in an environment subject to severe mechanical vibration.
- If condensation forms on the calibrator, allow it to dry completely before applying power.
- During low differential-pressure calibration, leaving the reference port (REF) open to atmosphere may reduce control stability because of slight changes in ambient temperature or pressure. It is strongly recommended that the low-pressure port of the device under test be connected to the calibrator's reference port (REF).
- If a liquid mist is discharged from the VENT port during operation, collect it to prevent environmental contamination.
- Vent all internal pressure from the calibrator before replacing the internal pressure module.
- Use only the specified power adapter for charging. Recharge the calibrator promptly when the low-battery warning appears.
- If the calibrator operates abnormally, stop using it and contact Additel.
- Do not install or remove the battery while the calibrator is powered on or charging.
- Before switching off the calibrator, make sure that all pressure has been fully released.

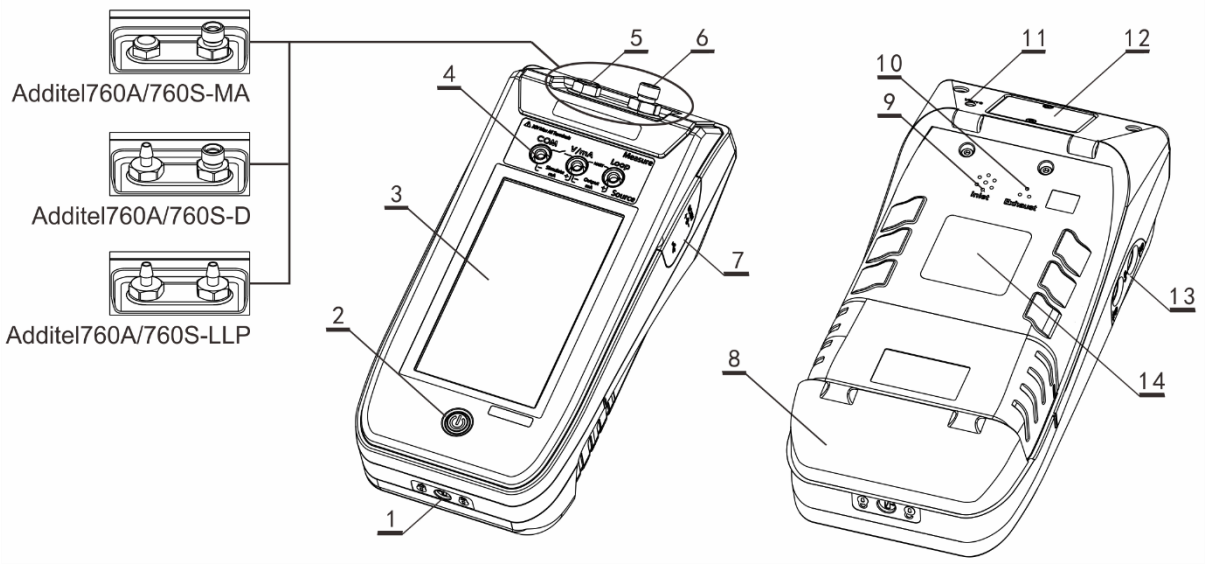
1. Product Models

Function	Additel 760A	Additel 760S
Built-in Automatic Pressure Source	●	●
External Pressure Measurement Module	●	●
Replaceable Rechargeable Battery	●	●
Built-in Filter	●	●
mA Output	●	-
mA Measurement	●	-
Voltage Measurement	●	-
24 V DC Output	●	-
Pressure Switch Test	●	-
HART Smart Calibration	○	-
HART Communicator	○	-
Calibration Task Management	●	●
Data Logging	○	-
USB, Wi-Fi, and Bluetooth	●	●
USB Flash Drive Upgrade	●	●

Note 1: ● Standard; ○ Optional. (ADT760A-X-DL models only)

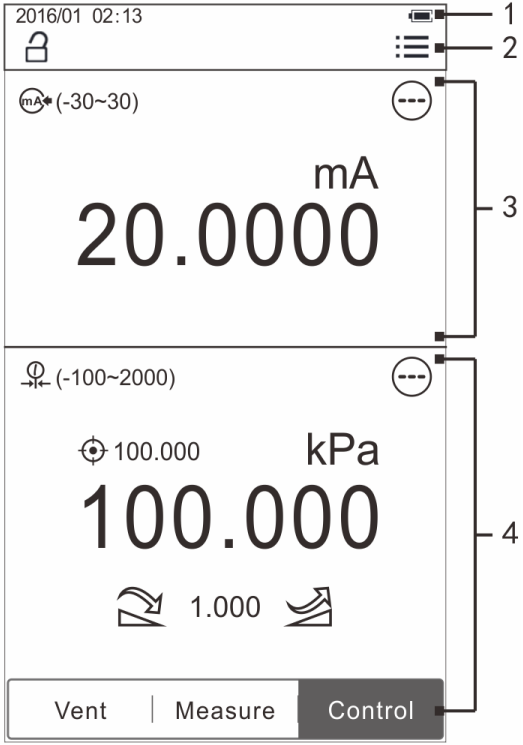
Note 2: Calibration task management functions vary by model.

2. Instrument Overview



No.	Item	Description
1	Battery Lock	Locks the battery in place to prevent unexpected power loss.
2	Power Button	Switches the calibrator on and off.
3	Touchscreen	Displays information and supports touch operation.
4	Electrical Measurement Panel	The Additel 760A provides electrical measurement and output. The ADT760A-X-DL model also supports connection to HART transmitters.
5	Reference Port (REF)	Reference port; on the pneumatic version, it is used for atmospheric-pressure sensor
6	Pressure Output Port (OUT)	Output port for connection to the device under test.
7	Right-Side Interface Panel	Includes the power-adapter connector and a USB Type-A port.
8	Battery	Powers the calibrator when the power adapter is not connected.
9	Air Inlet	Do not obstruct the air inlet.
10	Exhaust Port	Do not obstruct the exhaust port.
11	Pressure Vent Port (VENT)	Do not obstruct the vent port. During venting, do not point it toward personnel.
12	Internal Pressure Module	Vent all internal pressure before replacing the internal pressure module.
13	Left-Side Interface Panel	Two 5-pin circular connectors for external pressure modules or an automatic gas-liquid separator (-MA and -D versions).
14	Product Nameplate	Shows the product model information.

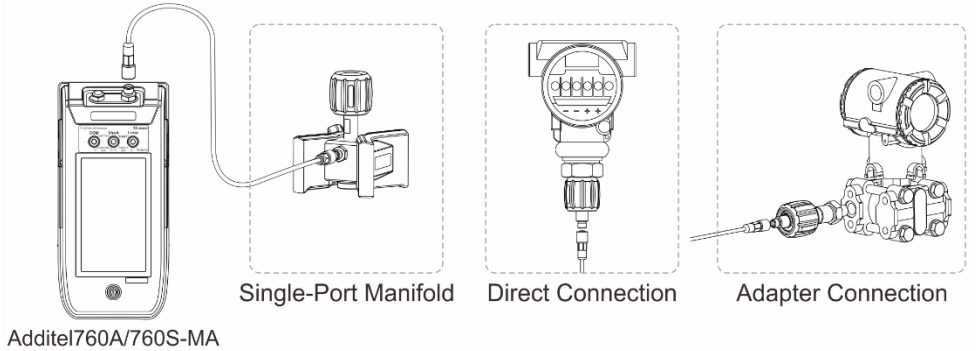
3. Main Screen



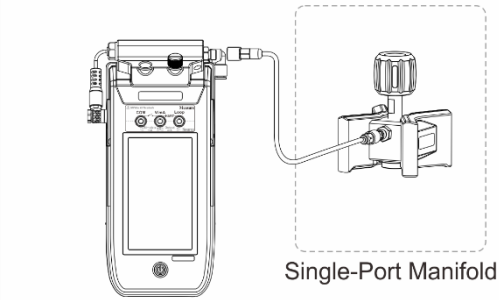
No.	Display Area	Description
1	Status Bar	Date and time: Displays the current date and time.
		External pressure module A connection status.
		External pressure module B connection status.
		HART transmitter connection status (AdT760A-X-DL only).
		Wi-Fi status: Indicates the connection status and signal strength.
		Bluetooth status: Indicates that Bluetooth is enabled.
		USB flash drive status: Indicates that a USB flash drive is connected.
		24 V power status: Indicates whether the 24 V output is on or off.
		Pressure head correction status: Indicates that pressure head correction is enabled.
		Anti-contamination system status: Indicates that the automatic gas-liquid separator is
		Power status: Indicates the remaining battery level and whether the power adapter is
2	Title Bar	Screen-lock button: Locks the screen to prevent unintended operation.
		Diagnostic notification center: Displays notifications when an abnormal condition is
		System menu button: Provides access to settings, data logging, applications, and other
3	Electrical Measurement Area (ADT760A only)	(-30 to 30) mA current measurement.
		(-30 to 30) V voltage measurement.
		Mechanical switch / NPN electronic switch / PNP electronic switch test.
		(0 to 24) mA current output.
		HART transmitter function (Additel 760A only).
4	Pressure Module Area	Displays the real-time pressure value and pressure unit. It also allows the user to set the

4. Pneumatic Connections

4.1 ADT760A/760S-MA

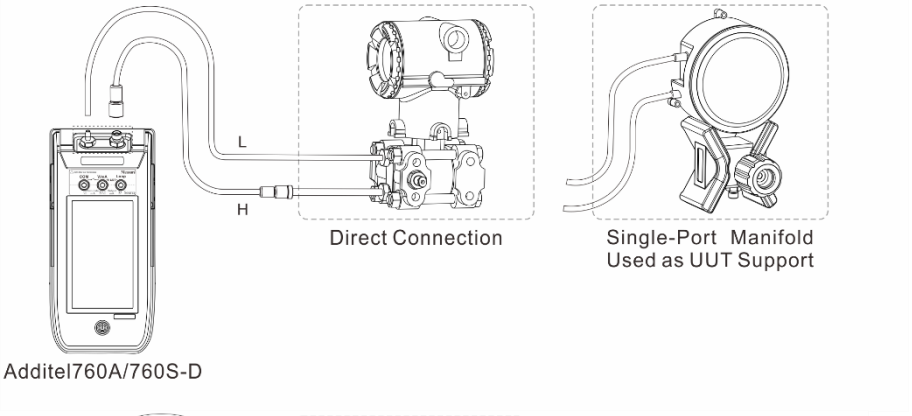


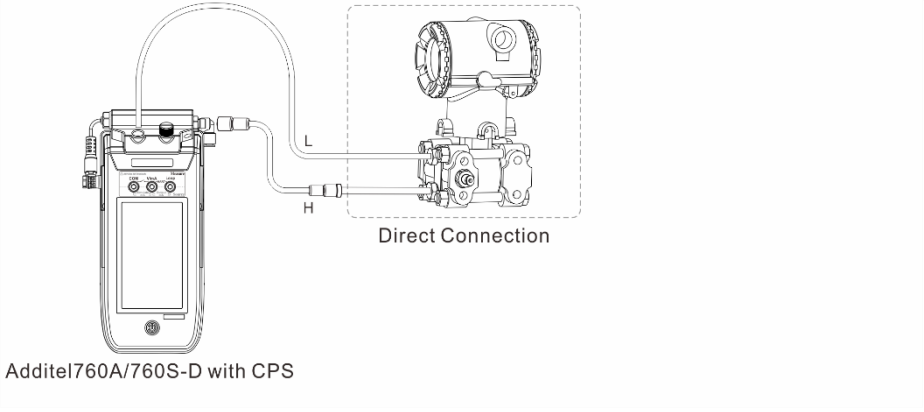
Additel760A/760S-MA



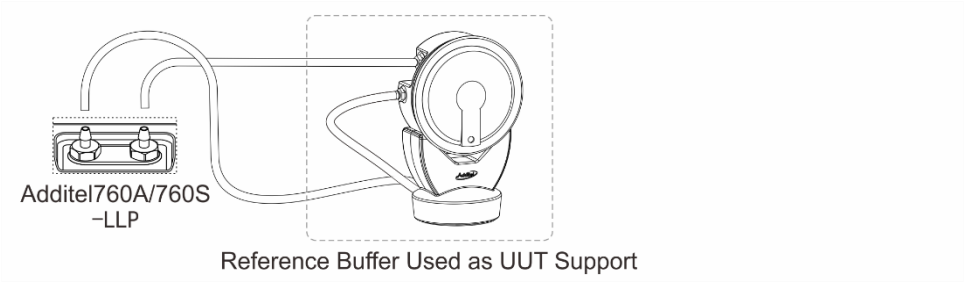
Additel760A/760S-MA with CPS

4.2 ADT760A/760S-D

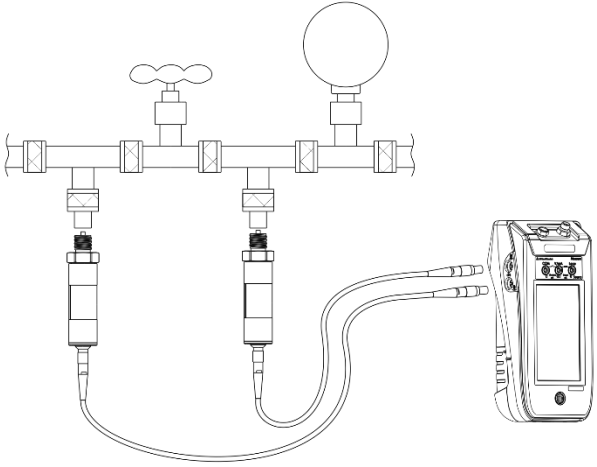




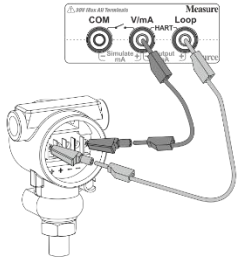
4.3 ADT760A/760S-LLP



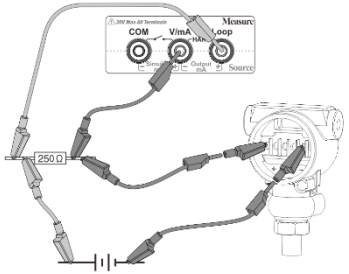
4.4 External Pressure Modules



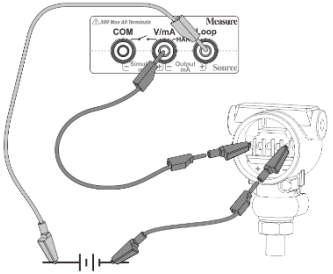
5. HART Transmitter Connections



Internal Power / Internal Resistor



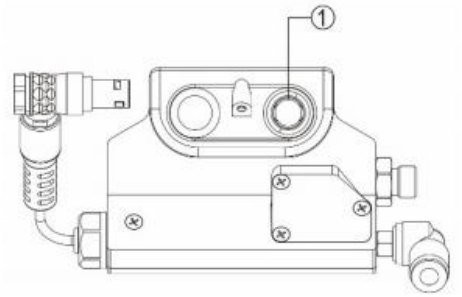
External Power / External Resistor



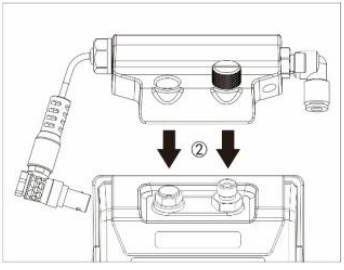
External Power / Internal Resistor

6. Automatic Gas-Liquid Separator Connection

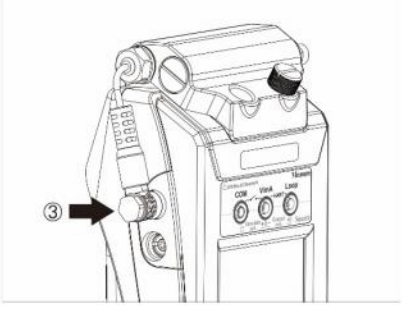
① Check that the O-ring is correctly seated in the groove.



② Install the automatic gas-liquid separator, with the O-ring fitted, onto the Additel 760A and tighten the retaining nut securely.



③ Insert the LEMO plug into the CPS port on the calibrator.



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