



Additel 835 Portable Calibration Bath Quick Start Guide



[Version No.: 2503V02]

Safety and Notes

- >  Indicates the user must refer to the user manual prior to using the bath.
- >  Indicates the terminals or sockets may have high voltage and user should avoid direct contact.

Warnings

- > Please read the user manual, especially the Safety Instructions before using this product.
- > This bath is intended for professional use only. Non-professional use may impair its safety protection.
- > The device should be operated by trained professionals to prevent operator injury or equipment damage.
- > Do not use this bath near flammable materials, as this may cause a fire under extreme circumstances.
- > Avoid splashing heat transfer fluid onto the ground to prevent potential safety hazards.
- > Keep your body away from the parts of the device that may be hot or cold, such as the bath access opening, overflow port, drain port, overflow oil tank, fan outlet and nearby areas, so as to avoid harm.
- > The device has a high temperature warning function. In the event of the temperature of the heat transfer fluid exceeding 50°C after startup, a warning sign  will be displayed on the top of the screen.
- > Before use, please make sure that the power supply is correct and the correct fuse is used in accordance with the user manual.
- > Under certain circumstances, the fluids may generate hazardous or toxic fumes. Refer to the heat transfer fluid's Material Safety Data Sheet (MSDS) for detailed information and additional safety precautions.
- > When the recommended silicone oil is heated above 150°C, trace amounts of formaldehyde and other harmful decomposition products may be produced. Please ensure good ventilation and fume exhaust.

Notes

- > When in use, please ensure that the bath is in a horizontal and upright position and never operate it on a tilted or unstable surface.
- > The bath is suitable for an ambient temperature range of 0 to 40°C, and is recommended to operate within the range of 13 to 33°C to ensure excellent performance.
- > A minimum of 150 mm of space must be left in front and on the sides of the bath, and a minimum of 300 mm of space must be left at the rear to ensure that ventilation and cooling fans can function properly.
- > Do not place other heat sources at the air inlets in front of and on the sides of the bath. Excessively high air inlet temperatures will affect the performance of the bath.

- > Do not use the bath in harsh environments with a lot of dust. Dust may enter the bath and cause malfunctions or may block the air inlet, affecting the performance of the bath or causing damage.
- > The overflow tank is used to collect the heat transfer fluid overflowed due to heating expansion and insertion of the tested equipment. Due to its limited volume, monitor the fluid level inside the overflow tank.
- > When cooling down, please check the liquid level regularly to ensure that the liquid level is always above the minimum line. A low liquid level may affect the performance of the bath and may even cause damage.
- > Do not move or transport the bath when it is full of fluid to prevent injury from spilling fluid.
- > The condenser of ADT835-150 is prone to dust accumulation, which will cause air duct to be blocked and will reduce the performance of the bath and even cause equipment damage. Therefore, please use a vacuum cleaner or compressed air to clean the condenser regularly.
- > When ADT835-150 is operated at low temperatures for a long time, it is recommended to seal the bath to reduce air flow so as to reduce the formation of ice crystals.

* **Warning:** Conditions or operations which may cause injury to operator.

* **Note:** Conditions or operations which may cause damage to device or UUTs.

Basic Structure



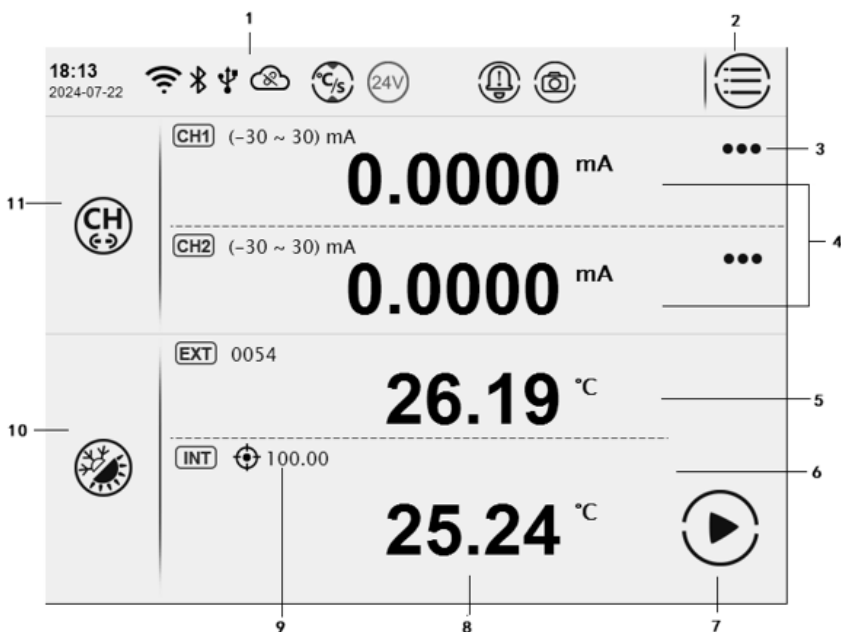
No.	Name	Description
1	Display	Display area, touch screen
2	Power button	Switch on and off
3	AC power supply	Connect to power cord
4	Electrical panel	Plugs for smart reference thermometer, test leads and TCs
5	Firmware reset button	Please contact Additel before operating this button, otherwise it can cause damage to the unit
6	USB Port (Host)	Connect USB disk for system upgrade
7	USB Port (Device)	USB communication to host computer
8	Ethernet	Connect to Internet
9	Bath sealing cover	Seal the bath during short-distance transportation to prevent the heat transfer liquid from spilling
10	Overflow port and plug	To overflow heat transfer fluid that expands due to heat
11	Overflow tank	To store heat transfer fluid that expands due to heat
12	Drain port and plug	To drain the heat transfer fluid
13	Ventilation port	To cool down the heat transfer fluid (only for ADT835-250)
14	Cooling fan	Cooling the device. For ADT835-150, it can also cool down the condenser
15	Air inlet	Device cooling air inlet, including front inlet and side inlet
16	Motor cooling port	To cool down the motor. When facing the display, the left port is air inlet and the right port is air outlet.

Model Description

Functions	ADT835PC-150	ADT835-150	ADT835PC-250	ADT835-250
3-channel high precision temperature readout	•		•	
mA/mV/V/ Ω measurement	•		•	
Switch measurement	•		•	
24V loop power	•		•	
HART communication	•		•	

Quick-Push connectors	•		•	
Int. temperature control	•	•	•	•
Ext. temperature control	•		•	
Self-calibration features	•		•	
Documenting task	•		•	
Step test	•	•	•	•
Thermal calculator	•	•	•	•
Sensor library	•	•	•	•
Screenshot	•	•	•	•
Smart remote control	•	•	•	•
Smart diagnosis	•	•	•	•
USB upgrade	•	•	•	•

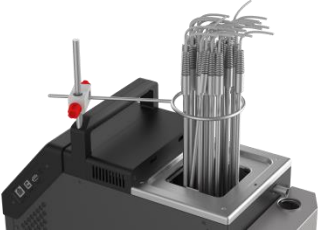
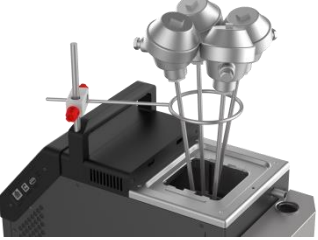
Main Display

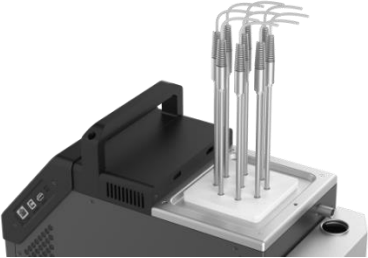


No.	Name	Description
1	Status bar	Time and date: system time
		WIFI : WIFI status, show WIFI status and signal
		USB : USB, indicates USB devices connected
		Bluetooth : Bluetooth, indicates Bluetooth is enabled
		ACloud : ACloud, indicates the unit is connected to cloud service
		Diagnosis center : Diagnosis center, displays error messages
		24V : 24V power, indicates 24V output is enabled
		Snapshot : Snapshot, indicates snapshot function is enabled
		CH1 : CH1 electrical channel, indicates CH1 channel is enabled
		CH2 : CH2 electrical channel, indicates CH2 channel is enabled
		High temperature warning : High temperature warning, indicates bath temperature >50 °C
		°C/s : Control rate limit, click to edit temperature control parameters

2	Main menu	>Setup: Communication, Sensor library, ACloud service, Languages, Themes, Updates, Date&time... >Task: Users can create tasks for intelligent temperature control >Application: Thermal calculator, Step test, Switch test, Snapshot > Screen lock: After entering the lock screen state, only the unlock key can be used.
3	DUT menu	Close channels, zero, scaling and average and extreme values
4	DUT channels	Measurement settings, select and set sensor type, display real-time electrical data
5	Ext. REF channel	When external reference thermometer is connected, users can select it as temperature reference, there will be parameters and set point of external reference on display.
6	Int. control channel	Displays the real-time temperature and settings of internal reference thermometer
7	Control icon	Start and stop temperature control
8	Temperature measurement data	>Display internal measured temperature, click to enter temperature control set point. >Display temperature unit, click the unit to set the temperature unit of all channels, it supports °C, °F and K.
9	Set point	Touch to set temperature set point.
10	Temperature output settings	Set stability tolerance, set point tolerance, temperature control rate, stabilization time and set point limit. If external reference is connected, it supports switch temperature reference.
11	DUT channel settings	Includes CH1 & CH2 connection settings, temperature resolution, stability tolerance, stability time and mA/V resolution settings.

Typical Calibration Application

No.	Application	Jigs	Pictures
1	Open batch calibration for 40 rod type sensors	Single circular bracket + Protection basket	
2	Open batch calibration for 4 temperature transmitters or more	Single circular bracket + Protection basket	
3	Open batch calibration for 4 sanitary sensors of 50 mm diameter	Adjustable multiple hole jig	
4	Open single calibration for 1 large dial bimetallic thermometer	Single clamp bracket	

5	Closed precision calibration for 9 precision sensors	Multiple hole Teflon cover + Protection basket	
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Note:

1. Open calibration is intended for batch calibration of low-precision temperature sensors, large dial low-precision sensors, or temperature transmitters.
2. Closed calibration is designed for precision temperature sensors or transmitters, featuring insulation to minimize heat loss.

Metrology Made Simple

Statement

The product technical specifications, accessories and other related information in this manual are subject to change without prior notice. Please contact Additel Corporation if you have any questions.

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