



Arbin Instruments
762 Peach Creek Cut Off Rd. College Station, TX 77845
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www.arbin.com

ADDITIONAL OPTIONS TO CONSIDER

- Auxiliary Voltage Input:** This option is typically used to measure each cell voltage in a multi-cell battery pack or to measure the reference electrode voltage in a three electrode setup. The value of voltage can be recorded in the results file or used to further control the experiment. Minimum order quantity: 8 channels per module (cables sold separately)
- Temperature measurement:** This option is used to measure the temperature of any point in the setup using either our thermocouple module (E, J, K or T) or our thermistor module (type to be specified when placing the order). The value of temperature can be recorded in the results file and/or used to further control the experiment. Minimum order quantity: 8 channels of thermocouples or 16 channels of thermistors per module (sensors sold separately).
- Pressure input:** This option works the same way as the temperature option above but measures the pressure inside the cell using a pressure transducer. The transducer used with this option uses an operating supply voltage of 5VDC and output voltage of 0-100mV. The cell must have an opening to insert the transducer. Minimum order quantity: 8 channels per module (transducers sold separately)
- Auto-calibration** This option allows all the channels to be calibrated automatically for each current range (current $\leq 20A$), each voltage range (voltage $\leq 70V$), and each auxiliary voltage channel. The user sets the desired accuracy and this module will generate a results report once the calibration has finished. This report documents the “as found” and “as left” calibration information. An HP34401A, HP34410A, or KEITHLEY2100 multimeter is generally used in this process (sold separately). This option includes the ACVIVUS-8 connection bus and necessary wiring for up to 24 channels. Additional ACVIBUS-8 modules can be purchased separately.
- Smart Battery:** This option is used to communicate with smart batteries using SMBus 1.1 or 2.0 (please specify at time of order). This feature will allow users to read/write registers on the smart battery as well as compare data collected from the smart battery with data that the Arbin system measures directly.
- High Speed Pulse:** This option provides the capability to run GSM, CDMA, TDMA or other custom designed pulses. We define a High Speed Pulse as a sub-second single or repeated pulse profile. Each single pulse profile can have up to 10 stages. To generate a good pulse shape, it is important to have a rise time that matches your pulse requirement. Please consult with your Sales Engineer regarding the appropriate circuit to meet your requirements.

There are two options that you may choose that determine the flexibility of assigning pulses to each channel:



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Shared Pulse Option: This option uses one microcontroller shared by a group of four or eight channels. Only one pulse type can be run at the same time on channels connected to the same microcontroller. The minimum pulse width is 500uS (or 10x the rise time of the channel, whichever is greater). Each pulse can have up to 10 stages and data is collected at 2 points per stage.

Burst Pulse Option: This option provides a dedicated microcontroller for EACH channel. With this option, the user can assign an independent pulse type on each independent channel that can run simultaneously. The minimum pulse width is 500uS (or 10x the rise time of the channel). Each pulse can have up to 10 stages and data is collected at 2 points per stage. It also allows users to collect data points every 1ms for short periods of time. For more information, please contact your Sales Engineer.

- External Charger/Load:** This is a useful option when qualifying chargers to be used with your batteries or studying load profiles. Using this option, the user connects the battery to the regular channel and the charger or load to the External Charge input provided. The user can program the battery to be charged/discharged by the external charger/load at a predetermined step in the schedule. The system internally and automatically connects the battery to the charger/load. During the External Charge/Load step, the Arbin system collects data about the charger/load performance. The system then disconnects the charger/load once the preset limit conditions are met.
- Digital I/O:** The Digital Input/Output module sends and receives a simple digital on/off signal. Available in TTL and Relay. 8ch input and 8ch output per module.
- UPS:** This option is designed to support the PC and detect a power outage to the Arbin tester. The user can select options on how their test responds to the power outage and restoration. Included is a Smart UPS and proprietary cable to allow control by the Arbin software.
- Temp. Chamber Interface:** The Temperature Chamber Interface option (MTCI) allows the system to communicate with a temperature chamber controller during testing. The MTCI module tells the chamber controller what temperature set-point to use during each test step, allowing the user to program complex automatic temperature profiles in their tests. Consult your Sales Engineer for a full list of supported chambers and MTCI specifications.
- Battery Holder:** Arbin has many standard and customized holders that can be used to hold a wide variety of cells. We have different sized coin cell holders, lithium polymer flat-cell holders, and universal battery holders that hold different size cylindrical cells. Additionally, we have battery holder racks available and/or we can design a customized rack to meet your exact requirements. Contact your Sales Engineer for more information and pricing.