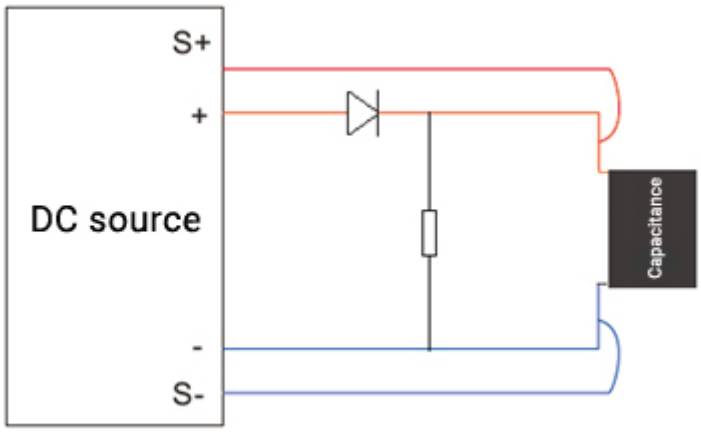
Application of APM Programmable DC Power Supply in multiple test condition

Now electrical equipment is increasingly rich. For different DUT like capacitive load, inductive load, battery, LED load, requirement to reliability, stability and flexibility is getting higher. To make sure the test proceed smoothly, it is necessary to have different methods to different DUT.

1. Application to capacitive load

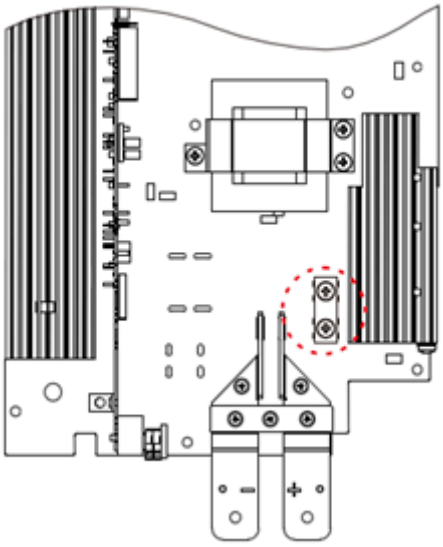
Because capacitive load has the characteristics of increasing output voltage. Especially when output voltage adjusts from high voltage to low voltage, it will cause voltage fall slowly. Thus, normally, a power resistance will parallel connect to the output terminal and a diode will series connect between output terminal and load. It could reach a good application.



2. Application to inductive load

When change the output current, inductive load will create negative induced electromotive force. If power source could not absorb this part of energy or without adding absorption circuit in output terminal, it will damage the inductive load. APM middle power source has anti-reverse function which could perfectly solve the problem. Without adding external absorption circuit, only need to connect short circuit copper sheet in internal of power

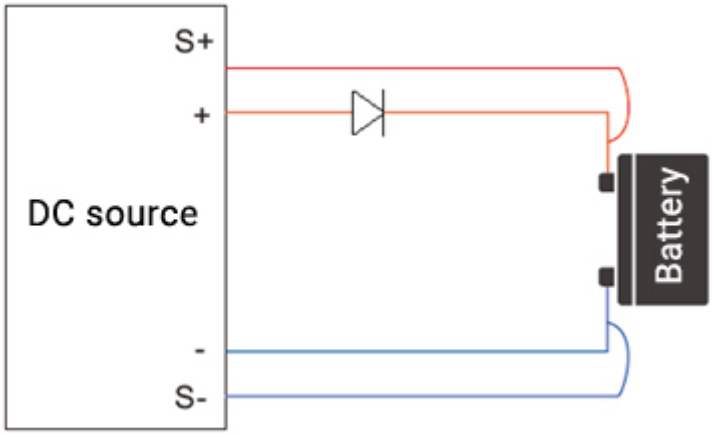
source, then output capacitance and other circuit could absorb this part of energy. This function could activate or ban accordingly.



3.Application to battery load

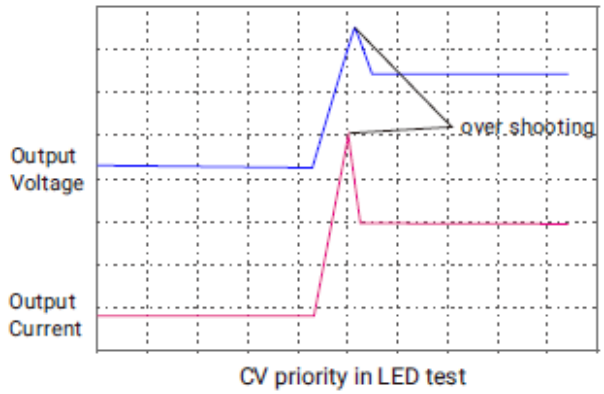
When charging battery via DC source, a diode will series connect between power source and battery to avoid damage to equipment due cause by misconnection to battery. When turn off the power source, it could avoid battery reverse flow.

At the meanwhile, APM high power DC source is completing the 3 stage charging function. It is easy to operate. It could transfer condition according to test data of battery.

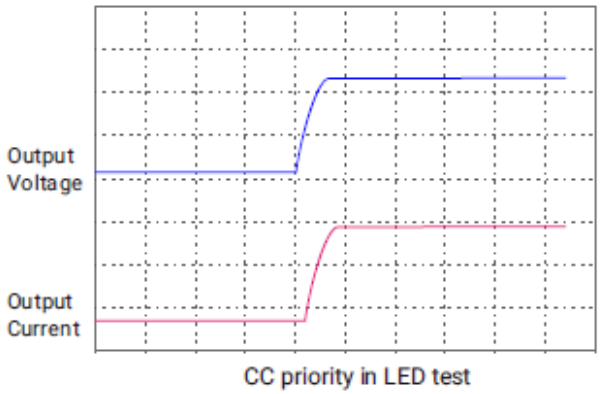


4. Application to LED load.

APM high power DC source support CC&CV priority function to decided output high speed voltage model or no overshoot current. When test LED load, it could select CC priority mode to avoid overshoot of output current.



CV priority in LED test



CC priority in LED test

Programmable DC source is significant technical component of test process of multiple test part. Knowing the matters need attention of power source in different test condition is important which could provide protection to human and equipment.