

Application note

CHARGING CAPACITORS

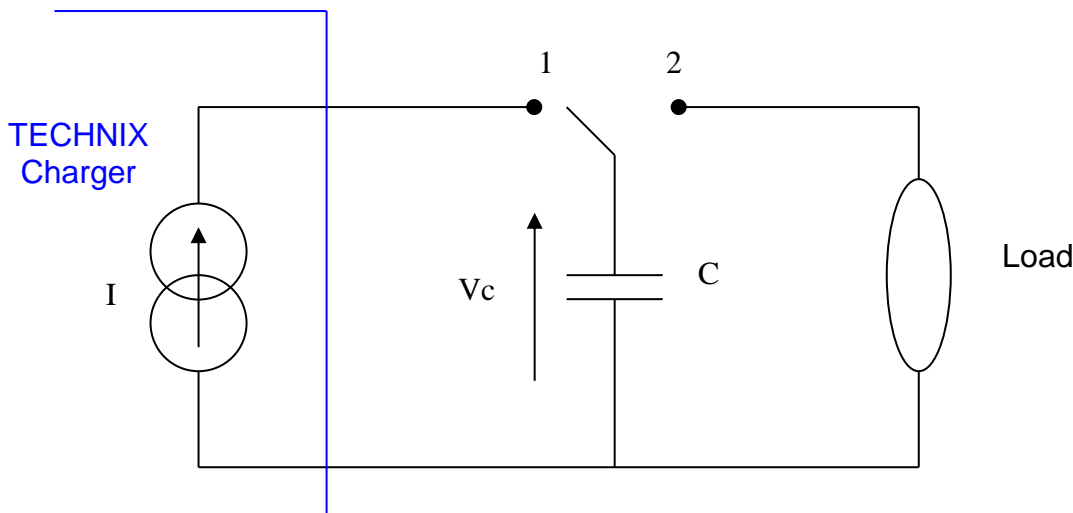
Following sketch represents the usual way customers use our capacitor chargers.

When switch is in position 1, the charger charges the capacitor in constant current.

During the charge the voltage V_c upon the capacitor is $V_c = I \cdot t / C$,
 where $I = I_{\text{setting}}$ (in Amperes) , $C = \text{capacitor value}$ (in Farads),
 $t = \text{time}$ (in seconds) and V_c is Voltage upon Capacitor (in Volts)

When V_c reaches V_{setting} , the charger stops to charge C and maintains this voltage.
 Then the capacitor can be discharged by putting switch in position 2.

The switch and its control are in charge of the customer.



In some applications, capacitor is discharged through the load as soon V_c reaches V_{setting} . This is case (1)

In case (2) customer holds Voltage upon Capacitor before discharging and also before charging again.

In case (3) discharge is partial.

In all these graphs, discharging time is considered as insignificant.