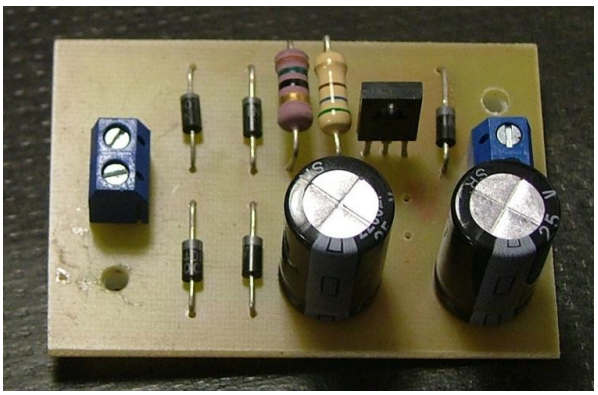
CAPACITOR DISCHARGE UNIT

INFORMATION SHEET ref CTT02a

Description

This device is a rapid charge circuit for a large low voltage capacitor. It converts 16 Volt ac into approx 20 volt dc and charges up the capacitor using a transistor connected as an emitter follower.



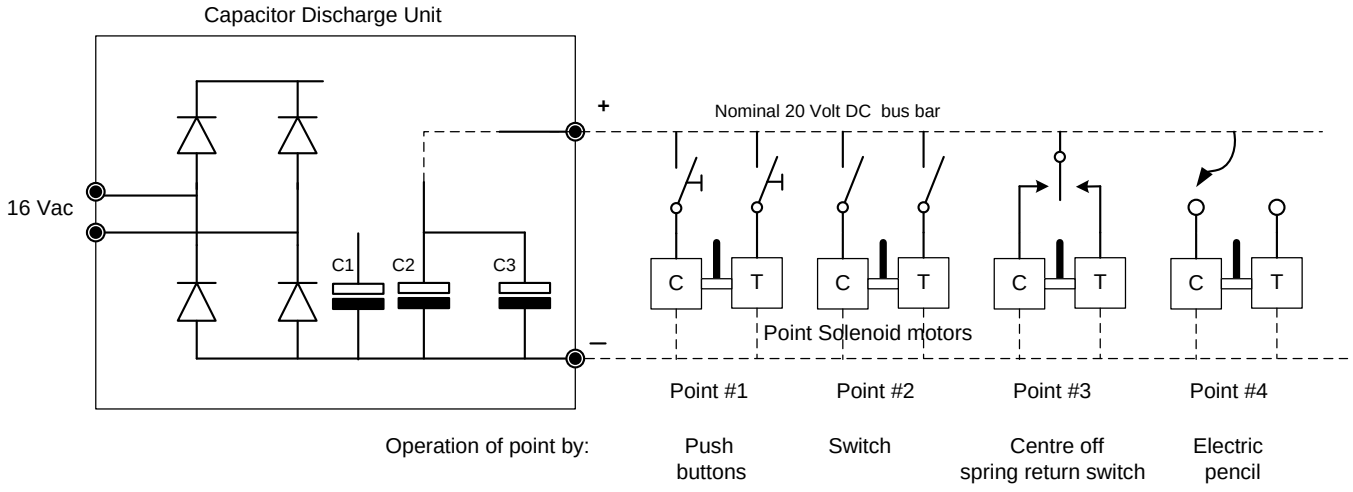
Application

It is used primarily for the operation of model railway point solenoid motors. When the point is to be operated a switch or push button connects this unit to the solenoid. The capacitor is then discharged very quickly by the current drawn by the solenoid which moves the point to the selected direction. When the switch or push button is released the capacitor is charged up to full voltage quickly to make it ready for the next operation.

Typical point solenoids draw approx 4-5 amps and are short time rated, i.e. they will burn out if they are energised for more than a few seconds. The CDU helps to prevent this happening as the capacitor remains discharged if the push button is held down.

Several points can be operated at the same time, typically 2 when switching a cross over which employs 2 points. More than 2 can be operated at once but extra capacitors may be required, depending on your layout wiring and dimensions.

One common misconception is that each point needs a CDU. This is not true as one CDU can be applied to control any number of points but not all at once. In effect the CDU out creates a bus bar to which all point solenoids can be connected via its push button, switch or electric pencil.



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