1.1.2 Electromagnetic Control Gear for HID Light Sources

There are a number of different types of circuits used for high intensity discharge (HID) lamps which vary according to the type of lamp and its requirements for starting.

The most common type of ballast used is a choke or inductive ballast in series with the lamp. The choke, which is a coil of copper wire wound on a laminated iron core, limits the current through the lamp. Figure 119 shows a typical circuit using a choke.

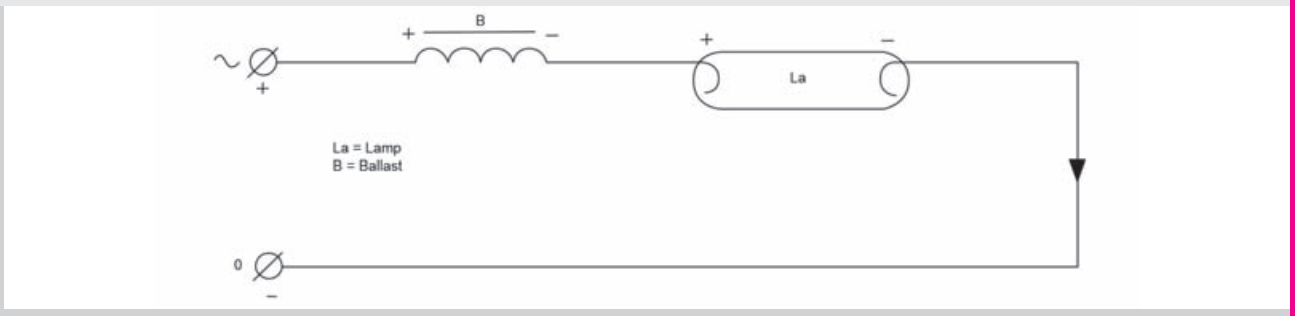

Figure 119
Schematic diagram of a HID lamp circuit using a choke.

This type of circuit is used for all high intensity discharge lamps apart from the low pressure sodium lamp. The low pressure sodium lamp has a long run-up during which time the voltage across the lamp needs to be greater than normal mains voltage; this has given rise to a number of circuits for running the lamp that provide the necessary voltage.