



Figure 123  
A circuit diagram of an electronic ballast for two fluorescent lamps.

In some ballasts the electronics that control the power oscillator can vary the frequency at which the power oscillator runs; as the frequency increases the current passing through the coils decreases and thus it is possible to dim the lamps. Some types of ballast have a 0 to 10 volt input that is used to regulate the output while some have digital interfaces. See Chapter E / 2.0 for further information on controls.

### 1.1.6 Electronic Control Gear for HID Light Sources

Making electronic control gear for HID light sources is a complex process. There are many different lamp types each with different electrical requirements and a limited range of frequencies in which they can be operated. Also many lamp types do not show a significant gain in efficiency when operated on high frequencies. For these reasons electronic control gear has been developed more slowly for HID lamps than for fluorescent lamps.

However, it is possible to gain a number of benefits from electronic gear for HID lamps. These include:

- Increased lamp life.
- Elimination of visible flicker.
- Better system efficacy.
- Less sensitivity to mains voltage or temperature fluctuations.
- The possibility of dimming with some lamp types.

Not all these benefits are possible for all lamp types and all control gear combinations. However, the availability and quality of electronic gear available for HID lamps is rapidly increasing.