DALI requires a single pair of wires to form the bus for communication to all devices on a single DALI network. The network can be arranged in a bus or star topology, or a combination of these. The DALI System is not classified as SELV (Separated Extra Low Voltage) and therefore may be run next to the mains cables or within a multicore cable that includes mains power.

The DALI data is transmitted using manchester-encoding and has a high signal to noise ratio which enables reliable communications in the presence of a large amount of electrical noise. DALI employs a diode bridge in the interface circuitry so that devices can be wired without regard for polarity.

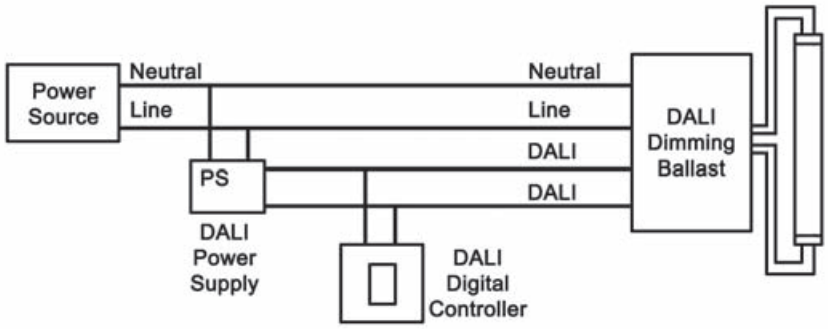


*Figure 131*
*DALI Dimming system diagram.*

### 2.3.3 DMX 512 or DMX 512-A Lighting Control System Description

DMX 512 was designed to control lights and other equipment in the entertainment industry. In a typical spotlight that has its aiming controlled, three channels may be used, one to dim the luminaire and one for each axis of rotation. The system has traditionally been used in theatres but is increasingly being used in architectural feature lighting where the lighting equipment is more complex.

DMX 512-A is the current standard and is maintained by ESTA (Entertainment Service and Technology Association). The DMX 512 signal is a set of 512 separate intensity levels (Channels) that are constantly being updated.