Electronic ballast operating principle

This series of electronic ballast has three models LEB-204~213,LEB-214~218, LEB-219~236, Power 2*13W, 2*18W, 2*36W. The circuit of the unit comprises AC/DC transfer circuit, transfer circuit, booster circuit and Protection circuit for lamp abnormity.

AC/DC transfer circuit: It comprises D1-D4 and CD1 CD2, the C1-C3, CY1, CY2, L1, L2 remove high frequency noise and interferences which were from network supply and this ballst. In the AC/DC transfer circuit a 120VAC input is rectified by the diode D1 D2 C14 C15 to a DC voltage.

Transfer circuit: It comprises T1 T2 L5 L6 C6 C7 and Tr,it converts the DC voltage into a high frequency AC voltage.

Booster circuit: It comprises L3 L4 and C11 C12 , it boosts the high frequency AC voltage high enough to start the lamp, it stabilities the lamp current when the lamp is operating.

Protection circuit for lamp abnormity: It comprises D11 D12 D9 SCR DB3-1 CD3 and T3, it supplies signal for transfer cricuit stop working when the lamp become abnormity (end of life, dropout or break).