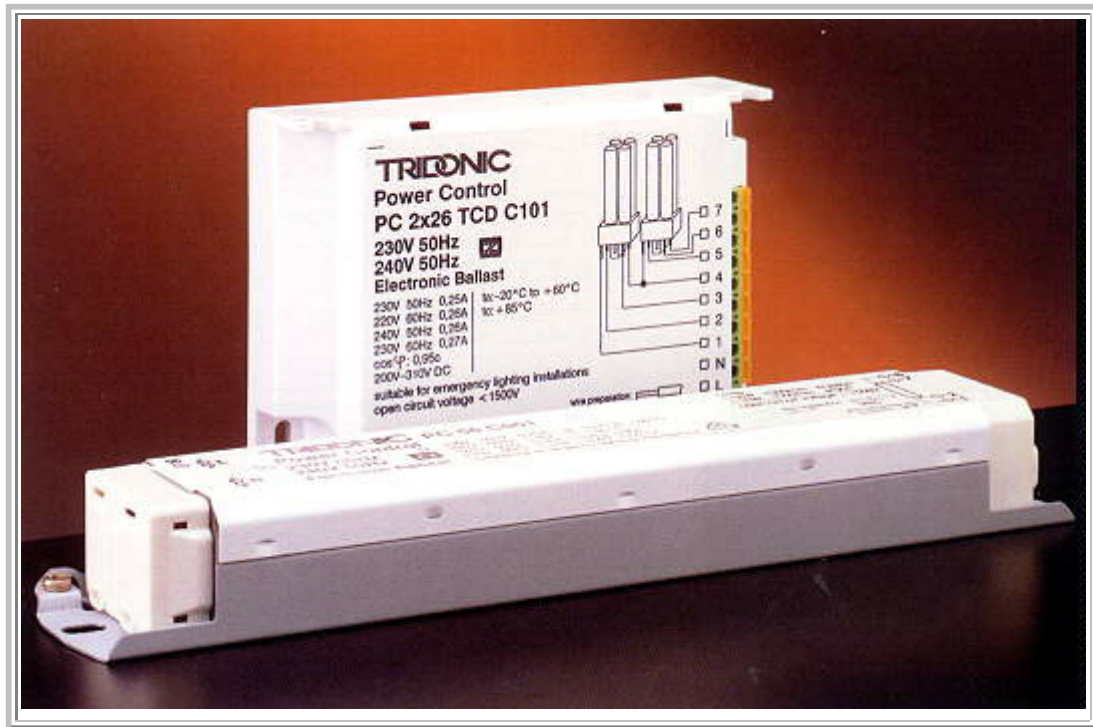


TRIDONIC

Electronic ballasts - Fluorescent lamps



Electronic ballasts, like wound chokes, are current limiting devices. The use of electronics allows more sophisticated control and enhanced quality of light, additional features that would not be possible with wound chokes.

Enhanced Quality of Light

Electronic ballasts run fluorescent lamps at high frequency (20-80 kHz) which ensures the lamp current is virtually constant, unlike wound chokes where the lamp current is interrupted 100 times a second at 50 Hz. This obviously gives greater visual comfort and 'cathode flicker' is eliminated, even at low temperatures. In addition the dangerous stroboscopic effect associated with rotating machinery is eliminated. At start up there is no annoying flicker or noise and, if a lamp is defective, it will be shut down automatically without causing any further disturbance.

Energy Savings

High frequency operation permits more energy to be converted into light and between 7 and 11 % less power is required for the same light output. Electronic ballasts are much more efficient than wound chokes and, therefore, run cooler not only reducing losses but lowering the temperature in the luminaire. The lamp is allowed to run nearer its optimum operating temperature of 25 °C. The total savings are dependent on the individual lamp but wound chokes use 30 % more energy than the equivalent electronic ballast.

Increased Lamp Life

Because the lamp is run under exactly the right conditions and a soft start is used, practical experience has shown increased lamp life. Technical advantages: Automatic shut down of defective lamps Automatic switch on when a lamp is replaced No capacitor is required ($\cos \phi = 0,95$) Can be used on a DC supply

	200-31eV Low weight Low heat output No starter is required Conforms to EN 60928 and EN 60929
Service Life	Tridonic electronic ballasts have a designed mean service life of 50.000 hours at 60°C ambient temperature and this is achieved by using only the highest quality components and by conducting a rigorous testing programme.
Quality Assurance	To maintain the reputation the PC range of electronic ballasts has earned, 100 % of production has a multistage testing programme, which is followed by a burn in test.
Lamp types	According to the Tridonic quality philosophy an electronic ballast must be specifically designed for and adapted to every lamp. As the lamp operation, preheating and ignition power differ from lamp to lamp, the ballast must be specified for each type. Argon and krypton lamps can both be operated with the Tridonic Power Control PC-C 001 and PC-A.
PC-C range	The PC-C range has been manufactured and tested to state-of-the-art level. It fulfils all the demands which are made on contemporary electronic ballasts. The ballast units guarantee optimum lamp operation and high reliability. PC-C ballasts are available for lamps with outputs from 18-70 W.
PC-E range	With the PC-E, Tridonic is offering a new generation of ballast with the benefit of a constant level of output. This makes it possible to achieve light output independently of fluctuations in mains voltage. These ballasts are fully approved for use in CE marked luminaires. PC-E ballast units are available for lamps with outputs from 18-58 W, with one or two tubes.
PC-C compact ballast	The design of these units has been adapted to the requirements for compact fluorescent lamps. Virtually square in shape, the design opens up new opportunities for light designers. PC-C compact ballasts are designed for the operation of 9-42 W TC-S/E, TC-D/E and TC-T/E lamps. This type of ballast also has a constant level of output. This makes it possible to achieve light output independently of fluctuations in mains voltage.
LUXCONTROL PC-A	The Tridonic LUXCONTROL PC-A is a dimmable, fully-digital ballast. The use of a two-wire bus to transmit digital signals to the ballast permits a reduction of the luminous flux to 1 %. Digital technology guarantees the same luminous flux for all the lamps in a lighting installation. The luminous flux will not be influenced by voltage peaks or drops on the bus. You will find a detailed description of the Tridonic LUXCONTROL lighting control system in Section 9 - LUXCONTROL Lighting Control Systems.
LUXCONTROL PC-A compact ballast	Like the PC-C compact ballasts, the design of these units has been adapted to the requirements for compact fluorescent tubes. These units can be used to dim 11-42 W TC-S/E, TC-D/E and TC-T/E lamps from 100 0/0 to 3 % continuously and evenly to the human eye.
Emergency lighting	Tridonic electronic ballasts are ideal for use in emergency lighting systems. They can be operated on direct current from 200 to 310 V. Ballasts in the PC range can also be used in conjunction with several emergency lighting installations, in which every lamp can be rewired as a safety lamp. Further information is available on request.
Standard and test marks	Tridonic ballasts fulfil the requirements of the most recent applicable standards and have the necessary test marks from European testing agencies in accordance with CCA