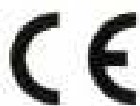
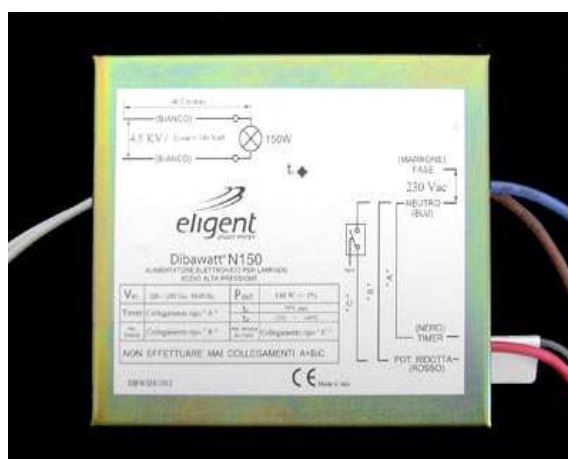


DIBAWATT®

ELECTRONIC BALLAST FOR HID LAMPS

TECHNICAL SPECIFICATIONS



May 2008. We reserve the right to make technical changes without prior notice

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DESCRIPTION

Recent laws and consumptions dejection dictated by Kyoto protocol, associated with the need to achieve energy efficiency, containment of current cost and respect for the environment , place our company at the forefront, to meet the new changed scenario in the field of public lighting, thanks to our product. Moreover, continuous oil costs increase, and consequently increase of energy costs, require a decisive and timely direction to achieve savings and efficiency.

DIBAWATT® is an electronic dimmable ballast, to be incorporated, energy efficient for HID sodium lamps, mainly designed for outdoor lighting of public roads, residential areas, parking lots, pedestrian areas and roads, tunnels, etc.

DIBAWATT® enables energy savings in avoiding energy losses, normally present in the windings of conventional ballasts.

DIBAWATT® provides to:

- Supply ignition voltage to the lamp. In case of power failure, (particularly in the case of hot lamp) and to avoid unnecessary stress to the lamp, DIBAWATT® sends pulses of new rounds of ignition about 1 minute apart.
- Provide the power the lamp requires to operate under normal and reduced power condition (see dimmer function).
- Reduce the power of working lamp (dimmer mode), normally during night hours, according to the following parameters:
 1. internal automatic timer;
 2. activation command sent from the external device.

- Stabilize the power of working lamp (or the power normal and reduced) regardless of supply voltage of the public lighting.
- Totally eliminate the reactive power load.
- Interface itself with an external remote monitoring system.
- Remove all visible phenomena of flickering lamps.
- Reduce the colour differences and stroboscope effect ensuring flow uniformity for all the bright lights of the same line.
- Ensure a strong energy savings thanks to lower power consumption compared to traditional power systems.

TECHNICAL DATA

Relative Humidity	80% no condensing
Supply Voltage	220-240 Vac
Frequency	50/60 Hz
Pedestal Voltage	4,5 KVac
Pedestal Voltage Duration	1 msec max (for each impulse)
Power Factor	Cos ϕ > 0,98 for each output power and input voltage
Operating Environment Temperature (ta)	-30°C ÷ +60°C
Storage Temperature	-30°C ÷ +90°C
Electrical Insulation Class	DIBAWATT® can be installed both on the I and II class of lighting equipment, in accordance with light fixtures regulations requirements
Applied Guideline	2004/108/CE, 2006/95/CE
References Standards	EN 61347-1, EN 61347-2-12, EN 55015, EN 61000-3-2/3, EN 61000-4-2/3/4/5/6/11
Protections	For open circuit for lamp failure or absence; for accidental short-circuit on the lamp side
Certifications & Brands	



TECHNICAL DATA FOR EACH MODEL

	DIBAWATT®			
	N70	N100	N150	N250
Sodium High Pressure Lamp	70W	100W	150W	250W
Power Under Standard Condition	70W ± 5 %	95W ± 5 %	140W ± 5 %	225W ± 5 %
Power in Dimmer Mode	50W ± 5 %	60W ± 5 %	90W ± 5 %	155W ± 5 %
Ignition Current (Start Value)	0,20A ± 5 %	0,24A ± 5 %	0,37A ± 5 %	0,55A ± 5 %
Nominal Current on Standard Condition	0,31A ± 5 %	0,41A ± 5 %	0,61A ± 5 %	0,93A ± 5 %
Nominal Current on Dimmer Mode	0,21A ± 5 %	0,26A ± 5 %	0,39A ± 5 %	0,64A ± 5 %
Case Temperature (tc)	75°C	75°C	75°C	85°C
Dimensions (HxLxP) (mm)	103x116x60	115x133x60	115x133x60	117x136x64
Weight	1020g	1060g	1060g	1145g

DIBAWATT® OPERATING

When the lighting system turns on, Dibawatt starts providing to the lamp a perfect stabilized nominal power. Instead, the power provided by the lamp will be supplied by the Dibawatt gradually, in order to allow a no-stress ignition cycle. (soft start cycle)

During this situation, lasting several minutes, the power assimilated by the lamp is considerably lower than the one absorbed by the traditional ballasts systems.

The input voltage is applied to a PFC (Power Factor Corrector), which allows, with a performance greater than 98%, the power factor correction between voltage and current.

At the ignition cycle end, Dibawatt continues to supply the lamp at the nominal voltage, providing a lower power compared to the values verifiable with traditional ballasts systems.

Throughout the entire normal cycle functioning period (evening time), dibawatt distributes the nominal power, irrespectively of the voltage value supplied by the Network.

At the time preset by the Lighting System Manager, Dibawatt arranges the reduction of the power assimilated by the lamps (dimmer phase), at the same time maintaining an always perfectly stabilized power supply of lamps.

This function avoids shock caused by natural increase of the primary voltage supplied by the Network during the night time.

When the lighting systems turns off, Dibawatt automatically isolates, making itself ready to start a new cycle again.

WHAT HAPPENS IF THE SUPPLY VOLTAGE CHANGES?

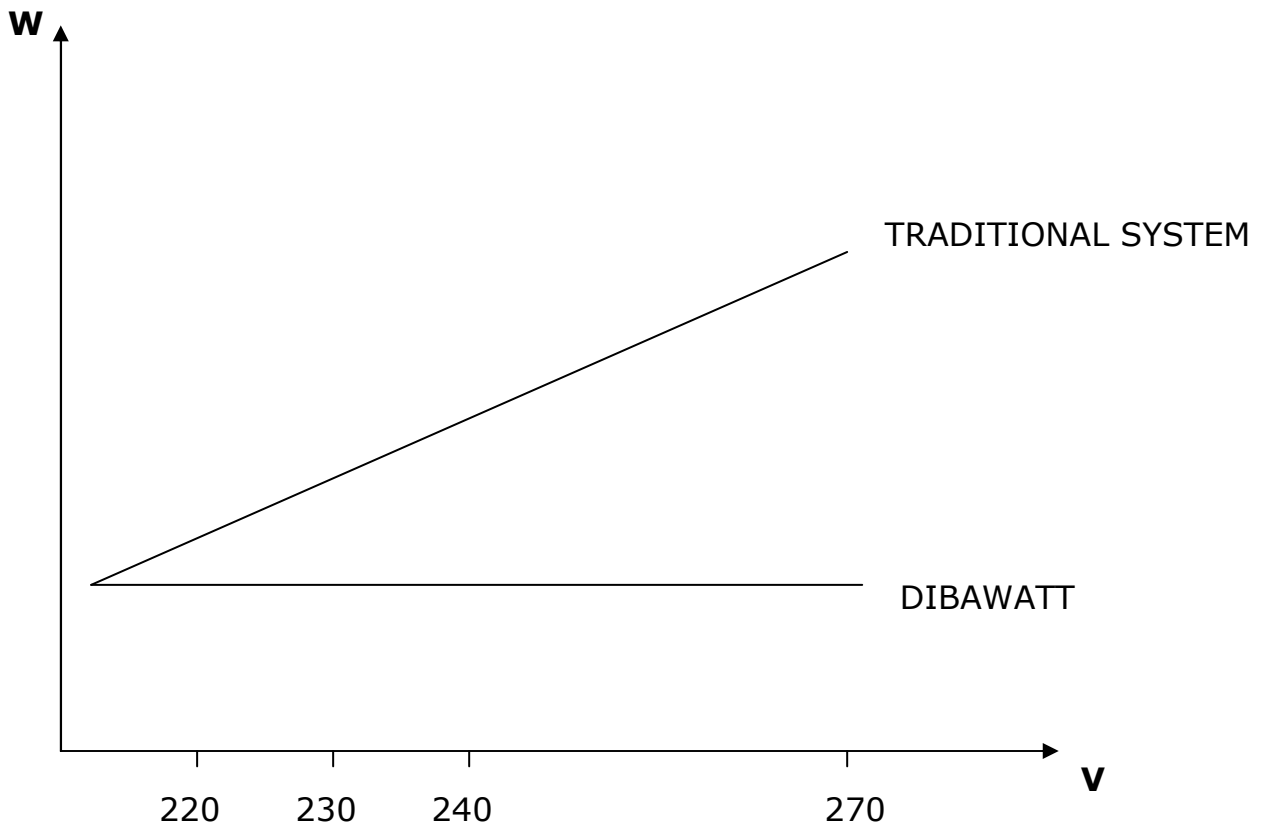


Figure 1: power assimilated by the two system (both of) during the voltage variance (in case of a 150W power supply)

Traditional ballast system increases the power together with the voltage increase. In opposite, DIBAWATT® maintains a stabilized power even during voltage variation.

This will ensure a constant illumination level, as can be easily observed in Figure 2.

