

## Economical illumination

EcoMaxx® energy saving devices for lighting systems and lamp stores offered by Tralec GmbH.

Due to the increasing energy prices it is worthwhile thinking about energy saving measures concerning many applications of lighting systems.



*In case of multi-storey car parks the payout time of EcoMaxx® is about one year.*

Lighting installations are considerable factors in energy consumption. In order to save costs there are two possibilities:

- A completely new concept and a new installation
- A modernisation and use of the existing lighting system

The first solution requires big investments and therefore results in long ROI times (Return of Invest). However, very often this is the only possibility especially if the electrical installation of the building has to be renewed.

The use and modernisation of the existing lighting system is the second possibility. This saves resources and is less expensive than a completely new installation. In the majority of cases the payout time is about two years.

### Tralec can offer a solution

Tralec can offer a walkthrough i.e. devices and engineering services are offered as one package in order to give the customer easily understandable details of investment and profit. Besides this, even before the installation of an energy saving device Tralec guarantees minimum savings of 20% after inspection of the lighting system. For the distribution of this system Tralec is searching for partners from the field of electrical engineering (please refer to „Sale of savings instead of hardware“). In case of lighting installations equipped with discharge lamps and conventional ballasts it is possible to save up to 35% of energy without modifying or replacing the installation itself.

### Fields of application

The voltage-drop device called „EcoMaxx® “ can be used for systems equipped with discharge lamps that are on for a long time, e.g. in multi-storey car parks, in department stores, in tunnels, for roadway lighting systems, in lamp stores, in DIY superstores, in open-plan offices, in hospitals or in school buildings.

Of course, for each application the required minimum intensities of illumination stipulated in standards and directives must be met.

Please find below two examples clearly showing possible savings:

**Savings achieved in a lamp store** with a power of 35 kW: depending on the voltage drop, between 20% and 35% of energy costs can be saved.

The following (real) data serve for calculation:

- ◆ Lighting hours: 3,800 h/a
- ◆ Power: 35 kW
- ◆ Current price: 0.1 € per kWh

This results in annual energy costs of 13,300 €. Thus, a saving of 25% of energy reduces the costs by 3,325 €. For the voltage-drop devices including installation the store-keeper pays about 5,700 €. Thus, the payout time of this device is about 1.7 years. Within five years after installation, the store-keeper will save 10,925 €.

This calculation does not include another saving possibility. In lamp stores, air conditioning systems have to dissipate the heat and therefore consume a lot of energy. If less heat is produced the energy consumption of the air conditioning system reduces.



*In lamp stores, savings of up to 35% can be achieved*

**Savings achieved in a multi-storey car park** with a power of 75 kW: there are also considerable saving possibilities:

The following example will show the savings achieved:

- ◆ Lighting hours. 8,760 h/a (24h operation time)
- ◆ Power: 75 kW
- ◆ Current price: 0.08 € per kWh

This results in annual energy costs of 52,560 €. A saving of 25% of energy reduces the costs by 13,140 €. The owner of the multi-storey car park has to pay about 12,390 € for the energy saving device including installation. Thus, the payout time of this device is about 0.9 years. Within five years after installation, the savings will amount to 53,310 €.

### **How it works**

By means of a special autotransformer, the „EcoMaxx® “ energy saving system reduces the voltage to the low level stipulated in the standard IEC 38. For all kinds of discharge lamps, this results in a considerable power reduction. Depending on the type of lamp the savings are between 18% and 35%. The voltage drops after warm-up period so that all lamps start at normal voltage. The systems are controlled by a microprocessor, work automatically and are maintenance-free.

### **Tralec GmbH**

Siemensstraße 12  
D - 21465 Reinbek

Germany  
Telephone: +49 (40) 727 57 - 08  
Telefax: +49 (40) 727 57 - 222

Email: [info@tralec.de](mailto:info@tralec.de)  
Homepage: [www.tralec.de](http://www.tralec.de) oder [www.ecomaxx.net](http://www.ecomaxx.net)