TE and TRM
Transformers for low-voltage halogen lamps
Enlightening your ideas

„I want a perfect solution whatever the application.“
We put all our energy into your light.

Tridonic has been involved in the quest for perfect light for more than 50 years. Our focus is on achieving better lighting with more and more advanced components, improving the reliability and safety of lighting systems still further and making a real contribution to climate protection. It is our unique expertise that enables us to achieve our prime objective, namely of helping you install lighting solutions that are unbeatable in terms of economy and functionality.

And what drives us above all is our great passion for light and lighting. In combination with our experience and in-depth knowledge of the lighting industry this passion has led to an ever expanding portfolio of products – from lighting components, lighting management systems and LEDs. And in combination with our service expertise it motivates us to support you in all phases of the project as a partner you can rely on. Wherever you are in the world. With a total of 2000 employees in 30 separate branch offices and a dense network of established sales partners, Tridonic is always nearby – at any of 73 locations throughout the world.

Facts and figures:
- 2000 employees
- Headquarters in Dornbirn
- 30 separate branch offices
- Worldwide presence
- More than 200 inventions
- More than 2000 patents
- New products account for more than 40% of the total
Quality
Tridonic is synonymous throughout the world for products that combine reliability with state-of-the-art functionality.

Expertise
Our in-depth know-how and extensive knowledge of the lighting industry make us your expert in all aspects of light and lighting.

Close customer contact
You are our focus. We want not only to supply you with the best possible equipment but also to support you every step of the way.
Lighting systems based on low-voltage halogen lamps are extremely popular. We are making sure that this technology keeps pace with developments in the 21st century. Our wide range of transformers provides reliable solutions for every application, whether you are looking for individual components or a complete system.

With Tridonic you are in safe hands. For many years we have been involved in the development and manufacture of transformers, and have maintained a valuable dialogue with our customers throughout this time. The result is a wide-ranging portfolio that offers innovative functions and the reliability of successful designs. Electronic transformers are offered in digital dimmable and phase-dimmable versions. A separate range of VIPER transformers has been developed for cost-effective solutions. Magnetic transformers are available with outputs from 50 to 500 VA and in various cross-sections.

▶ Luminaire installation or external mounting? From us you can expect a wide range of electronic and magnetic transformers for low-voltage halogen lamps on which you can rely.
Guaranteed reliable

Transformers that help you turn ideas into reality.

We see the world through the eyes of our customers, taking up the viewpoint of luminaire manufacturers, lighting planners and electrical contractors.

Reliable, functional, efficient and above all ideal for the specific project – that’s what a solution should be. With Tridonic you have a choice. We provide the answers to the problems of our times with a broad spectrum of product characteristics that are combined in the individual transformers to create packages with impressive benefits.
Magnetic transformers

Robust: Tridonic continues to offer magnetic transformers. For some application this is still the best solution. Customers can easily find the right products in our wide portfolio.

Technical details on each of these devices is given in our Product Catalogue

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Long life

Tridonic guarantees a “healthy supply” to lighting systems. By operating low-voltage halogen lamps in accordance with specifications the transformers extend the life of these lamps. The transformers themselves have an average life of 50,000 hours. This is thanks to the high-quality components, intelligent circuit design and extensive testing.

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All Inclusive

Tridonic offers you more than just high-quality products. With the right combination of advice, reliability and service we ensure the long-term success of a project. We support you in all phases of your project with practical services, providing the right logistics to meet individual requirements. Our ability to deliver means that even requests at short notice can be met.

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Economy starts at the installation stage

Every manual operation costs time and money. Products with an intelligent casing concept are the best remedy against unnecessary assembly and installation costs. Tridonic’s products offer many practical functions to simplify various manual operations or systematically eliminate them.

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Tried and tested

Fully automatic manufacturing processes certified to ISO 9001 ensure the consistent high quality of the transformers – all the components are subjected to 100% final inspection and safety testing. Tridonic transformers are ENEC certified, carry the CE mark and meet all the relevant European standards relating to safety, operation and electromagnetic compatibility (EMC).
Do you have very high and very varied requirements of a transformer? Then Tridonic bids you a very warm welcome. Our transformers are as varied as your requirements and projects.

### TE-DC 2 one4all

<table>
<thead>
<tr>
<th>Wattage range</th>
<th>Digital dimming</th>
<th>Standard transformer</th>
<th>Magnetic transformer</th>
</tr>
</thead>
<tbody>
<tr>
<td>100–300 VA</td>
<td>20–150 VA</td>
<td>20–105 VA</td>
<td>50–300 VA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimmable</th>
<th>1–100 %</th>
<th>1–100 %</th>
<th>1–100 %</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>switchDIM, DSI, DMI, DMI or 1–10 V or switches</td>
<td>With leading-edge and trailing edge phase dimmers</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Protection</td>
<td>Short-circuit protection, overtemperature shutdown, intelligent current monitor</td>
<td>Short-circuit protection, overtemperature and overload protection</td>
<td>Short-circuit protection, overtemperature and overload protection</td>
<td>Fuse possible</td>
</tr>
<tr>
<td>Features</td>
<td>Intelligent Voltage Guard (IVG)</td>
<td>corridorFUNCTION</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>DC mode acc. to EN50172</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Constant output voltage</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Simple installation</td>
<td>Surface-mounted version with toolless strain relief/terminal cover, cable length up to 20 m</td>
<td>Surface-mounted version with toolless strain relief/terminal cover available</td>
<td>Surface-mounted version with toolless strain relief/terminal cover available</td>
<td>Designed for surface-mounted applications – screw terminal/spring terminal</td>
</tr>
<tr>
<td>Casing</td>
<td>Double-sided terminals</td>
<td>Double-sided terminals</td>
<td>Double-sided or single-sided terminals</td>
<td>Terminals split (primary/secondary)</td>
</tr>
<tr>
<td>SELV</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
DALI Award
Renovation work on Cologne cathedral with its Gothic arches presented lighting designers and installers with an unusual challenge. The utmost care had to be taken in selecting and installing the lighting system. The problem was solved with a decentralised DALI supply concept. Thanks to space-saving DALI wiring, many of the existing cable ducts could be used. To create a large number of different lighting scenes, the 1000 luminaires were combined into 90 individually dimmable groups.

Tridonic supplied more than 500 TE 0105 one4all DALI transformers for this project which were integrated in the system together with other components. With this combination of transformers and ballasts we were once again able to demonstrate our outstanding system competence.
Functionality with added value

Energy savings and added convenience

corridorFUNCTION:
The simple and effective way to save energy
Devices with the corridorFUNCTION are a convenient and highly efficient way of reducing energy consumption in traffic zones or less frequented areas. Even a simple solution with a presence sensor has a great effect. A combination of daylight sensor and motion sensor lets you take full advantage of potential energy savings.

Payback thanks to energy efficiency:
free software
Tridonic has developed a useful software tool that enables you to calculate the amortisation period and the savings in costs and CO₂ emissions for corridorFUNCTION applications compared with conventional solutions. All you have to do is enter a few values. It is available for downloading free of charge.

Dimmable DALI:
Always versatile
Luminaires that can be addressed digitally and therefore individually have the great advantage that they can communicate with other Tridonic ballasts and lighting control systems free of any barriers. Emergency lighting can also be part of this intelligent system. DALI also offers the convenience of central control and operation.

What makes our DALI transformers different? A unique circuit concept stabilises the output voltage irrespective of the input voltage. The ASIC as the heart of the patented circuit ensures optimum low-loss control of the power section and all the protection and monitoring functions for overload, overtemperature and short-circuit.

▶ For the program for calculating possible savings go to www.corridorfunction.com, “Payback” menu

▶ At a glance:
  _ Dimmable luminaires are the platform for maximum efficiency
  _ Dynamic light increases comfort and flexibility
  _ Energy saving with corridorFUNCTION
  _ The simplest solution with a presence sensor
  _ Option of integrating daylight sensors
switchDIM:
**Efficient and cost-effective**

switchDIM was developed by Tridonic’s research department. It is a function that enables the lights to be switched and dimmed using mains voltage. This means there is no need for additional control lines. This has a positive effect on material and labour costs. What arguments can you use to convince consumers? Controlling the luminaires is simplicity itself.

As the inventors of switchDIM, we continue to develop this successful control technology. In its most recent update switchDIM was given a “memory”. This is used, among other things, for storing the dimming value in the event of interruptions in the power supply. This memory effect enables the transformer to restore the lamp to its previous operating state when power returns. Another feature of switchDIM is its choice of two fade rates.

**Lighting control and lighting management: Anything is possible**

You can combine all dimmable components from Tridonic directly with switches, daylight sensors or presence sensors. Integration in higher-ranking control systems such as DSI and DALI is just as easy. DALI technology assigns a separate address to each connected component so each luminaire can be individually dimmed or addressed in a group. In contrast, a DSI system supplies the same information to all the luminaires connected to a control line. The result is a uniform dimming level for all the luminaires on this control line.

**Range of control options:**
- Digital dimmable transformers with DALI or DSI interfaces
- Standard leading-edge and trailing edge phase dimmers
- Simple switch operation with switchDIM
- Rotary potentiometer with analogue interface (1–10 V)
Ecological awareness is sweeping through the world of lighting

We are living at a time when action is needed. New ideas and new concepts for protecting our environment are needed now more than ever before. Ideas that we at Tridonic have been putting into practice for a long time and that we are constantly improving to safeguard our future.

Small changes with a big impact
In the lighting industry in particular it is very easy to save energy with low costs, small design changes and high return on investment. We think such an approach deserves a name: ecolution.

True economy
With our innovative products and technologies we are actively promoting the development and application of economical lighting concepts based on low-voltage halogen lamps. These small light sources focus their light on a relatively small area. Even small objects can therefore be accurately illuminated with no great scatter losses so the energy is used efficiently.

Return on investment as a factor for the environment
A good return on the investment in products is essential for protecting natural resources. The greater the efficiency and the longer the life the lower the costs for energy, maintenance and disposal. This is why the following aspects were especially important to us when we designed our transformers. Operating low-voltage halogen lamps in accordance with the manufacturer’s specifications is the best way to ensure long lamp life. The transformers themselves achieve an average life of 50,000 hours.

Dimming for greater energy efficiency
Wit the option of dimming via DALI/DSI or mains voltage, Tridonic transformers are paving the way for massive energy savings. Power and therefore energy can be saved as soon as full output is no longer required. Dimmable transformers reduce energy consumption by as much as 80% by combining high lamp efficiency with low intrinsic consumption. With their intelligent functions they create the basis for the efficient use of light.

Protecting resources begins with production and packaging
Tridonic also places great emphasis in the efficient use of natural resources at the production and packaging stage. For example, we are streamlining our logistics costs by operating production facilities in several regions with the focus on Europe. And the best thing is that the quality of Tridonic components is the same throughout the world. The high European standards apply at all the company’s production sites.

ejolition stands for:
- protection of the environment and climate
- savings in natural resources
- use of recyclable materials
- increased return on investment
- eco-friendly production and packaging
At Tridonic our daily quest is to create perfect light. 2000 experts worldwide are working tirelessly to control, regulate and operate lighting in exactly the way you want it. And we have been doing this for more than 50 years with enormous passion and in cooperation with you. We devote all our energy to your light.

Go to www.tridonic.com to find your personal contact at Tridonic.

Further information and ordering data:

Product catalogue


Certificates at www.tridonic.com, “Technical Information” menu

FLASH customer magazine