

VGS Marketingservice GmbH Bärensteiner Str. 23/25 01277 Dresden, Germany	<b>Installation and operating manual</b> for <b>MaxxLuxx</b> ® -products	
Status 15.09.2016		

Please make sure that you comply with the following details concerning the utilization of our products to guarantee a successful, safe and long living operation.

## A. **MaxxLuxx**® - lighting objects

### 1. Description of the product

**MaxxLuxx**® -products are lighting objects made of acrylic glass or other materials with integrated LEDs that are molded into their position with a flexible casting resin protecting them against adverse environmental impact.

**MaxxLuxx**® -lighting objects are suitable for indoor as well as outdoor use. At a very minimum they meet the standards of IP 65. Up to IP 68 is possible.

**MaxxLuxx**® lighting objects can be ordered separately and pre-installed on a substructure for instance aluminum profiles, stainless steel pipes, Dibond hoods etc.

### 2. Intended uses

01. **MaxxLuxx**® -lighting objects are designed for use as lighting sources as well as for advertising and decoration purposes. If you are planning to use them for any other purposes please contact us to discuss the details. If the objects are used in applications other than their intended uses or if they are not used in compliance with the instructions, this may void their warranty coverage or the manufacturer's guarantee.

02. The lighting objects are designated specifically for the above-described purposes and are therefore not suitable toys for children. Consequently, these objects must be kept out of children's reach.

### 3. Safety warnings

01. Make certain that electrical connections are installed exclusively by a professional electrician in accordance with the enclosed wiring diagram so that compliance with all safety requirements is ensured.

02. It is prohibited to pull any of the cables! Never carry the single lighting objects on their connection cable. If the connection cable molded into the lighting object should not be fixed properly, please contact us prior to switching on the lighting installation.

03. Please observe the standard ESD safety requirements for LEDs during installation and usage.

04. We recommend the use of power supplies (converters) proposed by VGS to connect your lighting objects to the mains. Doing so will prevent malfunctions or damages. Furthermore, all our power supplies are regulated individually to guarantee an optimal illumination and maximum durability of the used LEDs. At any rate, you will have to use only power supplies (converters) that comply with the applicable safety regulations. Please be aware that any improper installation, improper usage, incompatible power supplies (converters) or any interference with the mechanical or electrical structures may void the warranty respectively guarantee entitlements and may also result in serious safety problems.

05. The cable connections between lighting objects and power supply (converter) must be insulated to expertly protect them against penetration by water. They also have to be installed according to the standards. For outdoor usage, wires according to the standards have to be used. Among other things, they have to provide UV protection.

VGS Marketingservice GmbH Bärensteiner Str. 23/25 01277 Dresden, Germany	<b>Installation and operating manual</b> <b>for <i>MaxxLuxx</i>®-products</b>	
Status 15.09.2016		

06. When you install the objects, please keep in mind that acrylic glass does expand differently when exposed to heat (or shrinks at a different ratio when exposed to cold temperatures) than other materials, such as metal, wood, concrete, rock, etc. and that the resulting tension has to be prevented. Especially when you mount – for instance – larger acrylic objects onto metal or rock foundations, you will have to factor in the different expansion coefficients of acrylics, metals or rock/concrete. Failure to do so may in some cases cause tension cracks in the lighting objects (for example in the mounting areas), which may lead to electrical as well as mechanical problems and subsequently to the failure of the lighting objects as well as other significant defects. Please make certain that the objects are mounted in such a manner that the different levels of expansion are accommodated (for instance by drilling long holes).
07. Also, make sure that water cannot accumulate between the elements made of acrylic glass and the mounting foundation (or the fixation).

#### 4. Installation and use

01. Always use the existing mounting points on the lighting objects. *MaxxLuxx*®-lighting objects have tapped blind holes on the back. To find their exact location and dimensions, check the installation template or installation file. Please be aware that our lighting objects need to be installed on a level surface. If this requirement is not fulfilled, for example during the installation on the curved side of a ship, you have to make sure that the differences in distance are compensated by appropriate measures.
02. Important: the drilling of additional holes or the modification of existing holes in the lighting objects may result in irreparable damages to the lighting objects and to the forfeiture of warranty or guarantee entitlements.
03. If you would like to use different fixation options than the ones defined by us, you will have to clarify the respective technical requirements.
04. The lighting objects are delivered without connection terminals. Please pay attention to the respective identification of the wires. The regulations applicable to the small voltage protection classification (SELV) apply to these objects. This means that you can for instance establish soldered connections. The insulation will have to be provided with a shrinkage hose with interior adhesive or a pressed connection using a linear connector (sourced e.g. from vendor Klauke). The insulation of the linear connection requires shrinking.
05. Please comply strictly with the instructions in the wiring diagram, which is enclosed with every shipment. If you should not have the wiring diagram on hand, please contact us prior to connecting the lighting objects. If you are planning to connect multiple lighting objects, make sure you install the power supply (converter) in a central location and as close to the lighting objects as possible. Choose cables that are preferably of the same length for all lighting objects as this will prevent brightness variations between the single lighting objects.
06. Diameter and type of the cable leading from the power supply (converter) to the lighting objects must comply with the respective requirements and the applicable international standards. If you are planning to use very long cables, please ask us for the necessary cable diameter.
07. Make sure you neither damage the power supplies (converters) nor the input/output cables nor re-use any damaged components.

VGS Marketingservice GmbH Bärensteiner Str. 23/25 01277 Dresden, Germany	<b>Installation and operating manual</b> <b>for <i>MaxxLuxx</i>® -products</b>	
Status 15.09.2016		

08. To prevent hazards, only the manufacturer, the manufacturer's service center or a professional electrician must replace damaged wires of the lighting objects.
09. Never deactivate any safety installations of the power supply manufacturer, such as protective conductor connectors.
10. When you install the power supplies (converters), pay attention to the specified protection class. The usable temperature range of the power supplies (converters) recommended by us usually ranges from -25°C to +50°C at 230 V AC.
11. If you are using power supplies (converters) with nominal input voltages of less than 230 V AC, please contact us directly to find out about the applicable temperature ranges.
12. Power supplies (converters) must not be installed in areas where water may accumulate. Make sure the air circulation is strong enough so that the heat can escape.

#### 5. Installation of substructures on/in buildings

01. All standardized metal substructures are exclusively produced based on the regulations set forth in EN 1090 and are designed specifically for the professional installation on solid walls (masonry, concrete) as well as for wind zone 2.
02. If the wall materials do not comply with the above or if you are planning to install the objects in wind zones 3 or 4 you will have to share this information with us prior to placing the order.
03. From our perspective, it is your obligation to comply with the statutory requirements pursuant to EN 1090 as well as all applicable laws, regulations and standards if you are ordering a metal substructure for the lighting objects you have ordered from us, given that VGS is principally neither aware of the general local conditions nor of the special requirements with regard to the installation of the substructure to the respective undergrounds.
04. Please also keep in mind that any modifications of the substructures delivered by us may have a grave impact on the stability and/or static effectiveness of the design. Once again, it is your responsibility to comply with the applicable regulations.
05. Consequently, any information provided by our staff members with regard to the respective installation of substructures on e.g. walls, can only be non-binding recommendations. If you should need binding information from us please clarify these requirements with our staff in writing in conjunction with the submission of your inquiry.

#### 6. Operation and maintenance

01. Please comply with the mandated auditing and inspection deadlines for electrical devices and equipment. Regular maintenance/inspection of the objects is recommended.

VGS Marketingservice GmbH Bärensteiner Str. 23/25 01277 Dresden, Germany	<b>Installation and operating manual  for <b>MaxxLuxx</b>® -products</b>	
Status 15.09.2016		

02. Please also keep in mind that LEDs reach the end of their useful lives a lot sooner if they are being operated at excessively high temperatures (e.g. in the summer exposed to the direct radiation of the sun). Consequently, the lighting objects have to be operated with a dimmer switch, a timer or both.

## 7. Cleaning

Regular cleaning of the objects is recommended as needed. Do not clean paint and acrylic glass aggressively and do not use strong cleansers such as ethanol or steel wool. Before you use any cleansers you will have to test the compatibility of the materials on a concealed location. We recommend a mild soap for cleaning.

## 8. Troubleshooting

Problem	Solution
The lighting objects do not light.	Check whether the voltage on the power supply (converter) is 230 V.
	Check the secondary voltage of the power supply (converter).
The lighting objects are blinking.	The dimensioning of the power supply (converter) is incorrect.

Please contact us if you should have any problems with your lighting objects. After a root cause analysis, we will decide whether a repair can be performed on site or the objects have to be returned to VGS.

## 9. Disposal

Make sure to comply with the regional disposal standards for lighting products.

## 10. Miscellaneous

A wiring diagram for **MaxxLuxx**®-lighting objects and power supplies (converters) is enclosed with every shipment.

## B. Unlit objects

All previous points also apply for unlit objects with the exception of the electrical and photometric references.

## C. Channel letters, illuminated box signs, projecting signs etc. (hereinafter referred to as housing object)

### 1. Description of the product

Our housing objects are manufactured from e.g. aluminum, sandwich materials or stainless steel in combination with plastics such as polymethylmethacrylate (PMMA), polyethylene terephthalate (PET), polycarbonate (PC) etc. and are illuminated with LEDs. The housing objects are suitable for indoor as well as outdoor use and comply with the degree of protection IP 43.

VGS Marketingservice GmbH Bärensteiner Str. 23/25 01277 Dresden, Germany	<b>Installation and operating manual</b> for <b>MaxxLuxx</b> ®-products	
Status 15.09.2016		

The housing objects can be ordered separately and pre-installed on a substructure for instance aluminum profiles, stainless steel pipes, Dibond hoods etc.

## 2. Intended use

Conform to **MaxxLuxx**®-products.

## 3. Safety warnings

Conform to **MaxxLuxx**®-products.

## 4. Installation and use

Conform to **MaxxLuxx**®-products.

## 5. Installation of substructures on/in buildings

Conform to **MaxxLuxx**®-products. Please use the fixation points on the housing objects if existent. The housing objects can be delivered without connecting terminals with stripped wire ends if agreed upon beforehand.

## 6. Operation and maintenance

Conform to **MaxxLuxx**®-products.

## 7. Cleaning

Conform to **MaxxLuxx**®-products.

## 8. Troubleshooting

Conform to **MaxxLuxx**®-products.

## 9. Disposal

Conform to **MaxxLuxx**®-products.

## 11. Miscellaneous

Conform to **MaxxLuxx**®-products.