

Installation and Wiring Instructions for Electronic Ballast ELXe 180UV.254 (VS Ref.-No.: 188862 und 188863)

Standards

EN 55015	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment
EN 61000-3-2	Electromagnetic compatibility (EMC) – Part 3: Limits – Main Section 2: Limits for harmonic current emission (equipment input current ≤ 16 A per phase)
EN 61547	Specification for equipment for general lighting purposes – EMC immunity requirements
EN 61347-2-3	Lamp control gear – General and safety requirements

Type

Electronic Ballast ELXe 180UV.254

Technical Specifications

Voltage	$U_{NAC} = 220\text{ V} - 240\text{ V} (\pm 10\%)$
Frequency	$f = 50$ to 60 Hz
Dimensions H x W x L	40 x 70 x 250 mm
Power Factor	> 0.95
Efficiency	$> 90\%$
Ambient Temperature	$t_a = +5$ to $+40$ °C
Reference Point Temperature	$t_c = +85$ °C
Lamps	2 x T12 UV lamps with 180W (reference lamps: Ergoline Dynamic Power 100-200W)
Reliability	Given a reference point temperature $t_c < 85$ °C, the ballast has a service life of 50,000 hours with a max. failure rate of 10 %. Failure rate $< 0.2\%$ / 1,000 hours (given a Ergoline Dynamic Power 100-200W reference lamp)

Coordinates and Diagram of t_c Point

The temperature reference point (t_c) is situated on the side of the heat sink that faces the nearest PCB edge (heat sink is mounted vertically and off-centre on the PCB). The t_c point is clearly labelled in Fig. 1 below.

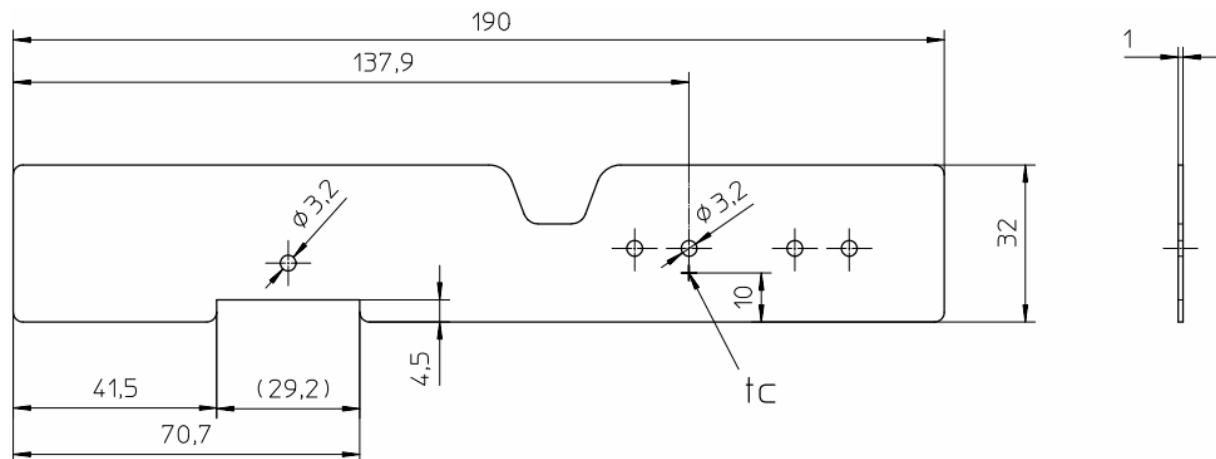


Fig. 1: t_c Point

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Wiring

The power supply, electronic ballast and lamp must be connected in accordance with the appropriate circuit shown in Fig. 2. The (metal) luminaire/solarium casing must be connected to the protective earth conductor. Furthermore, the electronic ballast must be earthed using a screw connection with a spring washer or similar. To ensure compliance with radio disturbance limits, power cables must not be wired in parallel with HF-carrying lamp cables, maximum clearance must be ensured and any cables marked with a * must be kept short. Ideally the lamp pins should be connected within the lampholder (shunted lampholders for minimal wiring effort).

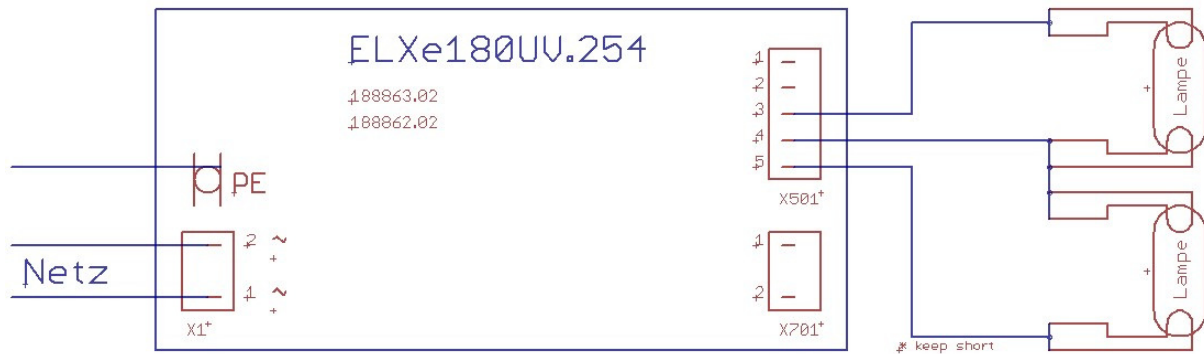


Fig. 2: Diagram

Operating Conditions / Operating States

Cooling	Active cooling must be used to ensure the max. temperature at the tc point is not exceeded.
Switching Off	Ballasts must be switched off before any lamps are exchanged. Defective lamps or any attempt to replace a lamp while the ballast is in operation will cause the electronic ballast to switch off. In the case of a defective lamp, the electronic ballast will only restart once the lamp has been replaced and the ballast has been briefly disconnected and then reconnected to the mains.

System Components

The ELXe100UV.254 electronic ballast is specified for use with an effective operating voltage of 500 V (U-OUT, in accordance with DIN EN 61347-2-3). As a result, all components (cables and lampholders) must be approved for a permanent operating voltage of U-OUT = 500 V.

Terminal (for 188863.02)	<p>In and Out: WAGO Multi-connector system MIDI (or compatible systems made by other manufacturers) Operating voltage: up to 500 V (pollution degree 2) Test voltage: 4 kV Male plug on the PCB</p> <p>The lead is connected using the corresponding female socket. Wire cross-section: 0.8–2.5 mm² (given a multipoint socket connector with a CAGE CLAMP – WAGO connection or compatible systems made by other manufacturers)</p>
Terminal (for 188862.02)	<p>In: 2-wire strip terminal, 235 series Operating voltage: up to 500 V (pollution degree 2) Test voltage: 4 kV Wire cross-section: 2 x 0.25–0.75 mm²</p> <p>Out: Single wire strip terminal, 235 series Operating voltage: up to 500 V (pollution degree 2) Test voltage: 4 kV Wire cross-section: 0.5–2.5 mm²</p>

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Systemkomponenten

Lampholder e.g.: VS Ref. No. 100591 or 100593
Nominal value: 2 / 500

Notes

A low-ohmic connection must be ensured between the protective earth conductor and the casing. Without ensuring a suitable protective earth conductor connection, full device functionality as well as its operation in accordance with EMC directives cannot be guaranteed.

A maximum of three devices can be bridged and supplied via a single conductor on the input side.

It is recommended that an automatic cutout with a "C"-type tripping characteristic is installed upstream within the EB's power supply lines. A maximum of 6 devices (6 lines x 3 devices) can be connected to a C16A device.

To prevent the destruction of sensitive electronic components, the EB must be installed in an ESD-protected area.

When connecting the stud bolt, care must be taken not to exceed the maximum stud torque (0.8 Nm) as overtightening could result in fracturing the PCB.

Vossloh-Schwabe Deutschland GmbH accepts no liability for mechanical damage caused during installation or for any damage caused by incorrect (and/or omitted) wiring.

Care must further be taken during installation to ensure sufficient creep and air distances between live metal parts on the PCB and other metal elements of the tanning bed. No warranty is extended for damage to EBs that is caused by electrical flashovers to external components.

Electronic ballasts for fluorescent lamps							Lamp				System
Type	Ref. No.	Voltage 50/60 Hz V ± 10 %	Mains current A	Ambient temperature ta [°C]	Casing temperature tc max. [°C]	Weight g	Numbers	Type	Nominal lamp rating W	EB lamp rating W	EB power consumption EVG (W)
ELXe 180UV.254	188862.02	220-240	1,10-1,93	+5 bis +40	+85	335	2	T12 UV	180	2x180	290 bis 382
ELXe 180UV.254	188863.02	220-240	1,10-1,93	+5 bis +40	+85	335	2	T12 UV	180	2x180	290 bis 382

Please note: this is an electronic device that must be handled with care.