CV 48 V

EasyLine 48 V C-L

186691, 186692

Typical Applications

- Shop lighting for 48 V systems
- Furniture lighting

EasyLine 48 V C-L

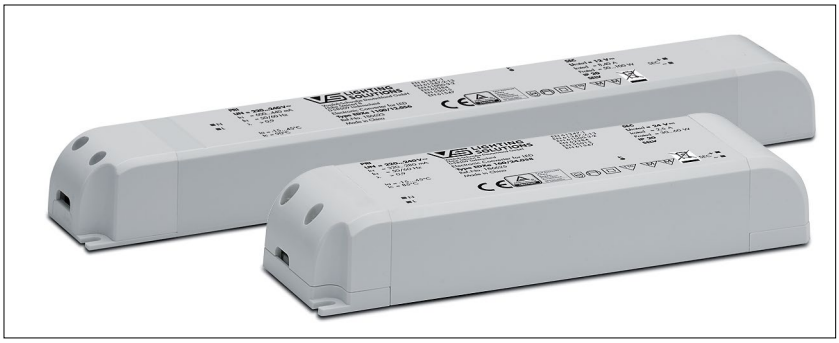
- **VERY LOW RIPPLE CURRENT: < 3%**
- **FOR CONDUCTOR CROSS SECTION: UP TO 2.5 MM²**
- **WITH INTEGRATED CORD GRIP FOR INDEPENDENT OPERATION**
- **SELV**
- **SUITABLE FOR BUILT-IN INTO FURNITURE**
- **LONG SERVICE LIFE: UP TO 50,000 HRS.**
- **PRODUCT GUARANTEE: 5 YEARS**

5 YEARS GUARANTEE

LIGHTING SOLUTIONS

Vossloh-Schwabe Deutschland GmbH · Stuttgarter Straße 61/1 · 73614 Schorndorf · Germany · Phone +49 7181/8002-0 · Fax +49 7181/8002-122 · www.vossloh-schwabe.com

EasyLine 48V C-L



Product features

- Compact casing shape
- For use in applications with medium and high capacity range of up to 75 W and 120 W

Electrical features

- Mains voltage: 220–240 V ±10%
- Mains frequency: 50–60 Hz
- Screw terminals: 0.5–2.5 mm²
- Power factor at full load: 0.95

Safety features

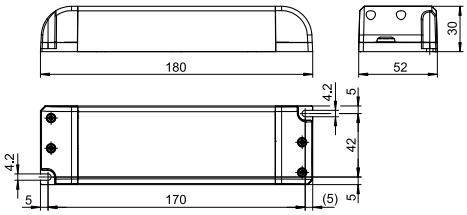
- Protection against transient main peaks
- Electronic short-circuit protection
- Overload protection
- Protection against "no load" operation
- Degree of protection: IP20
- Protection class II
- SELV

Packaging units

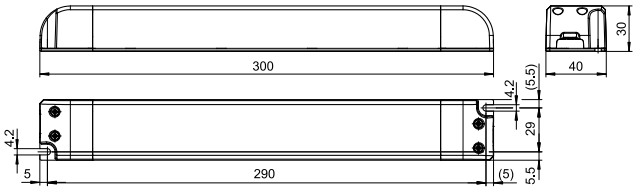
Ref. No.	Packaging unit		
	Pieces per box	Boxes per pallet	Weight g
186691	20	100	318
186692	20	70	410

Dimensions

- Casing shape: K55.1
- Ref. No.: 186691
- Length: 180 mm
- Width: 52 mm
- Height: 30 mm



- Casing shape: K60
- Ref. No.: 186692
- Length: 300 mm
- Width: 40 mm
- Height: 30 mm



Applied standards

- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 61000-3-2
- EN 62384
- EN 55015

Product guarantee

- 5 years
  for operation at recommended operation temperature (see table for expected service life time on the next page)
- The conditions for the Product Guarantee of the Vossloh-Schwabe Group shall apply as published on our homepage (www.vossloh-schwabe.com).
  We will be happy to send you these conditions upon request.

LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH · Stuttgarter Straße 61/1 · 73614 Schorndorf · Germany · Phone +49 7181/8002-0 · Fax +49 7181/8002-122 · www.vossloh-schwabe.com

Electrical characteristics

Max. output W	Type	**Ref. No.**	Voltage 50–60 Hz V	Mains current mA	Inrush current A / µs	Current output DC mA (±5%)	Voltage output DC (V)	THD %	Efficiency at full load % (230 V)	Ripple 100 Hz %
75	EDXe 175/48.068	**186691**	220–240	380–350	37 / 220	0–1563	48	6	90	< 1
120	EDXe 1120/48.069	**186692**	220–240	600–550	48 / 170	0–2500	48	10	91	< 3

Maximum ratings

Exceeding the maximum ratings can lead to reduction of service life or destruction of the converters.

Ref. No.	Ambient temperature range °C min.	°C max.	Operation humidity range % min.	% max.	Storage temperature range °C min.	°C max.	Storage humidity range % min.	% max.	Max. operation temperature at t_c point °C	Degree of protection
186691	–15	+45	20	60	–40	+80	5	95	+85	IP20
186692									+80	

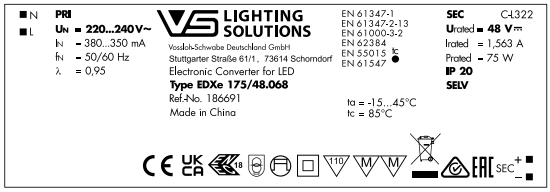
Expected service life time

at operation temperatures at t_c point

Operation current	Ref. No. 186691		186692	
Max.	75 °C*	85 °C	70 °C*	80 °C
hrs.	50,000	30,000	50,000	30,000

* recommended operation temperature

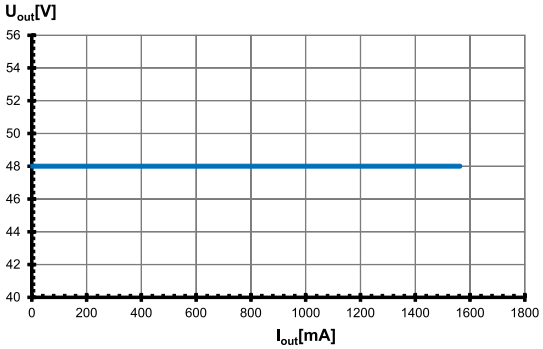
Product labels



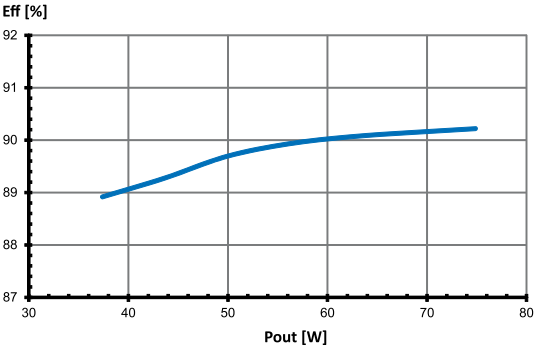
LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH · Stuttgarter Straße 61/1 · 73614 Schorndorf · Germany · Phone +49 7181/8002-0 · Fax +49 7181/8002-122 · www.vossloh-schwabe.com

Typ. performance graphs for 186691 / Type EDXe 175/48.068

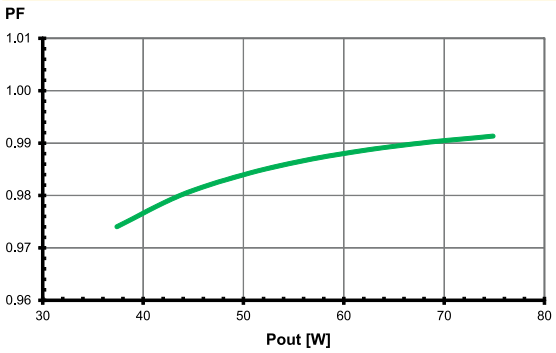
Working area



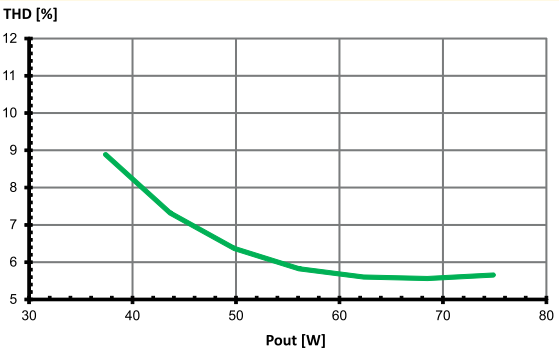
Efficiency



Power factor

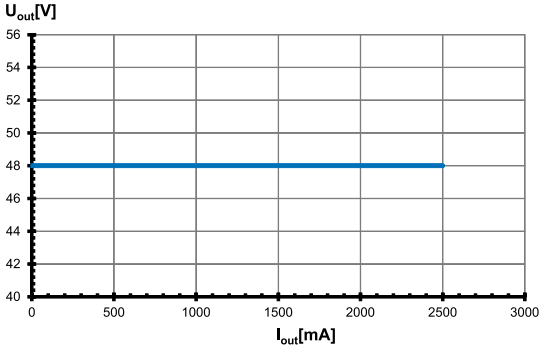


Total harmonic factor (THD)

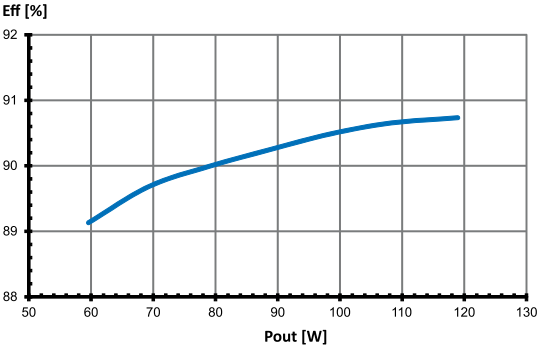


Typ. performance graphs for 186692 / Type EDXe 1120/48.069

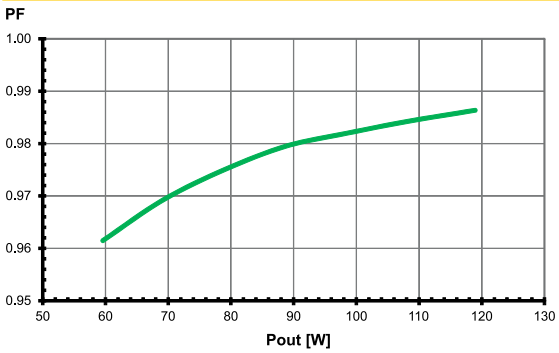
Working area



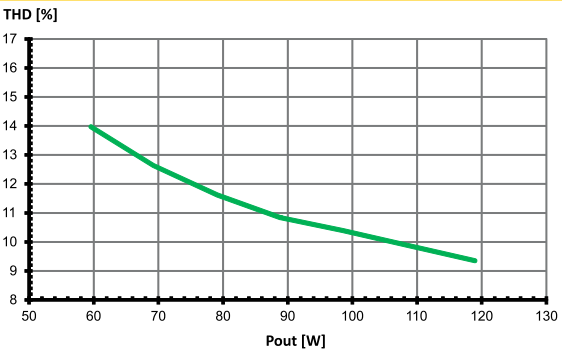
Efficiency



Power factor



Total harmonic factor (THD)



LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH · Stuttgarter Straße 61/1 · 73614 Schorndorf · Germany · Phone +49 7181/8002-0 · Fax +49 7181/8002-122 · www.vossloh-schwabe.com

Safety functions

- Transient mains peaks protection:
  Values are in compliance with EN 61547 (interference immunity).
  Surges between L/N–PE: up to 1 kV
- Short-circuit protection:
  The control gear is protected against permanent short-circuit with automatic restart function.
- Overload protection: The control gears have overload protection. Please check before switch-on mains power supply that the selected LED load is suitable (see Electrical Characteristics on data sheet).
- No load operation: The control gear is protected against no load operation (open load).
- If any of the above mentioned safety functions will be triggered, disconnect the control gear from the power supply then find and eliminate the cause of the problem.

LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH · Stuttgarter Straße 61/1 · 73614 Schorndorf · Germany · Phone +49 7181/8002-0 · Fax +49 7181/8002-122 · www.vossloh-schwabe.com

Assembly and Safety Information

Installation must be carried out under observation of the relevant regulations and standards. Installation must be carried out in a voltage-free state (i.e. disconnection from the mains). The following advices must be observed; non-observance can result in the destruction of the LED drivers, fire and/or other hazards.

Mandatory regulations

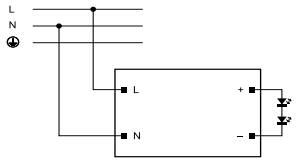
- DIN VDE 0100
- EN 60598-1

Mechanical mounting

- Mounting position: Built-in: Any position inside a luminaire is allowed
  Independent application: LED drivers are allowed to use for independent applications.
- Mounting location: LED drivers are designed for integration into luminaires or comparable devices.
  Independent LED drivers do not need to be integrated into a casing.
  Installation in outdoor luminaires: degree of protection for luminaire with water protection rate ≥ 4 (e.g. IP54 required).
- Degree of protection: IP20
- Clearance: Min. 0.10 m from walls, ceilings and insulation
- Surface: Solid and plane surface for optimum heat dissipation required.
- Heat transfer: If the LED drivers is destined for installation in a luminaire. sufficient heat transfer must be ensured between the LED drivers and the luminaire casing.
  LED drivers should be mounted with the greatest possible clearance to heat sources.
  During operation. the temperature measure at the LED driver's t_c point must not exceed the specified maximum value.
- Fastening: Using M4 screws in the designated holes
- Tightening torque: 0.2 Nm

Electrical installation

- Connection terminals: Screw terminals for rigid or flexible conductors with a section of 0.5–2.5 mm² for independent operation
- Stripped length: 9–10 mm
- Wiring: The mains conductor within the luminaire must be kept short (to reduce the induction of interference).
  Mains and lamp conductors must be kept separate and if possible should not be laid in parallel to one another.
- Polarity: Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- Through-wiring: Is not allowed
- Secondary load: The sum of forward voltages of LED loads is within the tolerances which are mentioned in the Electrical Characteristics on the data sheet.
- Wiring diagram:



Selection of automatic cut-outs for VS LED drivers

- Dimensioning automatic cut-outs
  High transient currents occur when an LED driver is switched on because the capacitors have to load. Ignition of LED modules occurs almost simultaneously. This also causes a simultaneous high demand for power. These high currents when the system is switched on put a strain on the automatic conductor cut-outs, which must be selected and dimensioned to suit.
- Release reaction
  The release reaction of the automatic conductor cut-outs comply with VDE 0641, part 11, for B, C characteristics. The values shown in the following tables are for guidance purposes only and are subject to system-dependent change.
- No. of LED drivers
  The maximum number of VS LED drivers applies to cases where the devices are switched on simultaneously. Specifications apply to single-pole fuses. The number of permissible drivers must be reduced by 20% for multi-pole fuses. The considered circuit impedance equals 400 mΩ (approx. 20 m [2.5 mm²] of conductor from the power supply to the distributor and a further 15 m to the luminaire).

Type	**Ref. No.**	Automatic cut-out type and possible no. of VS drivers pcs.		
Automatic cut-out type B		B 10 A	B 13 A	B 16 A
EDXe 175/48.068	**186691**	9	12	15
EDXe 1120/48.069	**186692**	9	12	15
Automatic cut-out type C		C 10 A	C 13 A	C 16 A
EDXe 175/48.068	**186691**	16	21	26
EDXe 1120/48.069	**186692**	14	19	23

– To limit capacitive inrush currents the current carrying capacity of each circuit breaker (fuse) can be increased by a factor of 2.5 with the help of our ESB (Ref. No.: 149820, 149821, 149822) inrush current limiters.

LIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH · Stuttgarter Straße 61/1 · 73614 Schorndorf · Germany · Phone +49 7181/8002-0 · Fax +49 7181/8002-122 · www.vossloh-schwabe.com