# CC COMPACT

## EASYLINE SIMPLE FIX MINI SLIM 100 V

**187601, 187602, 187603, 187604**

**Typical Applications**

Built-in in or independent version for

- Shop lighting
- Downlights
- Residential lighting

**EasyLine Simple Fix Mini Slim 100 V**

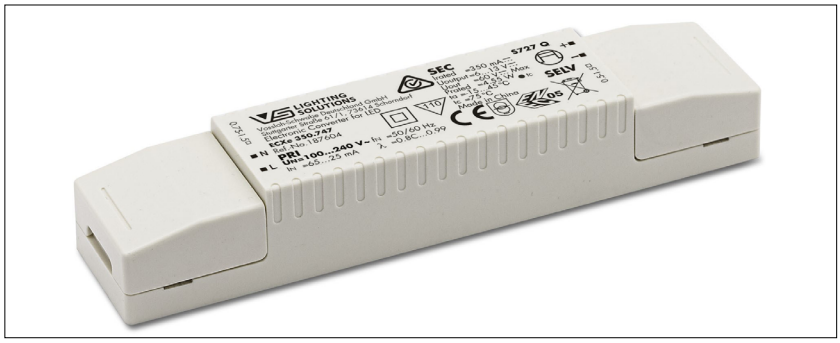
- **WIDE INPUT VOLTAGE RANGE: 100–240 V**
- **VERY COMPACT SHAPE**
- **LONG SERVICE LIFE: UP TO 100.000 HRS.**
- **PRODUCT GUARANTEE: 5 YEARS**

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 Simple Fix Mini Slim 100 V



### Product features
- Compact casing shape
- Fixed output current

### Electrical features
- Mains voltage: 100–240 V ±10%
- Mains frequency: 50–60 Hz
- Push-in terminals: 0.5–1.5 mm²
- Power factor at full load: see table "Electrical characteristics" on page 4
- Max. operation voltage without load ($U_{max.}$): 60 V
- Secondary side switching of LED modules is not allowed.

### Safety features
- Protection against transient main peaks between L and N up to 1 kV
- Electronic short-circuit protection
- Overload protection
- Protection against "no load" operation
- Degree of protection: IP20
- Protection class II
- SELV
- SVM: < 0.4
- PstLM: < 1

### Packaging units

| Ref. No. | Packaging unit | | |
|---|---|---|---|
| | Pieces per box | Boxes per pallet | Weight g |
| 187601 | 50 | 120 | 62 |
| 187602 | 50 | 120 | 62 |
| 187603 | 50 | 100 | 76 |
| 187604 | 50 | 120 | 63 |

### Product guarantee
- 5 years
  for operation at recommended operation temperature (see table for expected service life time on page 4)
- 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.

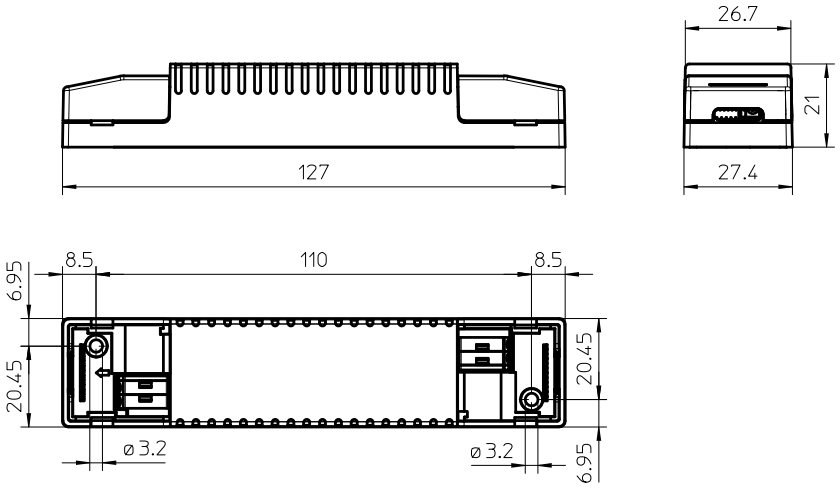
IP20 · SELV · OVERLOAD PROTECTION · 0% NO LOAD OPERATION · 30 000 hours Min. Service Lifetime · Guarantee 5 years

### Dimensions

| Ref. No. | Casing | Length a (mm) | Width b (mm) | Height c (mm) |
|---|---|---|---|---|
| **EasyLine Simple Fix Mini Slim 100 V** | | | | |
| All types | K120 | 127 | 27.4 | 21 |

### Used standards
- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 61000-3-2
- EN 62384
- EN 55015

### Drawing





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### 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 at full load % (230 V) | Efficiency at full load % (230 V) | Ripple 100 Hz % |
|---|---|---|---|---|---|---|---|---|---|---|
| 9 | ECXe 700.744 | **187601** | 100–240 | 98/45 | 14.4/198 | 700 | 6–13 | 15 | 87 | <3 |
| 15 | ECXe 350.745 | **187602** | 100–240 | 155/70 | 17.8/182 | 350 | 16–42 | 12 | 88 | <3 |
| 21 | ECXe 500.746 | **187603** | 100–240 | 225/100 | 21.4/218 | 500 | 16–42 | 12 | 88 | <3 |
| 5 | ECXe 350.747 | **187604** | 100–240 | 51/25 | 12.6/174 | 350 | 6–13 | 12 | 83 | <3 |

### Maximum ratings

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

| Ref. No. | Ambient temperature range | | Operation humidity range | | Storage temperature range | | Storage humidity range | | Max. operation temperature at $t_c$ point | Degree of protection |
|---|---|---|---|---|---|---|---|---|---|---|
| | °C min. | °C max. | % min. | % max. | °C min. | °C max. | % min. | % max. | °C max. | |
| 187601, 187602, 187604 | –15 | +45 | 10 | 90 | –40 | +85 | 5 | 95 | +75 | IP20 |
| 187603 | | | | | | | | | +85 | |

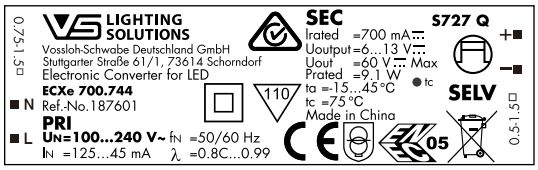
### Expected service life time

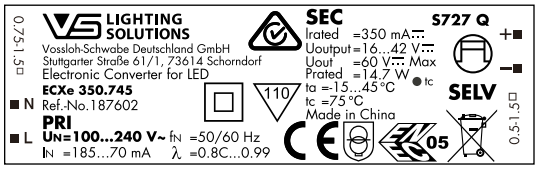
at operation temperatures at $t_c$ point

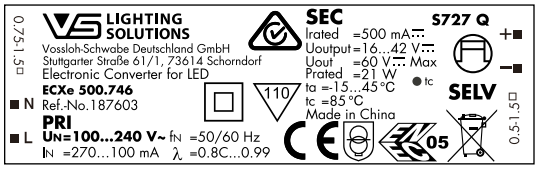
| Operation current | Ref. No. 187603 | | 187601, 187602, 187604 | |
|---|---|---|---|---|
| all | 75 °C* | 85 °C | 65 °C* | 75 °C |
| hrs. | 100.000 | 50.000 | 100.000 | 50.000 |

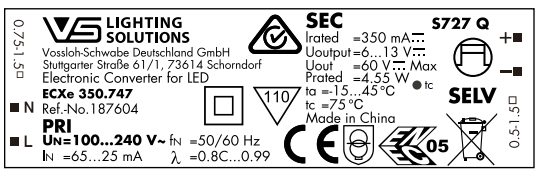
* recommended operation temperature

### Product labels



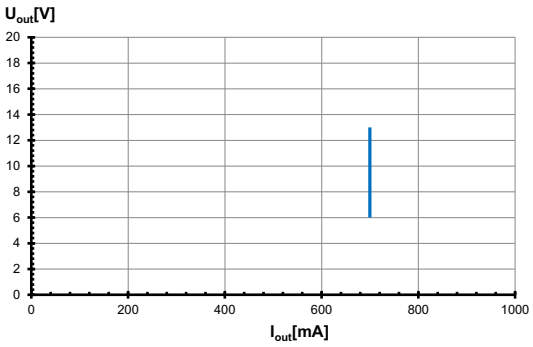



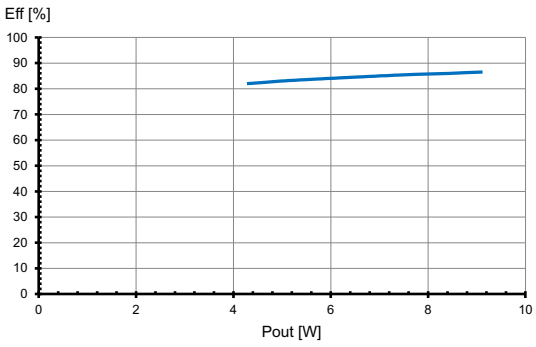



### Typ. performance graphs for 187601 / Type ECXe 700.744

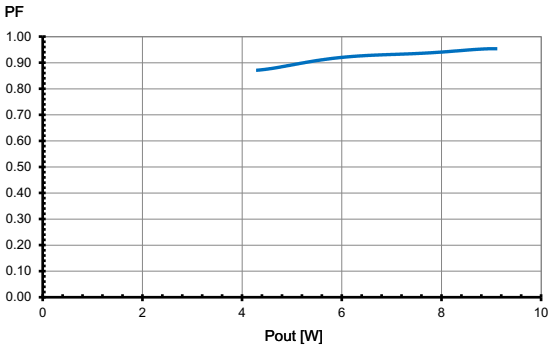
**Working area**



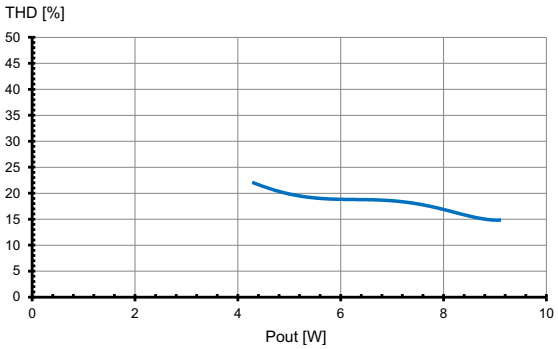

**Efficiency at 230 V**




**Power factor at 230 V**

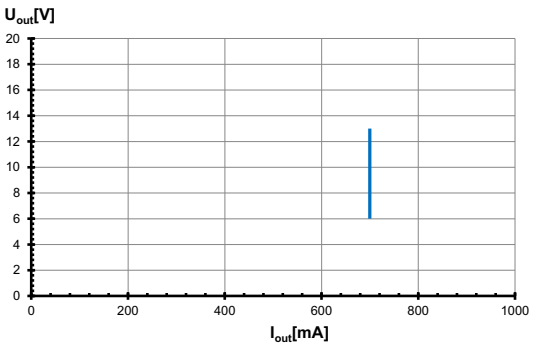



**Total harmonic factor (THD) at 230 V**

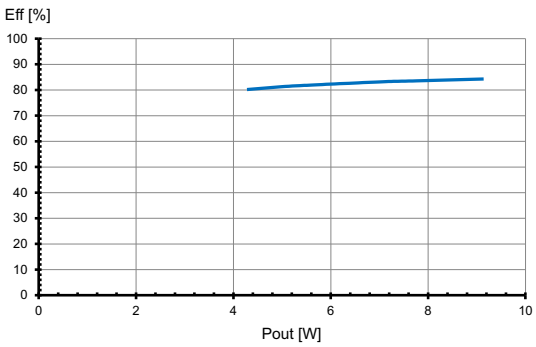



### Typ. performance graphs for 187601 / Type ECXe 700.744

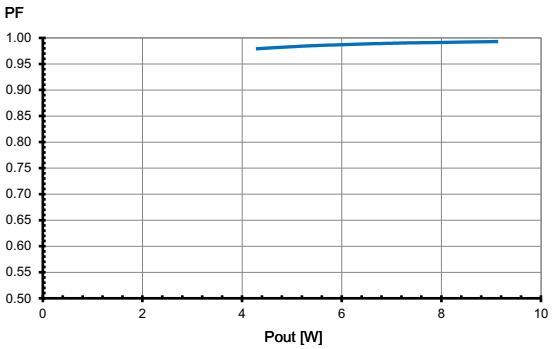
**Working area**



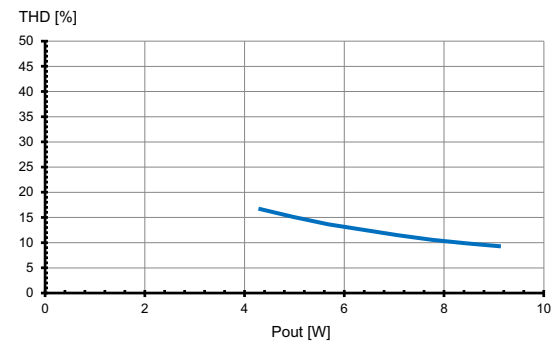

**Efficiency at 100 V**




**Power factor at 100 V**




**Total harmonic factor (THD) at 100 V**





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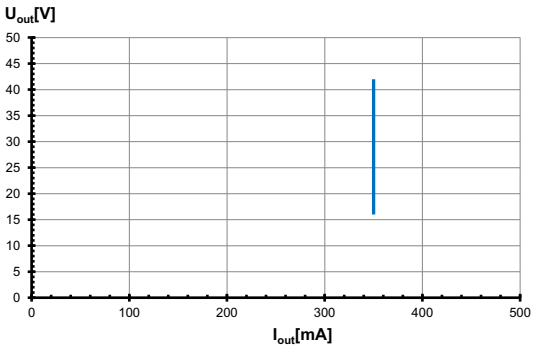
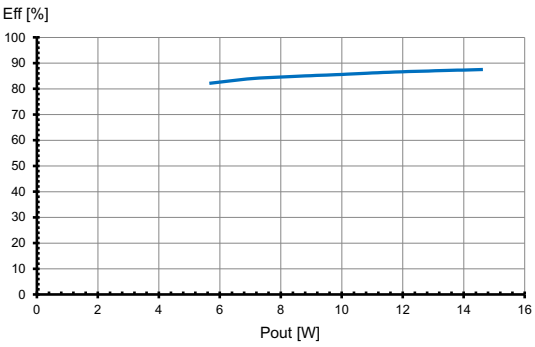
### Typ. performance graphs for 187602 / Type ECXe 350.745

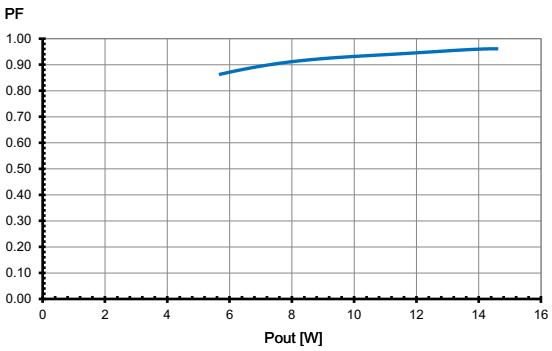
**Working area**



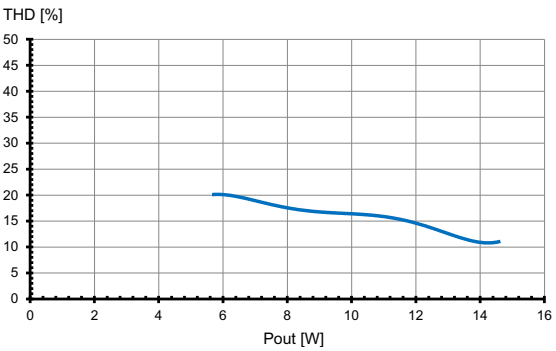

**Efficiency at 230 V**




**Power factor at 230 V**

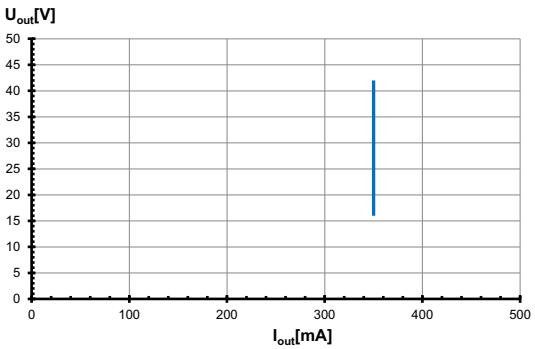



**Total harmonic factor (THD) at 230 V**

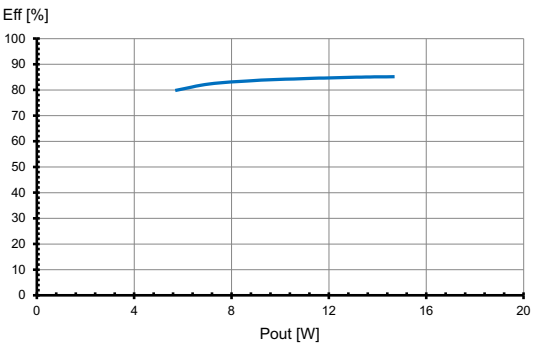



### Typ. performance graphs for 187602 / Type ECXe 350.745

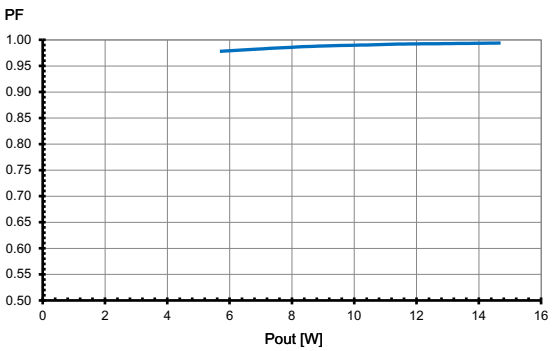
**Working area**



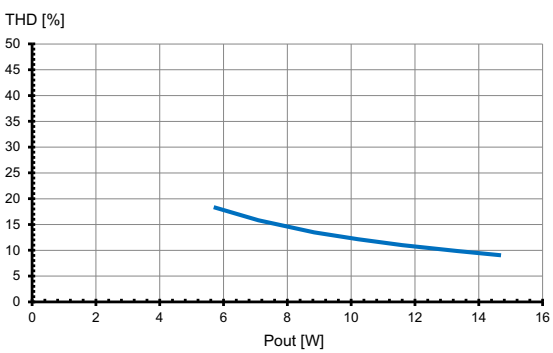

**Efficiency at 100 V**




**Power factor at 100 V**




**Total harmonic factor (THD) at 100 V**





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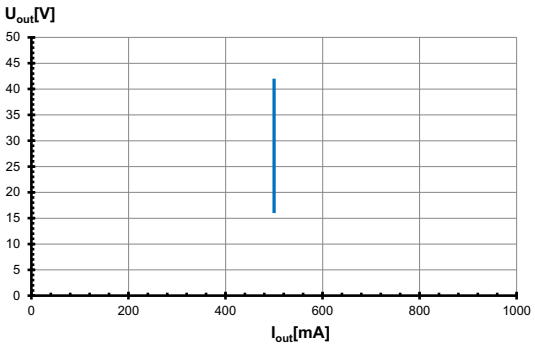
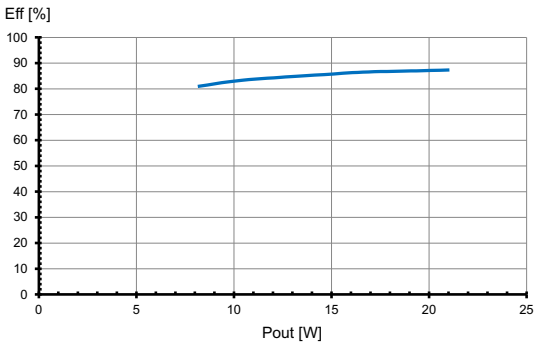
### Typ. performance graphs for 187603 / Type ECXe 500.746

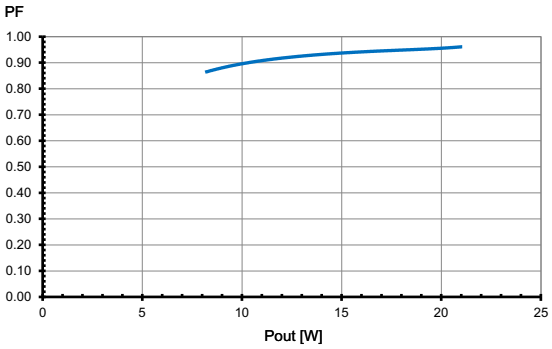
**Working area**



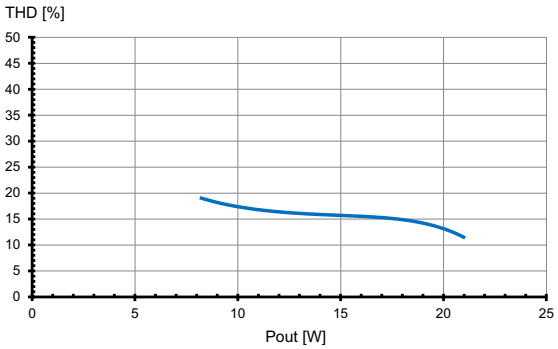

**Efficiency at 230 V**




**Power factor at 230 V**

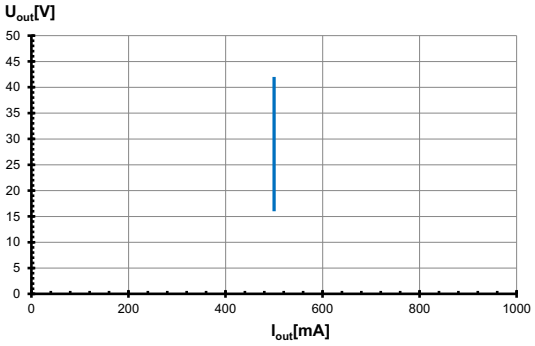



**Total harmonic factor (THD) at 230 V**

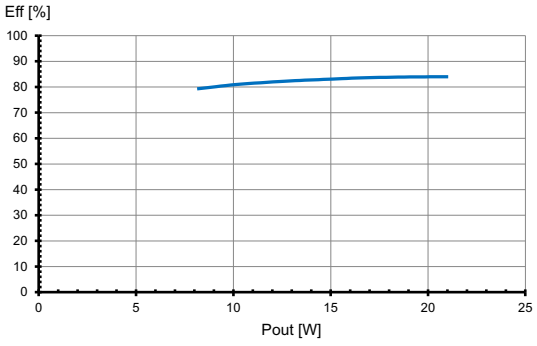



### Typ. performance graphs for 187603 / Type ECXe 500.746

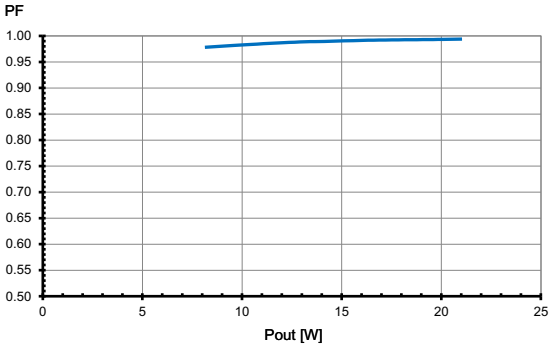
**Working area**



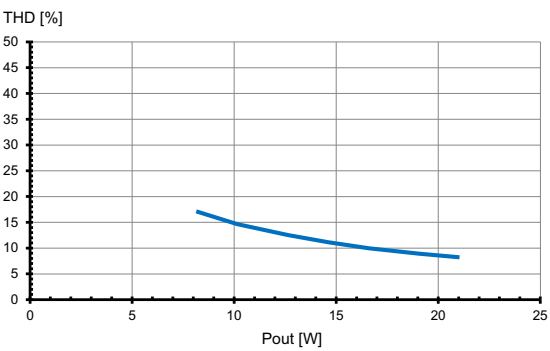

**Efficiency at 100 V**




**Power factor at 100 V**




**Total harmonic factor (THD) at 100 V**





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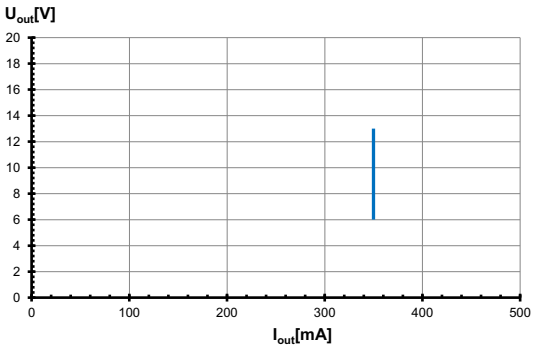
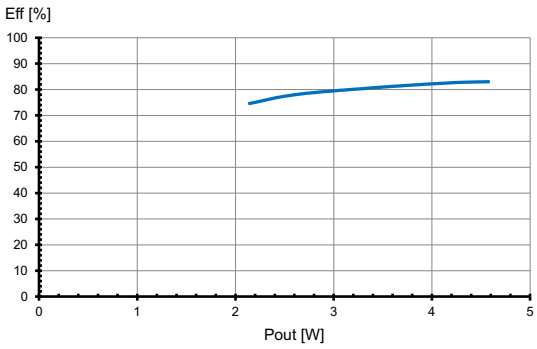
### Typ. performance graphs for 187604 / Type ECXe 350.747

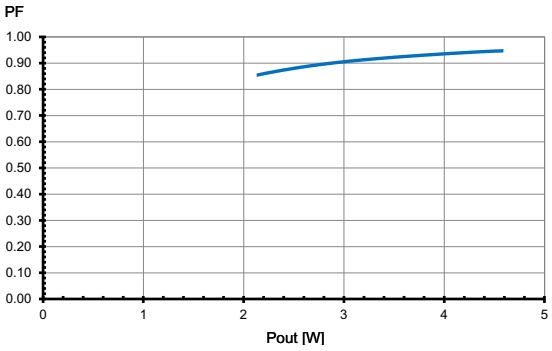
**Working area**



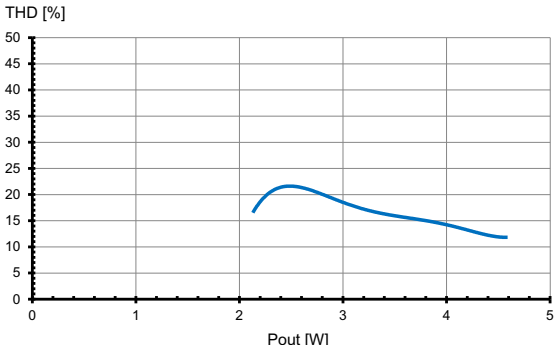

**Efficiency at 230 V**




**Power factor at 230 V**

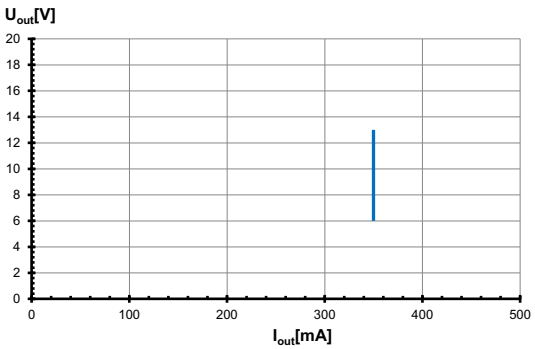



**Total harmonic factor (THD) at 230 V**

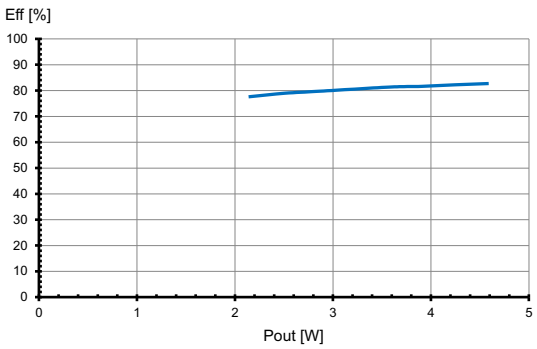



### Typ. performance graphs for 187604 / Type ECXe 350.747

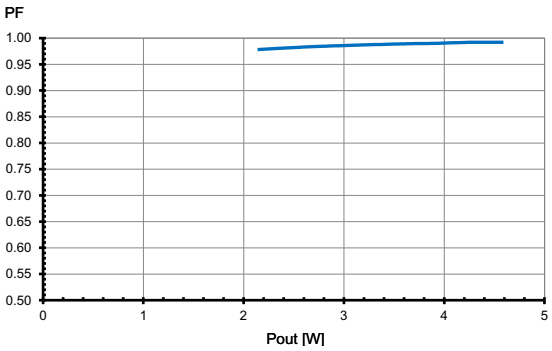
**Working area**



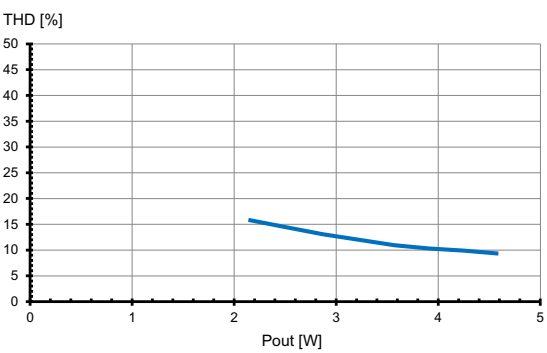

**Efficiency at 100 V**




**Power factor at 100 V**




**Total harmonic factor (THD) at 100 V**





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**Safety functions**

- Transient mains peaks protection:
  Values are in compliance with EN 61547 (interference immunity).
  Surges between L–N: up to 1 kV
- Short-circuit protection: The control gear is protected against short-term short-circuit
- Overload protection: The control gear only works in range of rated output power and voltage problemfree (< 60 V DC).
  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.





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# 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

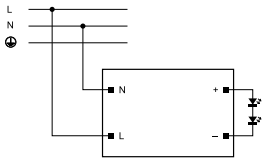
- DIN VDE 0100
- EN 60598-1

### Mechanical mounting

- Mounting position: Independent application: Drivers are allowed to use for independent applications
- Mounting location: 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 driver is destined for installation in a luminaire. sufficient heat transfer must be ensured between the driver and the luminaire casing.
  LED drivers should be mounted with the greatest possible clearance to heat sources.
  During operation. the temperature measure at the driver's $t_c$ point must not exceed the specified maximum value.
- Fastening: Using M3 screws in the designated holes
- Tightening torque: 0.2 Nm

### Electrical installation

- Connection terminals: Push-in terminals for rigid or flexible conductors with a section of 0.5–2.5 mm²
- Stripped length: 8.5–10 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.
  Max. secondary side lead length: 1 m
- 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.
- Parallel wiring: Parallel connection of LED loads is not allowed.
- 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** | | B10 | B13 | B16 | B20 |
| ECXe 700.744 | **187601** | 28 | 37 | 45 | 57 |
| ECXe 350.745 | **187602** | 25 | 33 | 40 | 50 |
| ECXe 500.746 | **187603** | 17 | 22 | 27 | 34 |
| ECXe 350.747 | **187604** | 37 | 48 | 60 | 75 |
| **Automatic cut-out type** | | C10 | C13 | C16 | C20 |
| ECXe 700.744 | **187601** | 47 | 62 | 76 | 95 |
| ECXe 350.745 | **187602** | 42 | 55 | 67 | 84 |
| ECXe 500.746 | **187603** | 29 | 37 | 46 | 58 |
| ECXe 350.747 | **187604** | 62 | 81 | 100 | 125 |





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