CV 24 V

EASYLINE 24 V C-L 120 V

187036, 187037, 187038, 187039

Typical Applications

Built-in in luminaires for 24 V systems

- Retail lighting
- Residential lighting
- Furniture lighting

EasyLine 24 V C-L 12 V

- **VERY LOW RIPPLE: < 3%**
- **WIDE INPUT VOLTAGE RANGE: 120–277 V**
- **WITH INTEGRATED CORD GRIP FOR INDEPENDENT OPERATION**
- **SELV**
- **SUITABLE FOR BUILT-IN INTO FURNITURE**
- **LONG SERVICE LIFE: UP TO 100,000 HRS.**
- **PRODUCT GUARANTEE: 5 YEARS**

5 YEARS GUARANTEE

LIGHTING SOLUTIONS

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EasyLine 24 V C-L 120 V

Product features

- Compact casing shape
- For use in applications with medium and high capacity range of up to 20, 40, 60 and 100 W

Electrical features

- Mains voltage: 120–277 V ±10%
- Mains frequency: 50–60 Hz
- Screw terminals: primary 0.75–2.5 mm², secondary 0.5–2.5 mm²
- Power factor at full load: > 0.98 C

Safety features

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

Packaging units

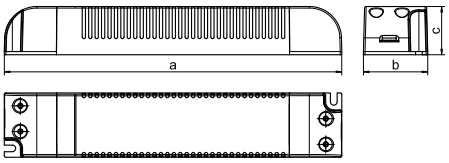
Ref. No.	Packaging unit		
	Pieces per box	Boxes per pallet	Weight g
187036	20	100	112
187037	20	90	288
187038	20	84	364
187039	12	114	503

Product guarantee

- 5 years
- 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.

Dimensions

Ref. No.	Casing	Length a mm	Width b mm	Height c mm
187036	K53	153	41	32
187037	K81	210	40	30
187038	K82	250	40	30
187039	K83	310	40	36



Applied standards

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

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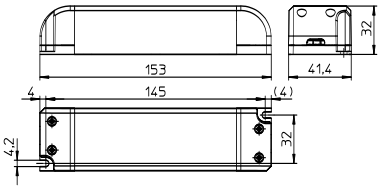
Product drawings and photos

K53



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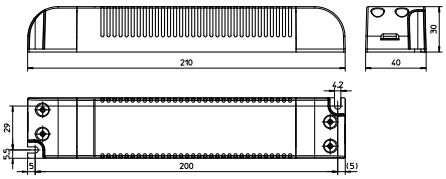

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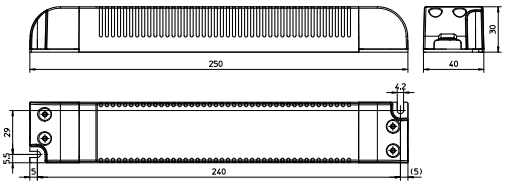

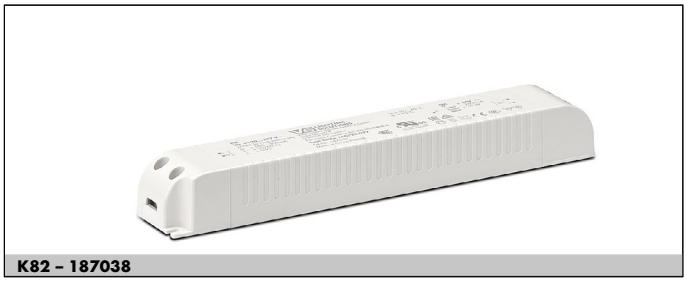

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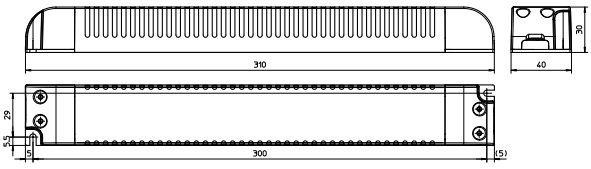

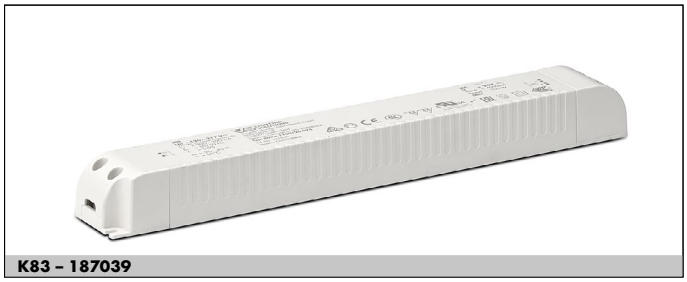

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Electrical characteristics

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 (± 5%)	THD at full load % (230 V)	Efficiency at full load % (230 V)	Ripple 100 Hz %
20	EDXe 120/24.075	**187036**	120–277	224–80	12 / 190	0–833	24	< 6	> 87	≤ 3
40	EDXe 140/24.076	**187037**	120–277	435–160	11 / 298	0–1670	24	< 8	> 87	≤ 3
60	EDXe 160/24.077	**187038**	120–277	635–230	13 / 285	0–2500	24	< 7	> 88	≤ 3
100	EDXe 1100/24.078	**187039**	120–277	930–365	24 / 698	0–4000	24	< 6	> 88	≤ 3

Maximum ratings

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

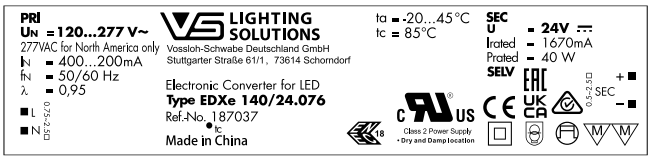
Ref. No.	Ambient temperature range °C min.	Ambient temperature range °C max.	Operation humidity range % min.	Operation humidity range % max.	Storage temperature range °C min.	Storage temperature range °C max.	Storage humidity range % min.	Storage humidity range % max.	Max. operation temperature at t_c point °C	Degree of protection
187036	–20	+45	5	60	–40	+85	5	95	+75	IP20
187037, 187038, 187039									+85	

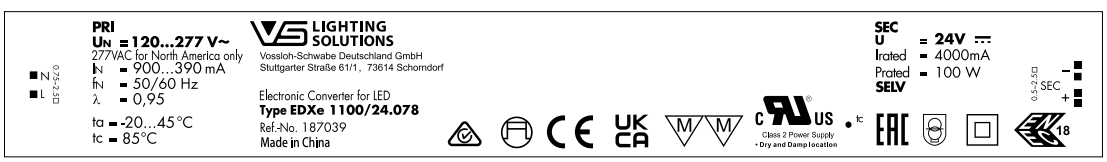
Expected service life time

at operation temperatures at t_c point

Operation current	Ref. No. 187036		187037, 187038, 187039	
All	65 °C	75 °C	75 °C	85 °C
hrs.	100,000	50,000	100,000	50,000

Product labels





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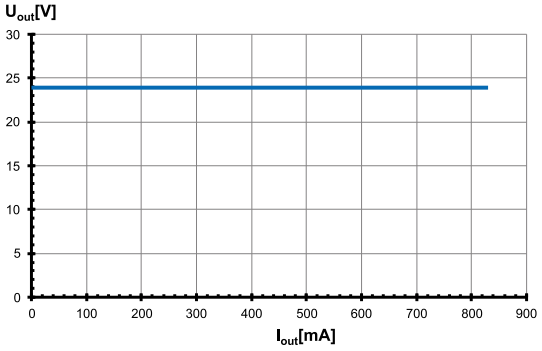
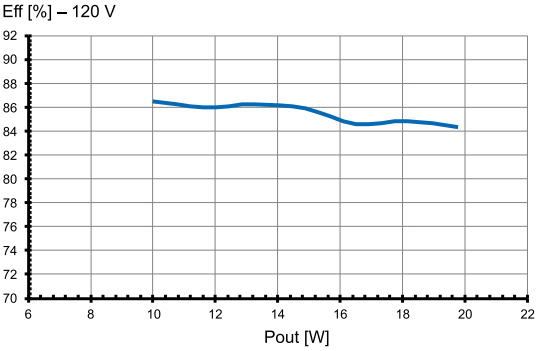
Typ. performance graphs for 187036 / Type EDXe 120/24.075

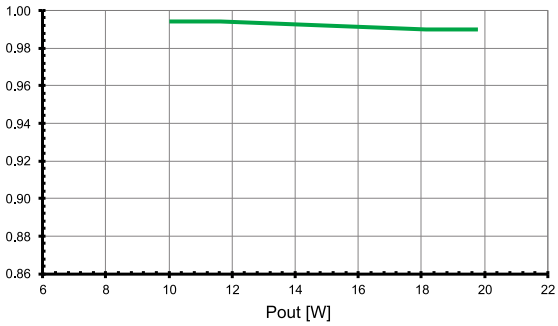
Working area



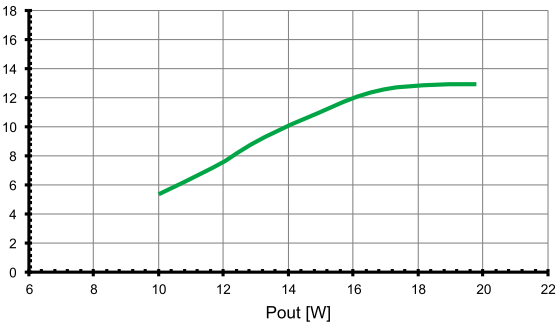
Efficiency at 120 V



Power factor at 120 V

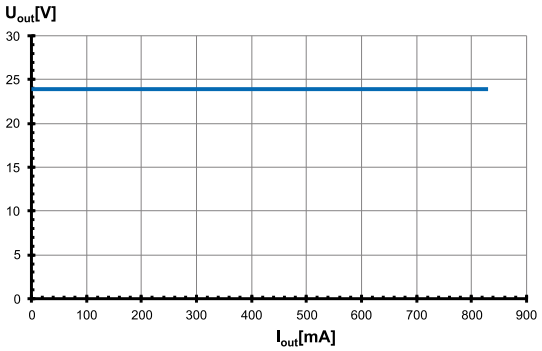


Total harmonic factor (THD) at 120 V

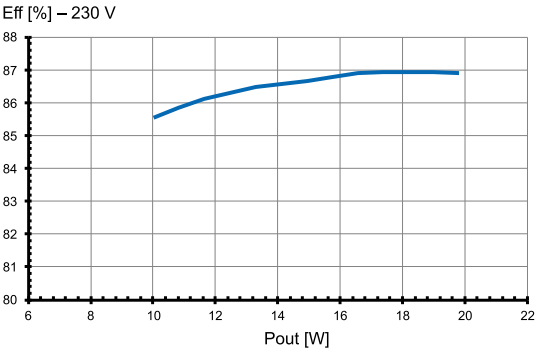


Typ. performance graphs for 187036 / Type EDXe 120/24.075

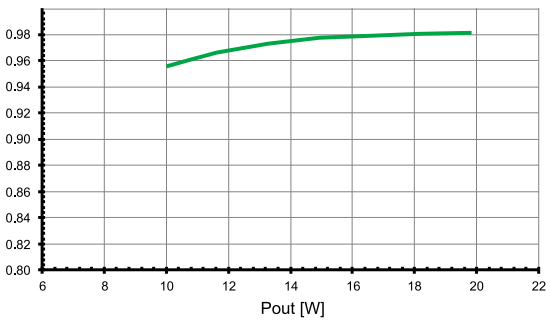
Working area



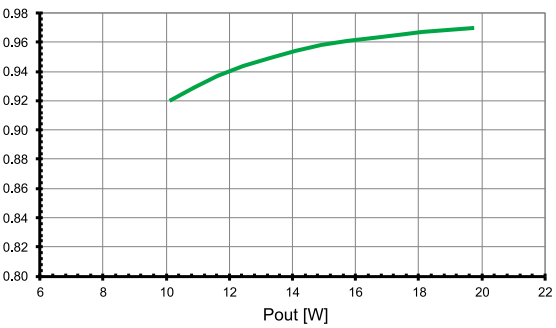
Efficiency at 230 V



Power factor at 230 V



Total harmonic factor (THD) at 230 V



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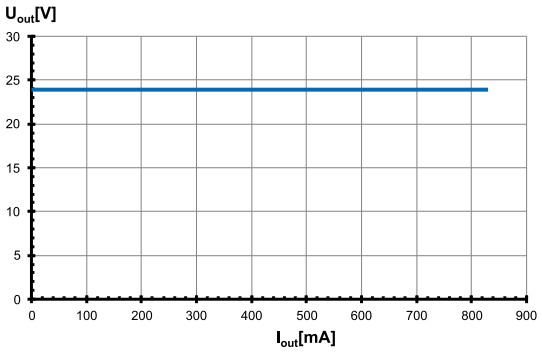
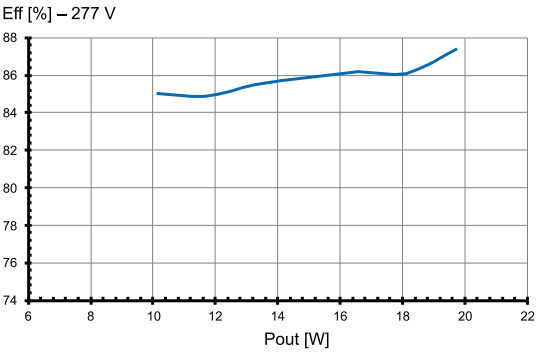
Typ. performance graphs for 187036 / Type EDXe 120/24.075

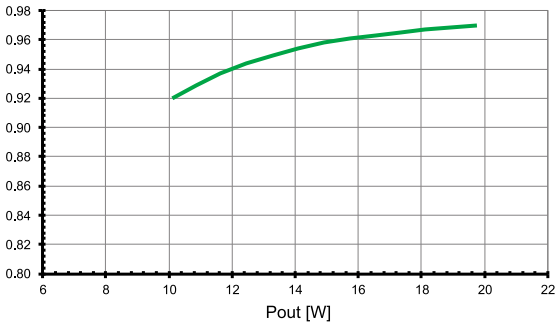
Working area



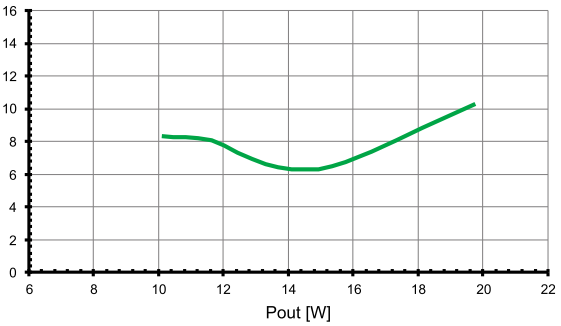
Efficiency at 277 V



Power factor at 277 V

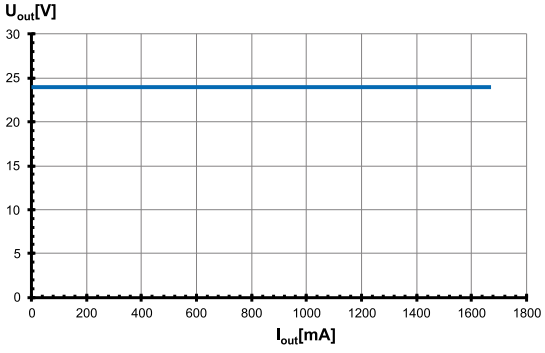


Total harmonic factor (THD) at 277 V

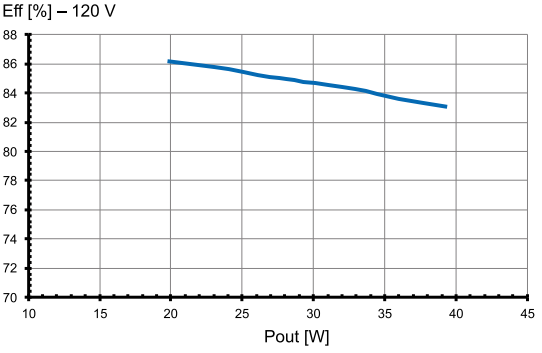


Typ. performance graphs for 187037 / Type EDXe 140/24.076

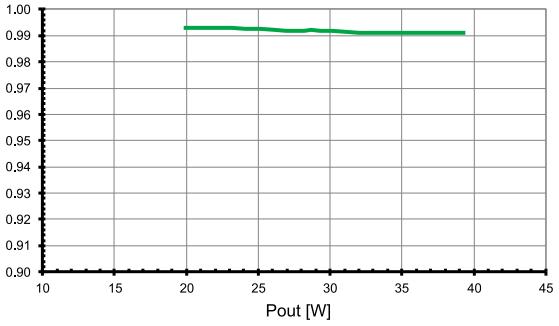
Working area



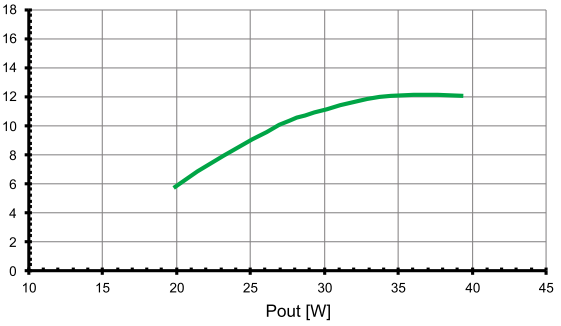
Efficiency at 120 V



Power factor at 120 V



Total harmonic factor (THD) at 120 V



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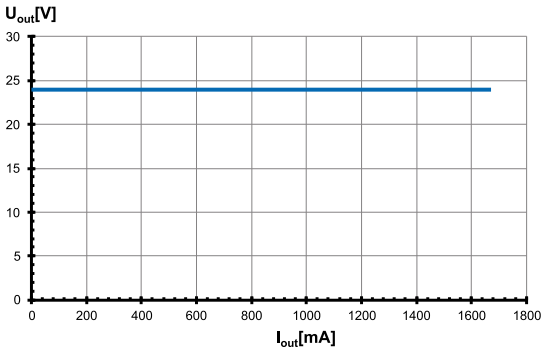
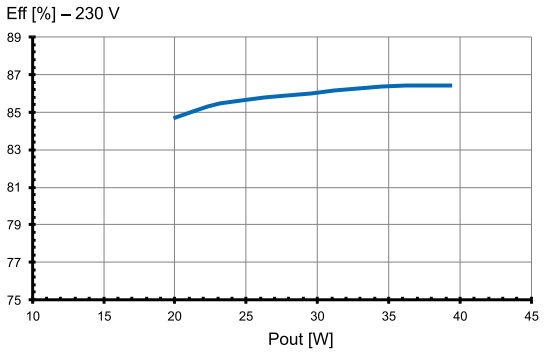
Typ. performance graphs for 187037 / Type EDXe 140/24.076

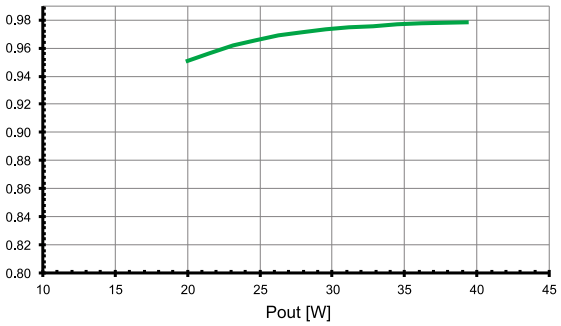
Working area



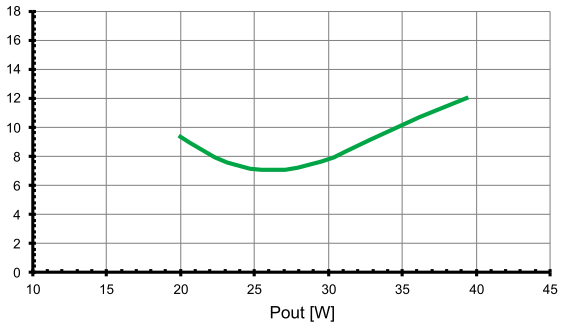
Efficiency at 230 V



Power factor at 230 V



Total harmonic factor (THD) at 230 V



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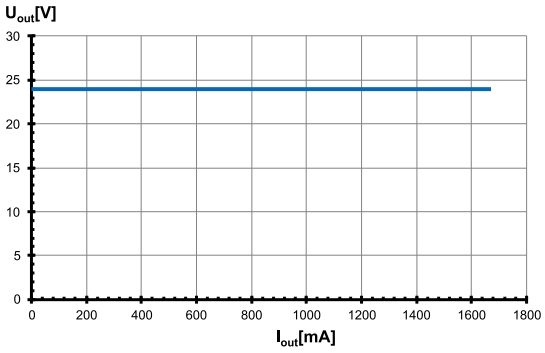
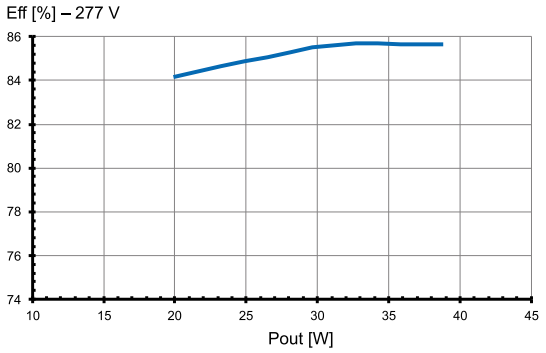
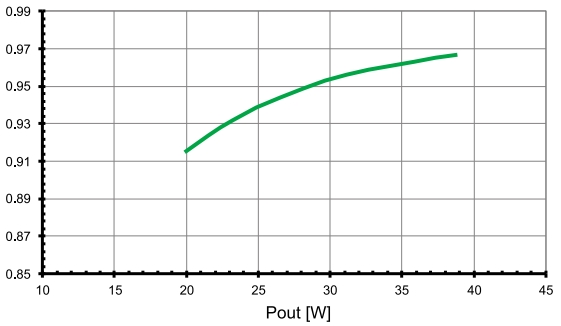
Working area



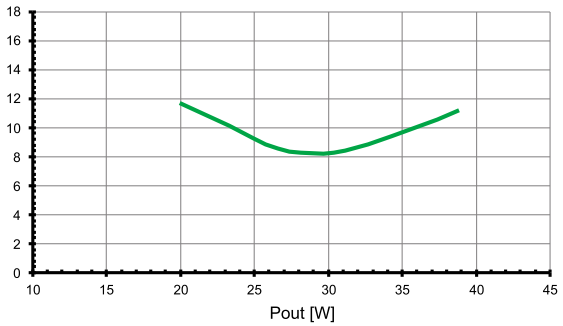
Efficiency at 277 V



Power factor at 277 V



Total harmonic factor (THD) at 277 V



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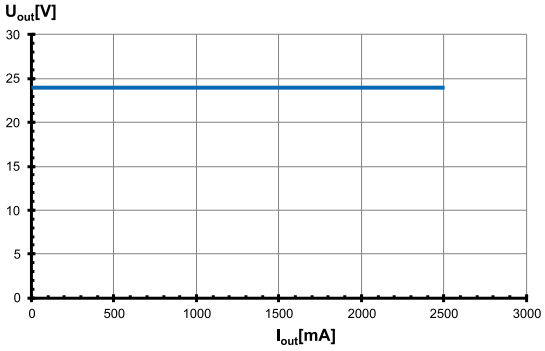
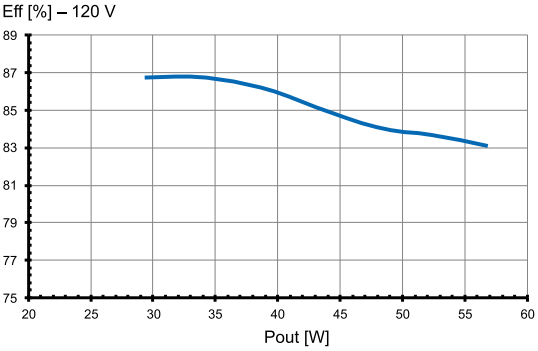
Typ. performance graphs for 187038 / Type EDXe 160/24.077

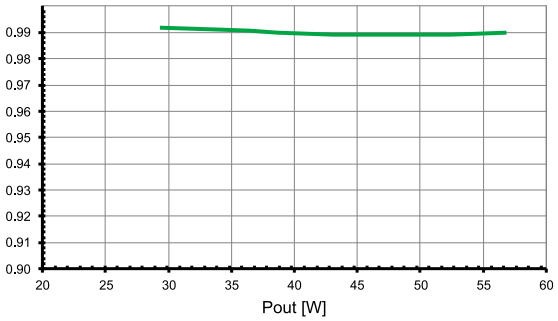
Working area



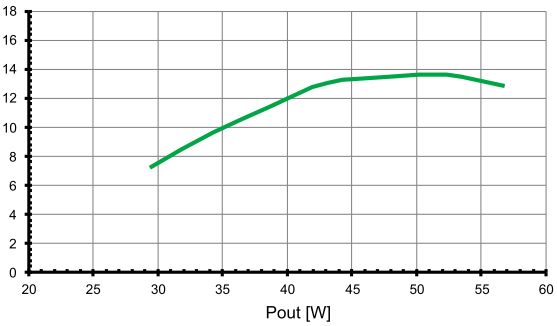
Efficiency at 120 V



Power factor at 120 V

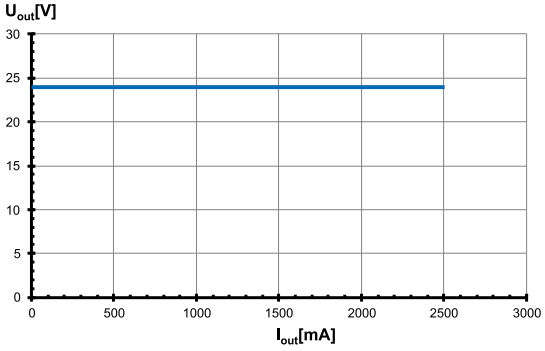


Total harmonic factor (THD) at 120 V

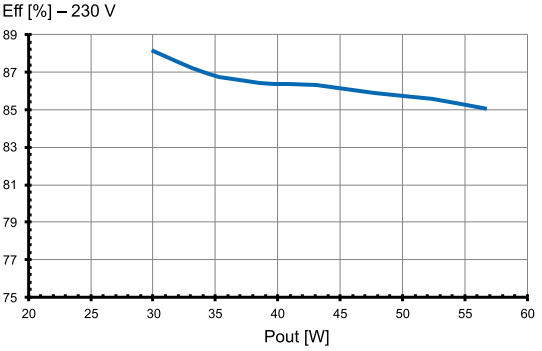


Typ. performance graphs for 187038 / Type EDXe 160/24.077

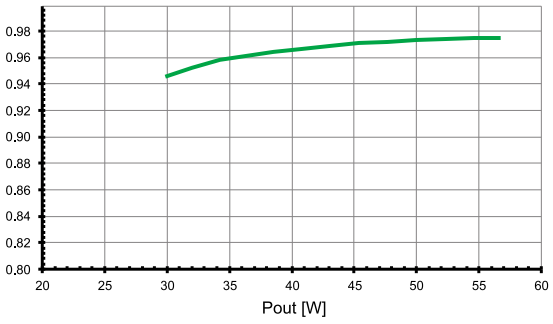
Working area



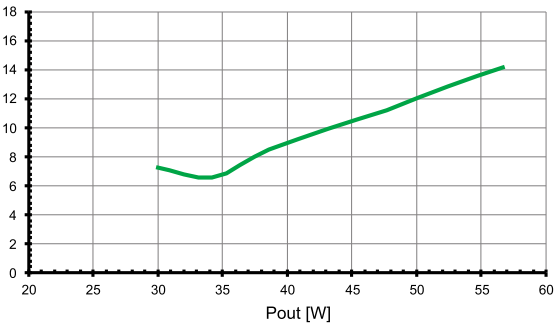
Efficiency at 230 V



Power factor at 230 V



Total harmonic factor (THD) at 230 V



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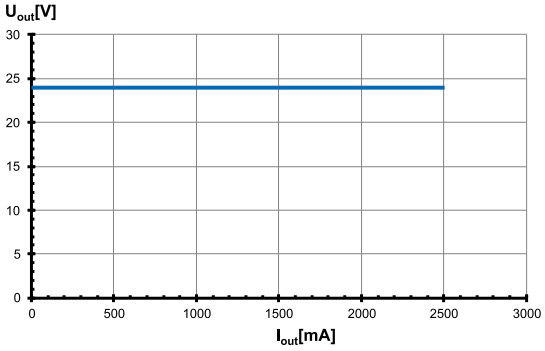
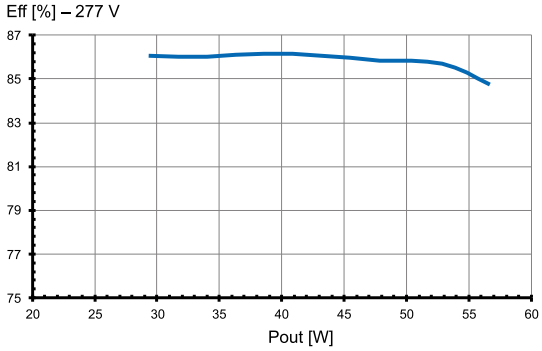
Typ. performance graphs for 187038 / Type EDXe 160/24.077

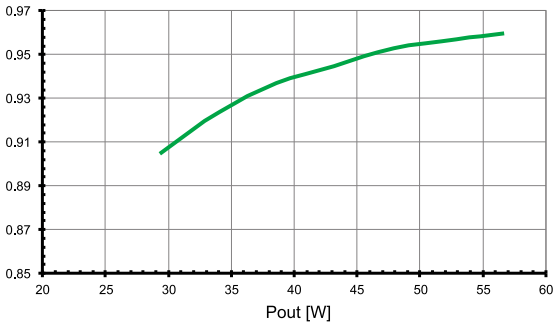
Working area



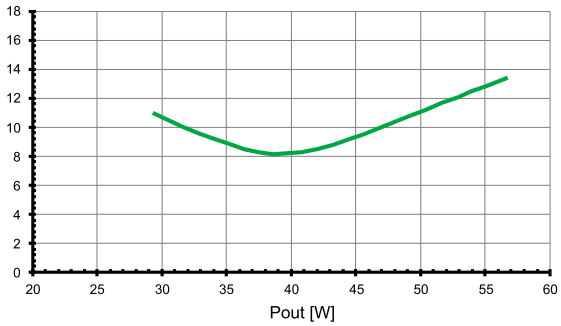
Efficiency at 277 V



Power factor at 277 V

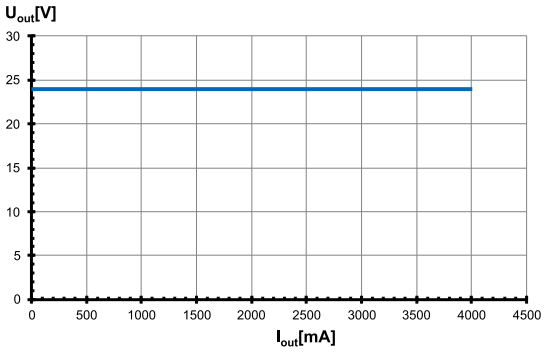


Total harmonic factor (THD) at 277 V

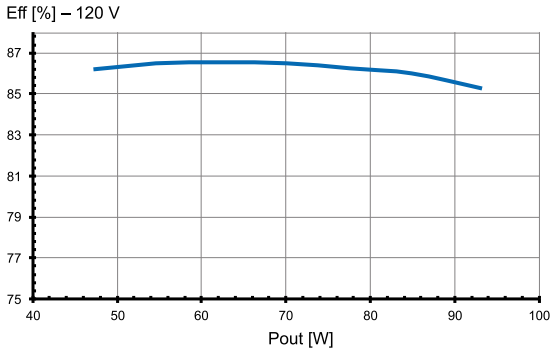


Typ. performance graphs for 187039 / Type EDXe 1100/24.078

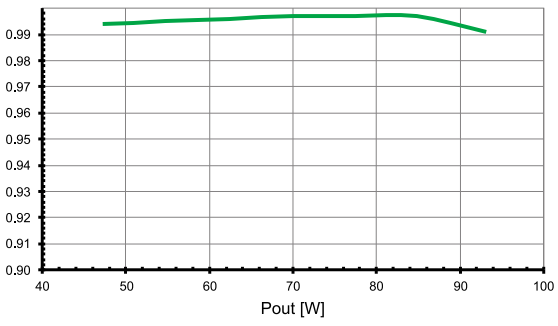
Working area



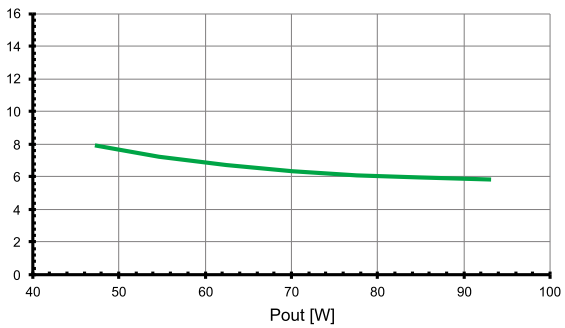
Efficiency at 120 V



Power factor at 120 V



Total harmonic factor (THD) at 120 V



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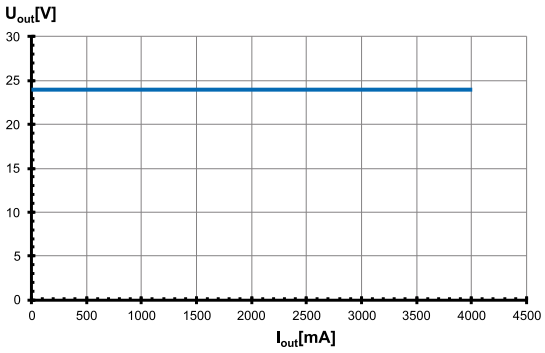
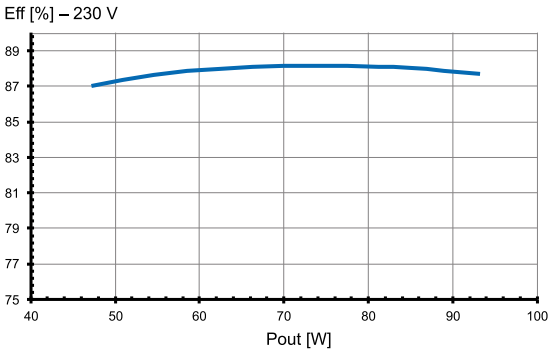
Typ. performance graphs for 187039 / Type EDXe 1100/24.078

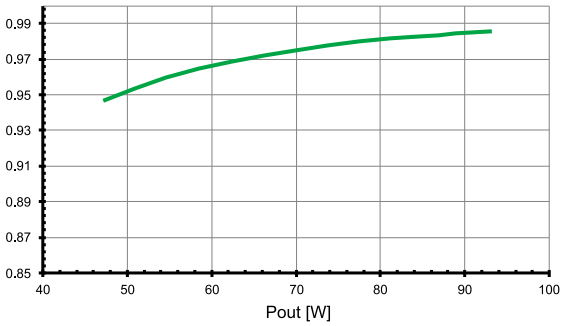
Working area



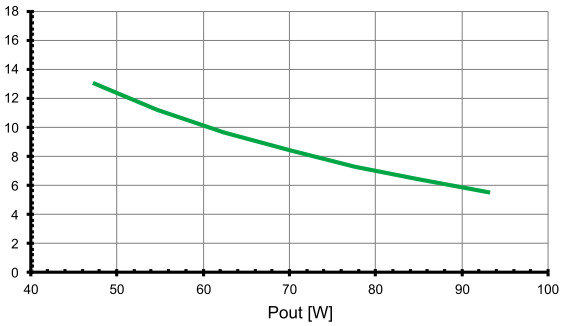
Efficiency at 230 V



Power factor at 230 V

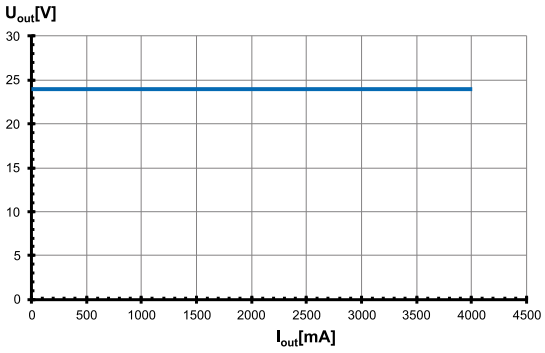


Total harmonic factor (THD) at 230 V

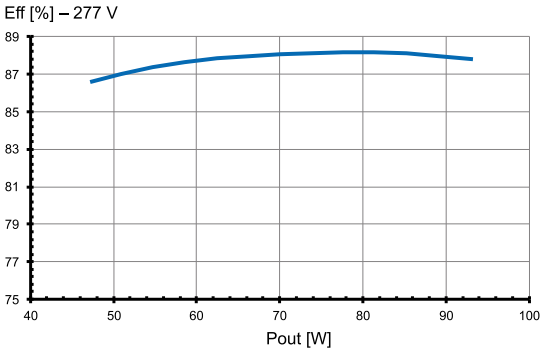


Typ. performance graphs for 187039 / Type EDXe 1100/24.078

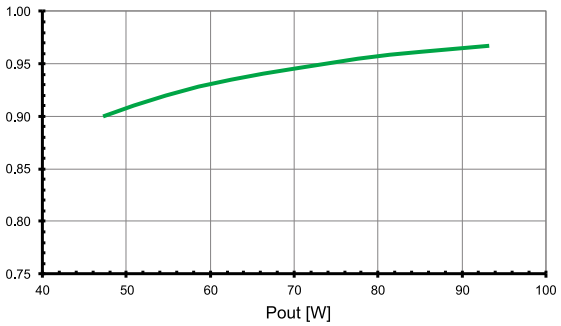
Working area



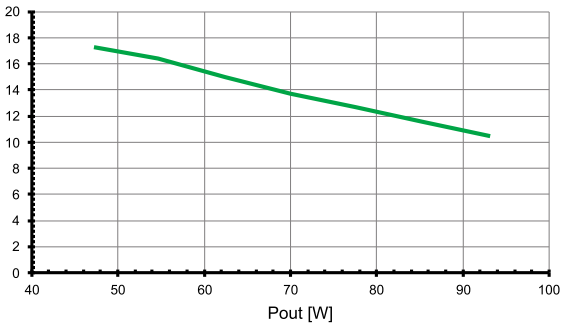
Efficiency at 277 V



Power factor at 277 V



Total harmonic factor (THD) at 277 V



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Safety features

- 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 permanent short-circuit with automatic restart function.
- Overload protection: The control gear only works in range of rated output power and voltage problemfree. Please check that the selected LED load is suitable (see Electrical Characteristics on this 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

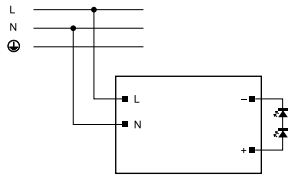
Mechanical mounting

- Mounting position: Drivers are suitable for independent operation.
- 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 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 0.75–1.5 mm² on primary side and 0.5–2.5 mm² on secondary side
- 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.
- 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 10 A	B 13 A	B 16 A	C 10 A	C 13 A	C 16 A
EDXe 120/24.075	**187036**	36	46	57	44	58	71
EDXe 140/24.076	**187037**	22	29	36	22	29	36
EDXe 160/24.077	**187038**	15	20	25	15	20	25
EDXe 1100/24.078	**187039**	4	5	6	6	8	10

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