

CC COMPACT DIP SWITCH



COMFORTLINE DIP SWITCH C

187574, 187575, 187576, 187577

Typical Applications

Built-in in compact luminaires for

- Shop lighting
- Office lighting
- Residential lighting
- Downlights



EasyLine DIP switch C Mini

- **SELECTABLE OUTPUT CURRENT VIA DIP SWITCH**
- **VARIOUS CORD GRIPS CAN BE MOUNTED**
- **SELV**
- **VERY COMPACT CASING SHAPE (MINI)**
- **LONG SERVICE LIFE: UP TO 100.000 HRS.**
- **PRODUCT GUARANTEE: 5 YEARS**



EasyLine DIP switch C Mini

Product features

- Very compact casing shape (Mini)

Functions

- Selectable current output by DIP switch

Electrical features

- Mains voltage: 220–240 V $\pm 10\%$
- Mains frequency: 50–60 Hz
- Push-in terminals:
 - rigid 0.5–1.5 mm²
 - strand 0.75–1.5 mm²
- Power factor at full load: > 0.90
- Open circuit voltage ($U_{max.}$): 60 V
- Secondary side switching of LED modules is not allowed.

Safety features

- Protection against transient main peaks up to 1 kV (between L and N)
- Electronic short-circuit protection
- Overload protection
- Overtemperature protection
- Degree of protection: IP20
- Protection class II
- SELV
- SVM: < 0.4
- PstLM: < 1

Packaging units

Ref. No.	Packaging unit		Weight g
	Pieces per box	Boxes per pallet	
187574	50	125	48
187575	50	125	48
187576	50	125	48
187577	50	125	48

Product guarantee

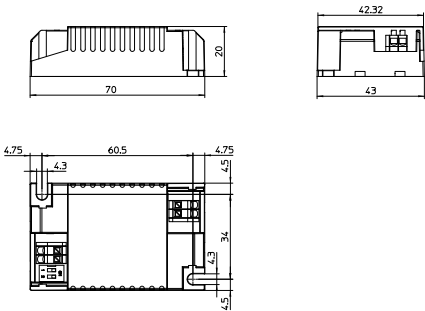
- 5 years
for operation at recommended operation temperature (see table for expected service life time on the next page)
- The conditions for the Product Guarantee of the Vossloh-Schwabe Group shall apply as published on our homepage (www.vossloh-schwabe.com).
We will be happy to send you these conditions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



Dimensions

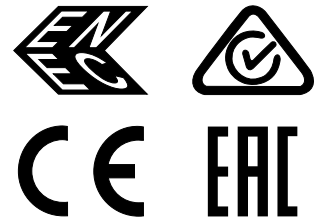
Ref. No.	Casing	Length mm	Width mm	Height mm
187574, 187575, 187576, 187577	K115	70	43	20

K115



Applied standards

- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 61000-3-2/EN 61000-3-3
- EN 62384
- EN 55015
- EN 61000-4-2/EN 61000-4-5



The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

Cord grip "sl" (screwless) for K107/K110

A cord grip consists of an upper and lower part (without screw).

For independent operation without through-wiring two 'sl' cord grips are required for each LED driver are required.

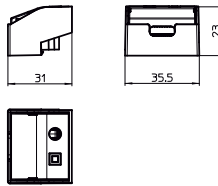
For independent operation with through-wiring one cord grip 'LIL0' is required for through-wiring on the primary side and one cord grip 'sl' for the the secondary side.

Permitted diameter of the cable mantle: 3-7mm

2x0.75-1.5mm² PVC cable

Packaging unit: 20 pcs.

Ref. No.: 187450 (1pcs Cord Grip sl for K107/K110)



Cord grip "ws" (with screw) for K107/K110

A cord grip consists of an upper and lower part and a corresponding screw for fixing.

For independent operation without through-wiring two 'ws' cord grips are required for each LED driver.

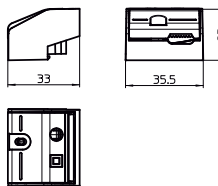
For independent operation with through-wiring one cord grip 'LIL0' is required for through-wiring on the primary side and one cord grip 'ws' for the the secondary side.

Permitted diameter of the cable mantle: 3-9mm

2x0.75-1.5mm² PVC cable

Packaging unit: 20 pcs.

Ref. No.: 187451 (1pcs Cord Grip sl for K107/K110)



Cord grip "LIL0" for K107/K110

A cord grip consists of an upper and lower part and two screws for mounting.

For independent operation with through-wiring a 'LIL0' cord grip is required for through-wiring on the primary side and a cord grip 'ws' or 'sl' is required for the secondary side.

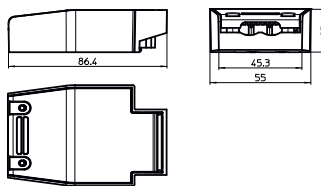
Permitted diameter of the cable mantle: 5-12mm

3x0.75-2.5mm² PVC cable, "E" terminal for protective earth

Only for looping wiring, two cables

Packaging unit: 20 pcs.

Ref.-No.: 187453 (1pcs LIL0(3pin) for K107/K110)



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Electrical characteristics

Max. output W	Type	Ref. No.	Voltage 50–60 Hz V	Mains current mA	Inrush current A / μ s	Current output DC mA ($\pm 5\%$; for 14W $\pm 7,5\%$)	Voltage output DC (V)	THD at full load % (230 V)	Efficiency at full load % (230 V)	Ripple 100 Hz %
4.5	ECXe 225.734	187574	220–240	28–23	12.1 / 162	150/175/200/225	6-20	< 10	81	< 3
8	ECXe 400.735	187575	220–240	50–37	11.1 / 158	250/300/350/400	6-20	< 10	82	< 3
9.5	ECXe 225.736	187576	220–240	65–45	11.6 / 160	150/175/200/225	20-42	< 10	85	< 3
17	ECXe 400.737	187577	220–240	90–75	14.2 / 166	250/300/350/400	20-42	< 10	87	< 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 °C	Degree of protection
	°C min.	°C max.	% min.	% max.	°C min.	°C max.	% min.	% max.		
All types	-20	+45	10	90	-40	+85	5	95	70	IP20

Expected service life time

at operation temperatures at t_c point

Operation current	Ref. No.	
	All types	
All	60 °C*	70 °C
hrs.	100.000	50.000

* recommended operation temperature

Product labels

VS LIGHTING SOLUTIONS **S727 Q**
 Vossloh-Schwabe Deutschland GmbH
 Stuttgarter Straße 61/1, 73614 Schorndorf
 Electronic Converter for LED

ECXe 225.734
 Ref.-No. 187574

PRI UN=220...240V~
 IN = 28...23mA
 fN = 50/60 Hz
 λ = 0,5C...0,97

SELV

OUTPUT	Pin1	Pin2
150	OFF	OFF
175	OFF	OFF
200	ON	OFF
225	ON	ON

SEC
 Uoutput = 6...20V...
 Uout = 60V... Max
 Prated = 4.5W
 Made in China

ta = -20...45°C
 tc = 70°C

VS LIGHTING SOLUTIONS **S727 Q**
 Vossloh-Schwabe Deutschland GmbH
 Stuttgarter Straße 61/1, 73614 Schorndorf
 Electronic Converter for LED

ECXe 400.735
 Ref.-No. 187575

PRI UN=220...240V~
 IN = 50...37mA
 fN = 50/60 Hz
 λ = 0,8C...0,98

SELV

OUTPUT	Pin1	Pin2
250	OFF	OFF
300	OFF	ON
350	ON	OFF
400	ON	ON

SEC
 Uoutput = 6...20V...
 Uout = 60V... Max
 Prated = 8W
 Made in China

ta = -20...45°C
 tc = 70°C

VS LIGHTING SOLUTIONS **S727 Q**
 Vossloh-Schwabe Deutschland GmbH
 Stuttgarter Straße 61/1, 73614 Schorndorf
 Electronic Converter for LED

ECXe 225.736
 Ref.-No. 187576

PRI UN=220...240V~
 IN = 65...45mA
 fN = 50/60 Hz
 λ = 0,8C...0,96

SELV

OUTPUT	Pin1	Pin2
150	OFF	OFF
175	OFF	ON
200	ON	OFF
225	ON	ON

SEC
 Uoutput = 20...42V...
 Uout = 60V... Max
 Prated = 9.5W
 Made in China

ta = -20...45°C
 tc = 70°C

VS LIGHTING SOLUTIONS **S727 Q**
 Vossloh-Schwabe Deutschland GmbH
 Stuttgarter Straße 61/1, 73614 Schorndorf
 Electronic Converter for LED

ECXe 400.737
 Ref.-No. 187577

PRI UN=220...240V~
 IN = 90...75mA
 fN = 50/60 Hz
 λ = 0,8C...0,97

SELV

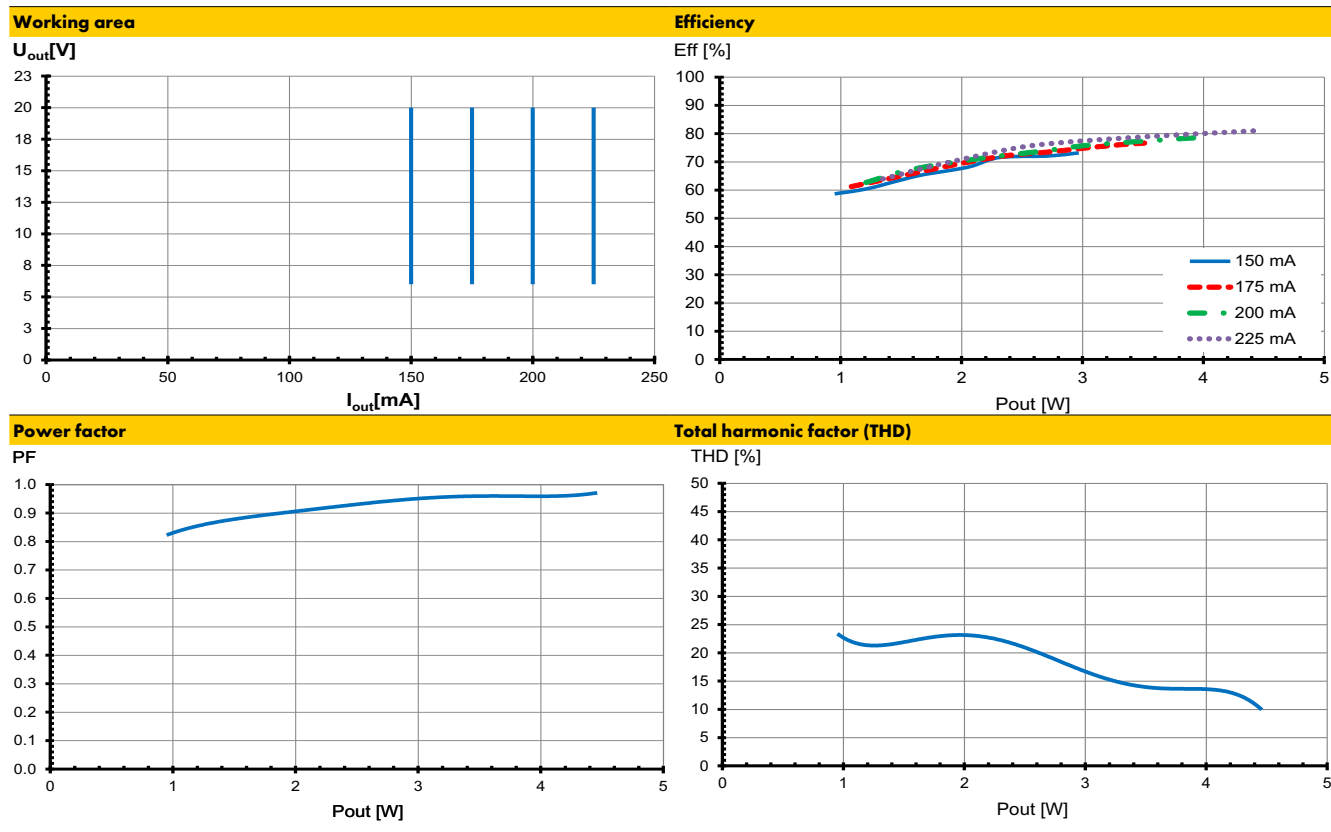
OUTPUT	Pin1	Pin2
250	OFF	OFF
300	OFF	ON
350	ON	OFF
400	ON	ON

SEC
 Uoutput = 20...42V...
 Uout = 60V... Max
 Prated = 17W
 Made in China

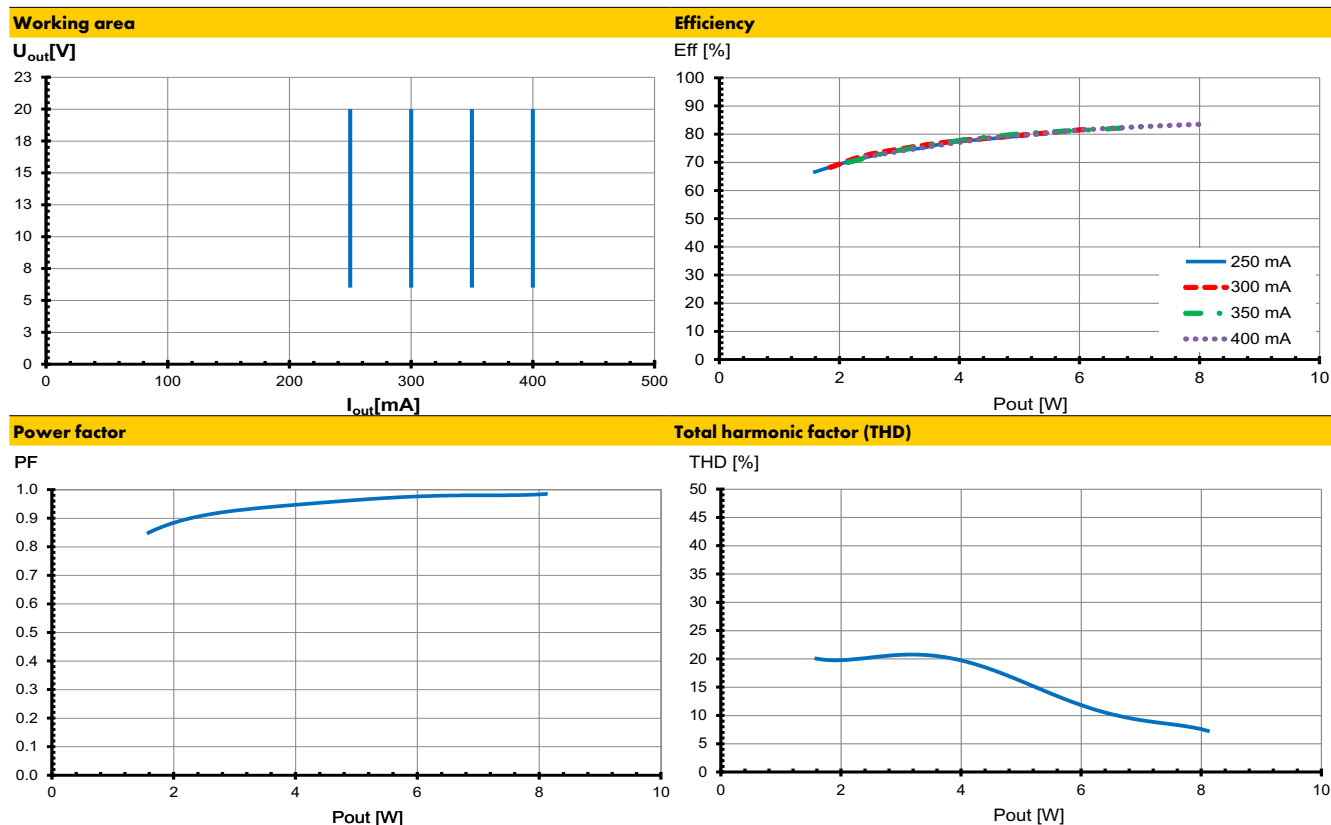
ta = -20...45°C
 tc = 70°C

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Typ. performance graphs for 187574 / Type ECXe 225.734

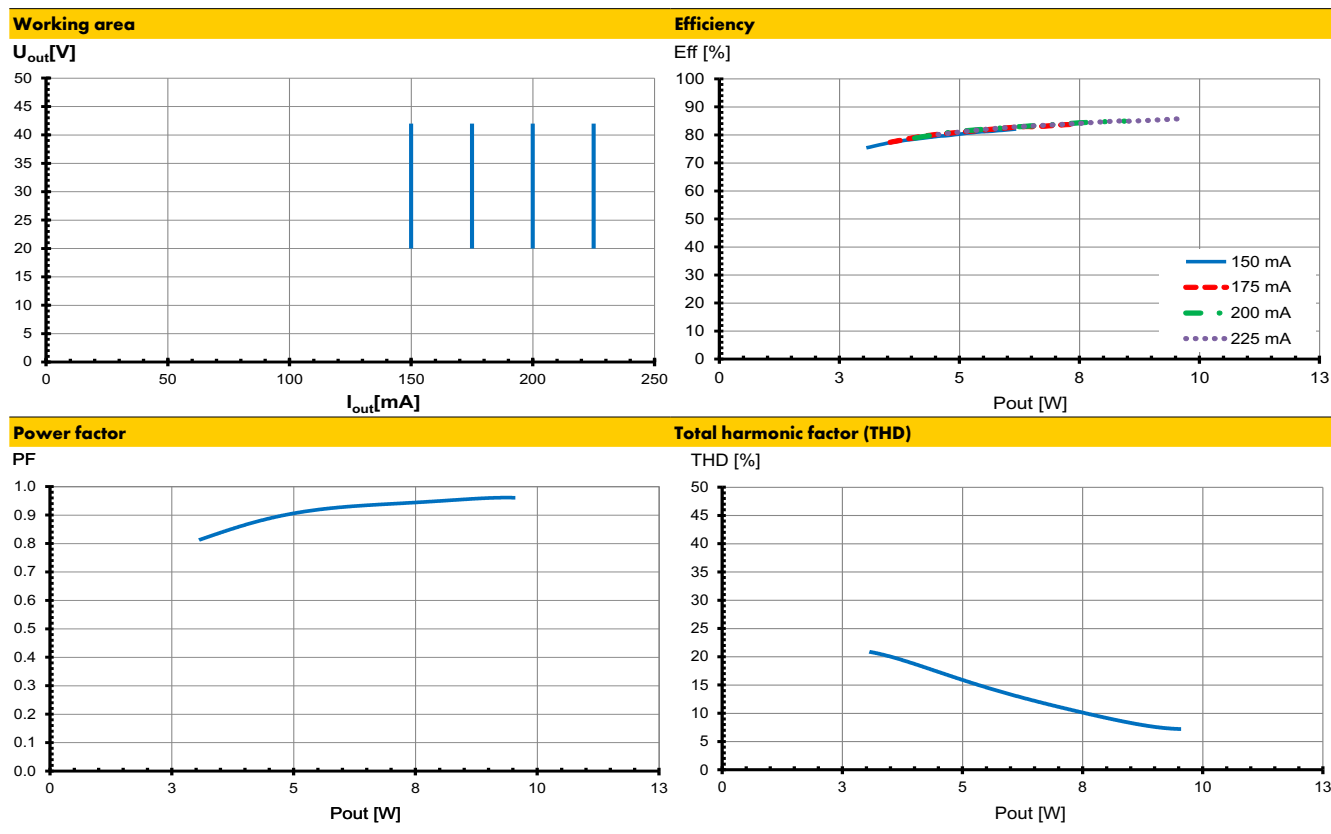


Typ. performance graphs for 187575 / Type ECXe 400.735

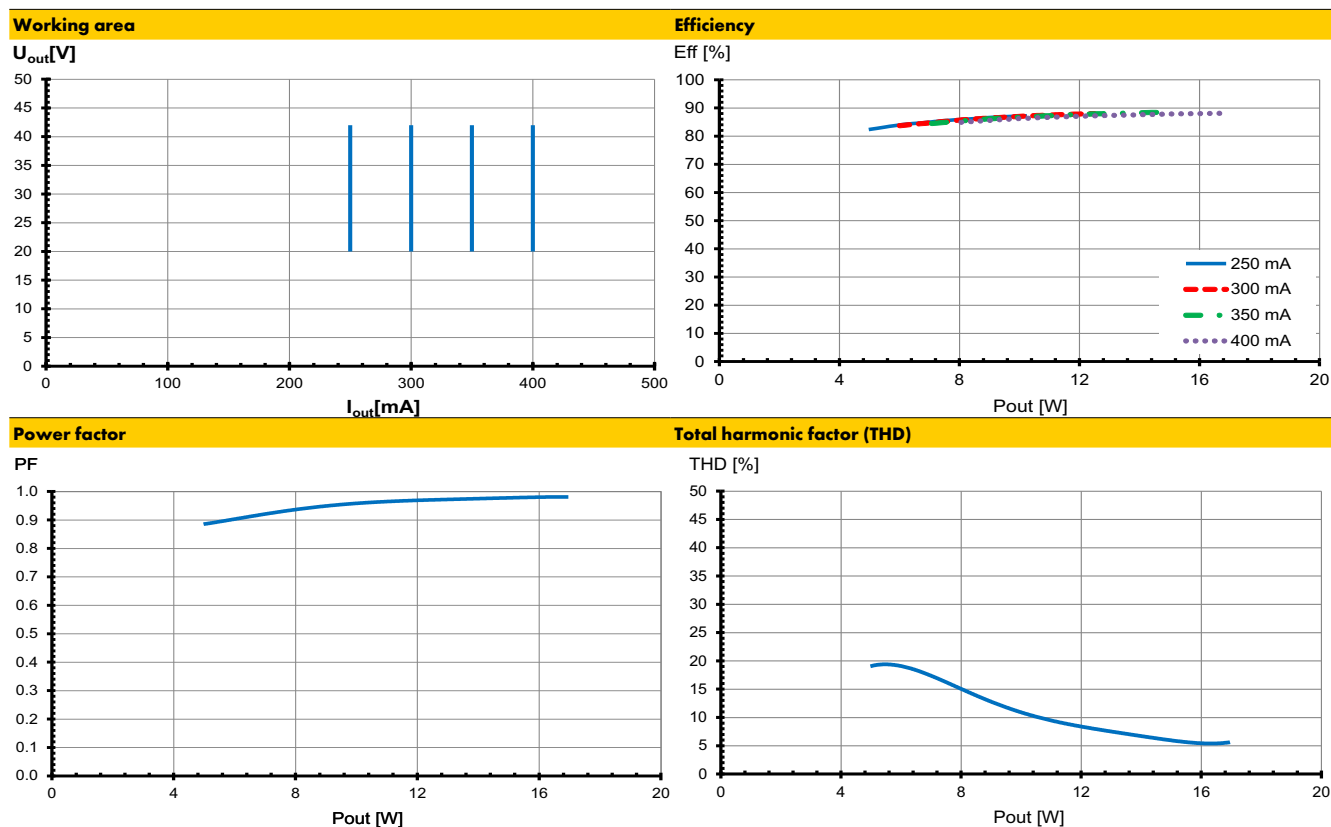


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Typ. performance graphs for 187576 / Type ECXe 225.736



Typ. performance graphs for 187577 / Type ECXe 400.737



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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
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 before switch-on mains power
supply that the selected LED load is suitable
(see Electrical Characteristics on data sheet).
- Overheating: The control gear has overheating protection.
- 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

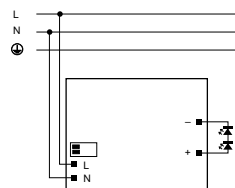
Mechanical mounting

- Mounting position: Built-in: Any position inside a luminaire is allowed.
Independent application: Drivers are allowed to use for independent applications with separate cord grip.
- 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 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: Push-in terminals for rigid or flexible conductors with a section of
built-in: 0,5-1,5mm² PVC cable
independent: 0,75-1,5mm² PVC cable
- Stripped length: 7–8 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: 2 m

- Polarity: Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- 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 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 m Ω (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
ECXe 225.734	187574	42	54	67	70	91	112
ECXe 400.735	187575	47	61	75	78	102	126
ECXe 225.736	187576	44	58	71	74	96	119
ECXe 400.737	187577	35	45	56	58	76	93

- 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.

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