

CV 24 V

DALI2



COMFORTLINE 24 V L DALI2

187361, 187362, 187363, 187430

Typical Applications

Built-in in luminaires for 24 V systems

- Retail lighting
- Office lighting
- Residential lighting
- Furniture lighting



ComfortLine 24 V L DALI2

- **DIMMABLE: DALI (ED. 2)**
- **VERY LOW RIPPLE: < 1%**
- **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**



ComfortLine 24 V L DALI2

Product features

- Compact casing shape
- For use in applications with medium and high capacity range of up to 45, 80, 150 and 250W

Electrical features

- Mains voltage: 220–240 V $\pm 10\%$
- Mains frequency: 50–60 Hz
- Plug-in terminals: 0.5–1.5 mm²
1–2.5 mm² for 250W output
- Power factor at full load: > 0.95 C
- SVM: < 0.4
- PstLM: < 1

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



Dimmung
PWM



Applied standards

- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 61000-3-2
- EN 62384
- EN 55015
- EN 62386 ed. part 101/102/207



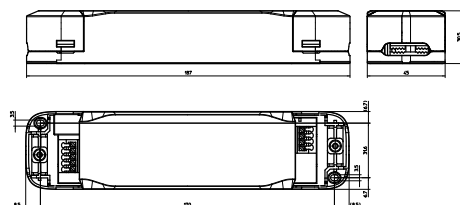
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Packaging units

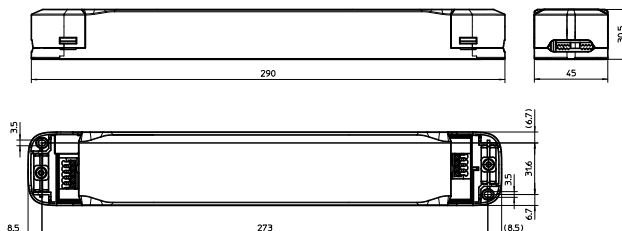
Ref. No.	Packaging unit		
	Pieces per box	Boxes per pallet	Weight g
187361	60	32	230
187362	30	32	310
187363	30	30	570
187430	30	24	785

Dimensions

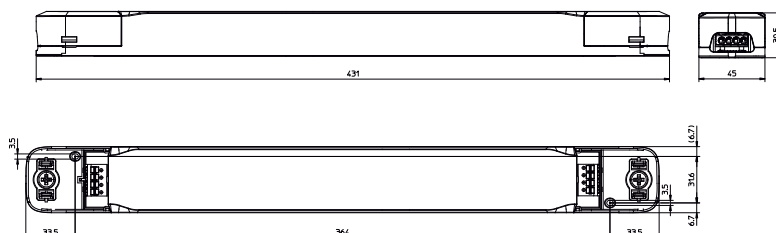
- Casing: K101
- Ref. No.: 187361
- Length: 187 mm
- Width: 45 mm
- Height: 31 mm



- Casing: K102
- Ref. No.: 187362, 187363
- Length: 290 mm
- Width: 45 mm
- Height: 31 mm



- Casing: K105
- Ref. No.: 187430
- Length: 431 mm
- Width: 45 mm
- Height: 31 mm



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

LED-Drivers – ComfortLine 24 V L DALI2

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	Voltage output DC V ($\pm$ 5%)	THD at full load % (230 V)	Efficiency at full load % (230 V)	Ripple 100 Hz %
45	EDXd 145/24.085	187361	220–240	236–217	18 / 240	0–1875	24	< 8	> 86	$\leq$ 1
80	EDXd 185/24.086	187362	220–240	411–377	37 / 264	0–3333	24	< 7	> 88	$\leq$ 1
150	EDXd 1150/24.087	187363	220–240	741–681	45 / 432	0–6250	24	< 7	> 92	$\leq$ 1
250	EDXd 1250/24.088	187430	220–240	1240–1139	47/640	0–10416	24	<4	>93	$\leq$ 1

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.		
187361	–20	+50	30	90	–30	+65	20	90	+85	IP20
187362	–20	+45	20	90	–20	+60				
187363										
187430										

Expected service life time

at operation temperatures at t_c point

Operation current	Ref. No. all types
t_c -temp	75 °C* 85 °C
hrs.	100,000 50,000

* recommended operation temperature

Product labels

VSLIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Stuttgarter Straße 61/1, 73614 Schorndorf
Electronic Controlgear for LED LED控制装置
Type ECXd145/24.085
Ref.-No. 187361
Made in China

PRI
Push-DIM
DA+ L
DA+ N
N
L

SEC =
 $U_{rated} = 24$ V
 $P_{rated} = 45$ W max
 $I_{rated} = 1.88$ A max
LED + ■
LED – ■
LED + ■
LED – ■
0.75-1.5 mm² □

$U_N = 220...240$ V~
 $f_N = 50/60$ Hz
 $I_N = 0.35$ A max
 $\lambda > 0.95$

$t_a = 50^\circ\text{C}$
 $t_c = 85^\circ\text{C}$

CE ENEC UK IEC IS 15885(PART2/SEC13) SELV R-41212997 www.bis.gov.in

VSLIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Stuttgarter Straße 61/1, 73614 Schorndorf
Electronic Controlgear for LED LED控制装置
Type ECXd180/24.086
Ref.-No. 187362
Made in China

PRI
Push-DIM
DA+ L
DA+ N
N
L

SEC =
 $U_{rated} = 24$ V
 $I_{rated} = 3.33$ A max
 $P_{rated} = 80$ W max
LED + ■
LED – ■
LED + ■
LED – ■
0.75-1.5 mm² □

$U_N = 220...240$ V~
 $f_N = 50/60$ Hz
 $I_N = 0.62$ A max
 $\lambda > 0.95$

$t_a = 45^\circ\text{C}$
 $t_c = 85^\circ\text{C}$

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VSLIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Stuttgarter Straße 61/1, 73614 Schorndorf
Electronic Controlgear for LED LED控制装置
Type ECXd1150/24.087
Ref.-No. 187363
Made in China

PRI
Push-DIM
DA+ L
DA+ N
N
L

SEC =
 $U_{rated} = 24$ V
 $P_{rated} = 150$ W max
 $I_{rated} = 6.25$ A max
LED + ■
LED – ■
LED + ■
LED – ■
0.75-1.5 mm² □

$U_N = 220...240$ V~
 $f_N = 50/60$ Hz
 $I_N = 1$ A max
 $\lambda > 0.95$

$t_a = 45^\circ\text{C}$
 $t_c = 85^\circ\text{C}$

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VSLIGHTING SOLUTIONS
Vossloh-Schwabe Deutschland GmbH
Stuttgarter Straße 61/1, 73614 Schorndorf
Electronic Controlgear for LED LED控制装置
Type EDXd1250/24.088
Ref.-No. 187430
Made in China

PRI
Push-DIM
DA+ L
DA+ N
N
L

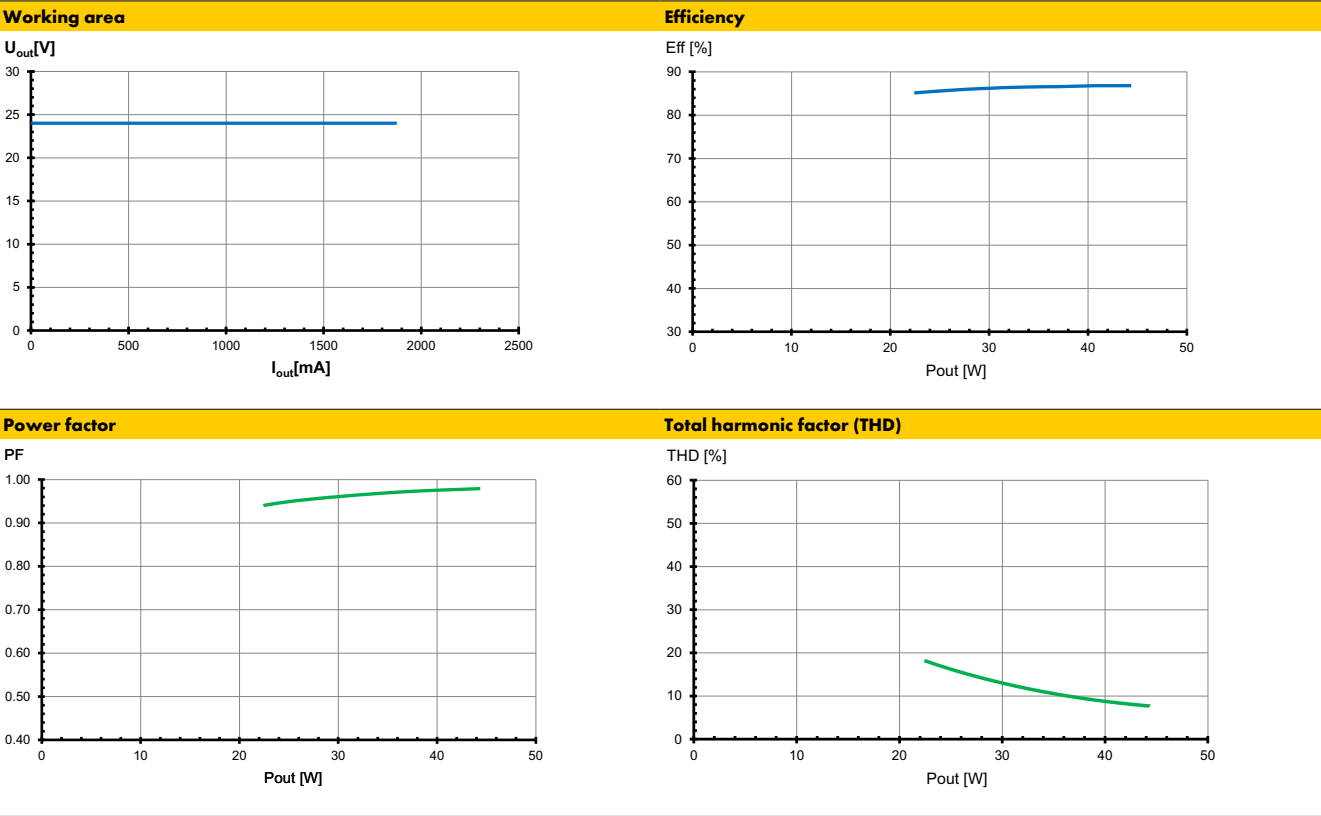
SEC =
 $U_{rated} = 24$ V
 $I_{rated} = 10.41$ A max.
 $P_{rated} = 250$ W max.
 $t_a = 45^\circ\text{C}$ $t_c = 85^\circ\text{C}$
LED + ■
LED – ■
LED + ■
LED – ■
1.0-2.5 mm² □

$U_N = 220...240$ V~
 $f_N = 50/60$ Hz
 $I_N = 1.5$ A max.
 $\lambda \geq 0.95$

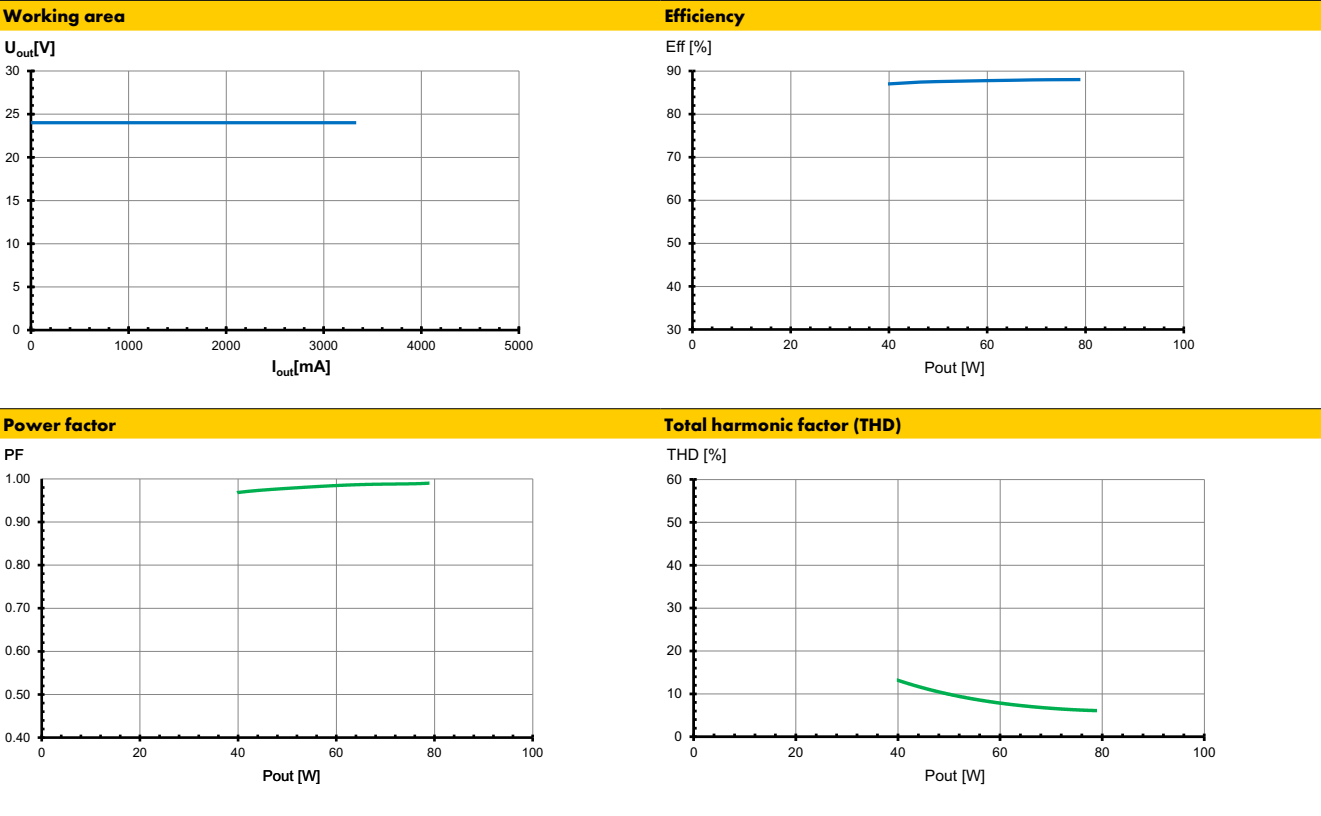
CE ENEC UK IEC IS 15885(PART2/SEC13) SELV R-41212997 www.bis.gov.in

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Typ. performance graphs for 187361 / Type EDXd 145/24.085

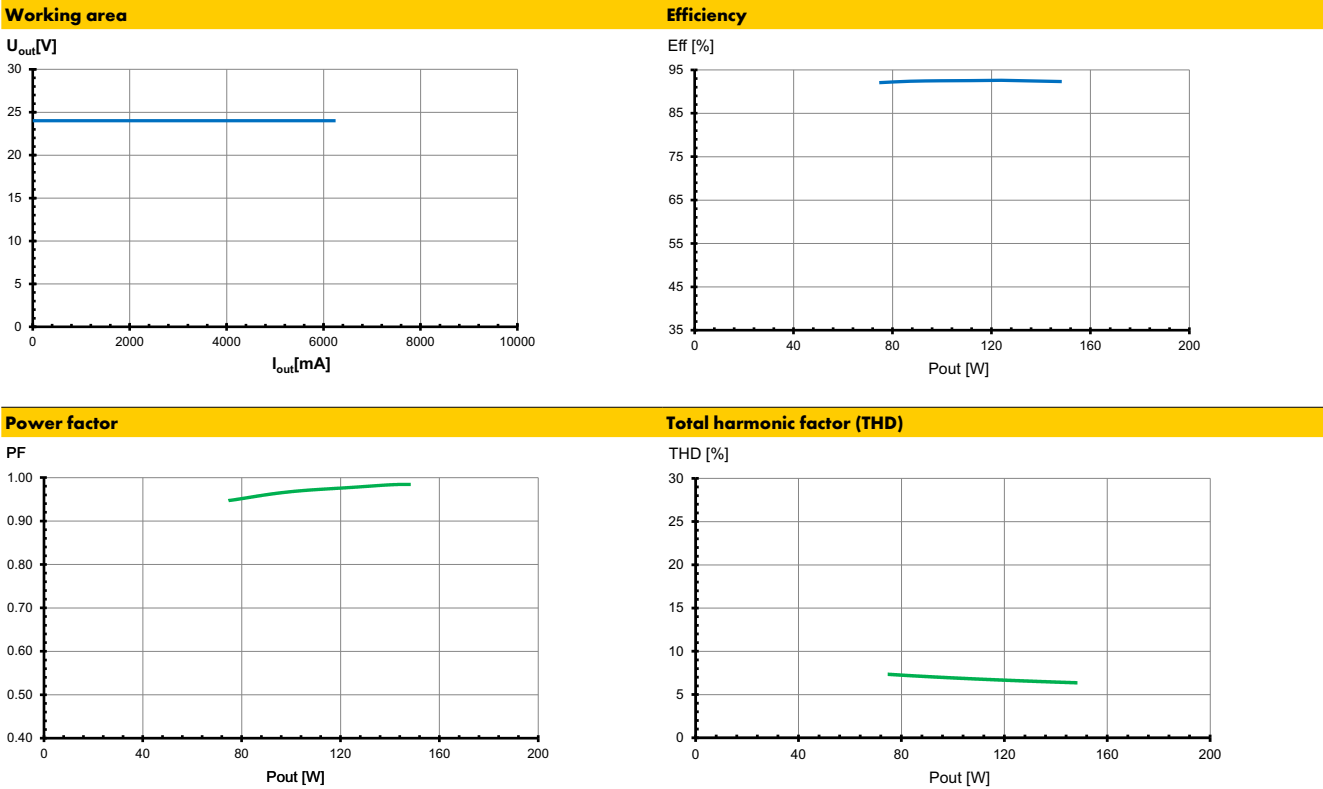


Typ. performance graphs for 187362 / Type EDXd 1250/24.088

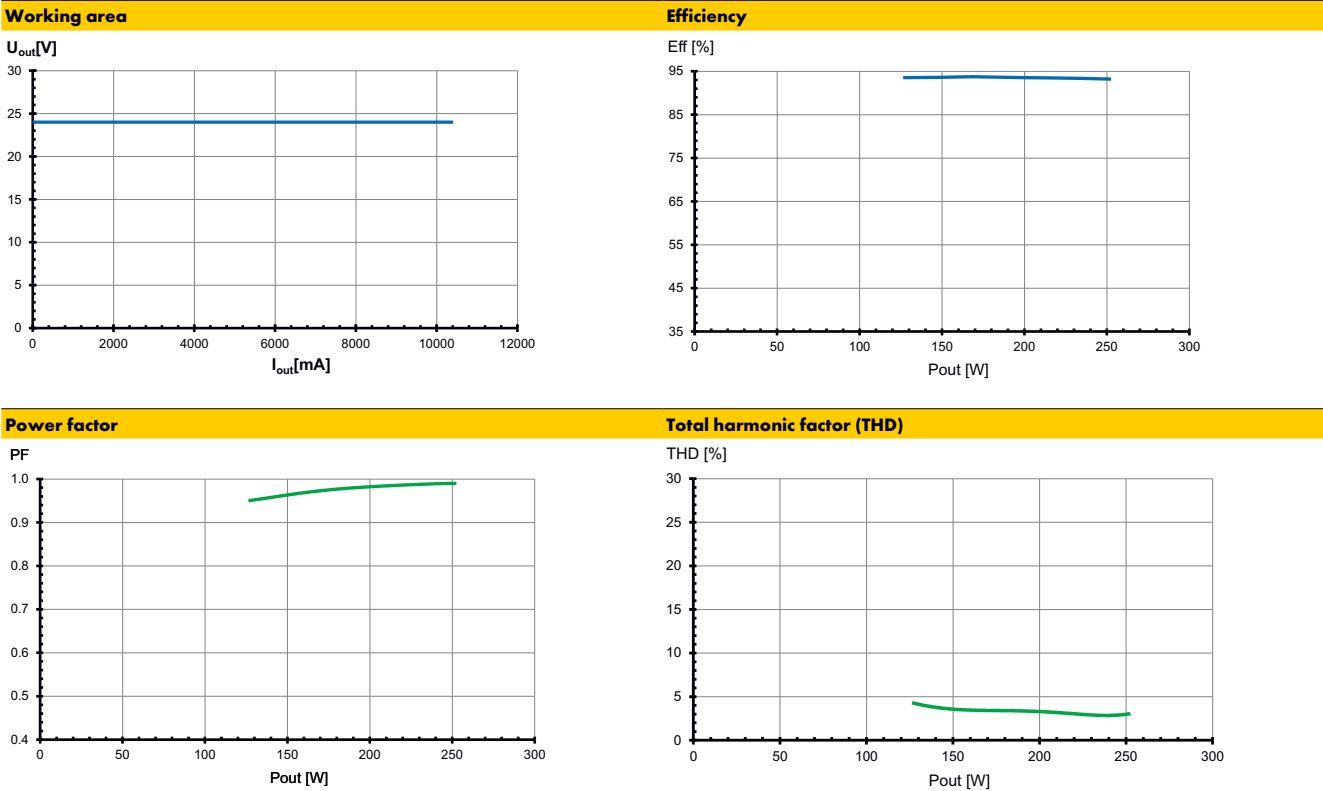


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Typ. performance graphs for 187363 / Type EDXd 1150/24.087



Typ. performance graphs for 187430 / Type EDXd 1150/24.087



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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.

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

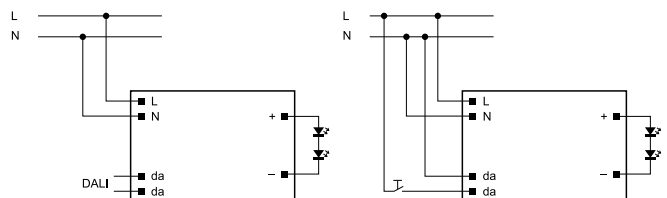
Mechanical mounting

- 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: 0.10 m recommended 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: Plug-in terminals for rigid or flexible conductors with a section of 0.5–1.5 mm²
1–2.5 mm² for 250W output
- 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
- Cord-Grip: Permissible cable jacket diameter 3–7mm for 45, 80, 150W and 2–12mm for 250W
If two cables are used in one cord-grip, cables should have same diameter

Wiring diagram:



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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
EDXd 145/24.085	187361	18	24	29	31	40	49
EDXd 180/24.086	187362	8	10	13	13	17	21
EDXd 1150/24.087	187363	4	5	6	6	8	10
EDXd 1250/24.088	187430	2	3	4	4	5	6

- 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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