

CV 24 V

DALI2



## COMFORTLINE 24 V DALI2 IP

187507, 187508, 187509

### Typical Applications

Luminaires for 24 V systems

- Industrial lighting
- Outdoor lighting
- Architectural lighting



### ComfortLine 24 V DALI2 IP

- **DIMMABLE: DALI (ED. 2)**
- **DEGREE OF PROTECTION: IP67**
- **VERY LOW RIPPLE: < 1%**
- **PRESSEMBLED CONNECTION LEADS**
- **SELV**
- **LONG SERVICE LIFE:  
UP TO 50,000 HRS.**
- **PRODUCT GUARANTEE: 5 YEARS**



## ComfortLine 24 V DALI2 IP

### Product features

- Compact casing shape IP67
- For use in applications in a power range of 45W, 80W, 150W

### Electrical features

- Mains voltage: 220–240 V ±10%
- Mains frequency: 50–60 Hz
- Power factor at full load: > 0.95
- SVM: < 0.4
- PstLM: < 1

### Safety features

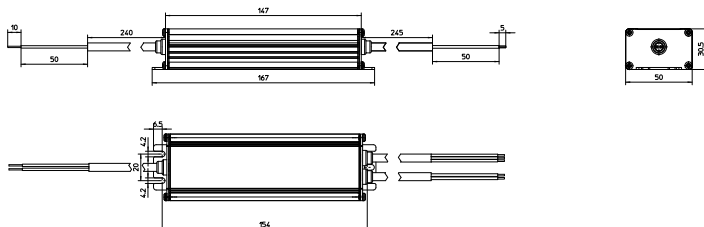
- Protection against transient main peaks
- Electronic short-circuit protection
- Overload protection: reversible
- Protection against "no load" operation
- Degree of protection: IP67
- Protection class I (metal casing)
- SELV

### Dimming

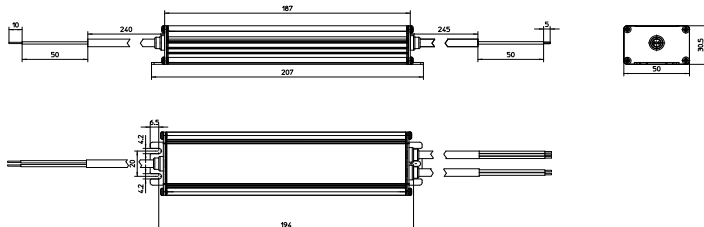
- PWM dimming > 1 kHz
- Dimming range: 1 to 100%

### Dimensions

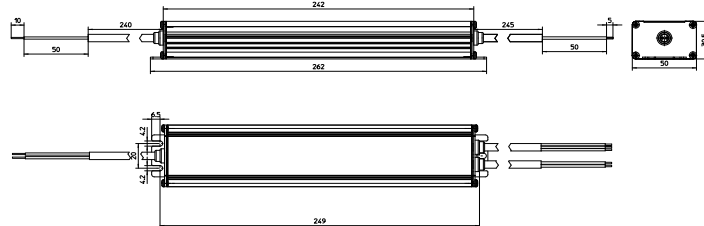
- Casing: M102
- Ref. No.: 187507
- Length: 167 mm
- Width: 50 mm
- Height: 30.5 mm



- Casing: M103
- Ref. No.: 187508
- Length: 207 mm
- Width: 50 mm
- Height: 30.5 mm



- Casing: M104
- Ref. No.: 187509
- Length: 262 mm
- Width: 50 mm
- Height: 30.5 mm



### Dimming

PWM



### Applied standards

- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 61000-3-2
- EN 62384
- EN 55015
- EN 62386 ed. part 101/102/207/251/252/253

### Packaging units

Ref. No.	Packaging unit		
	Pieces per box	Boxes per pallet	Weight g
187507	20	40	455
187508	20	40	595
187509	20	30	750



### 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](http://www.vossloh-schwabe.com)). We will be happy to send you these conditions upon request.

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



## Electrical characteristics

Max. output W	Type	Ref. No.	Voltage 50–60 Hz V	Mains current mA	Inrush current A / $\mu$ 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 145/24.099	<b>187507</b>	220–240	236–218	20 / 261	0–1881	24	< 12	> 88	$\leq$ 1
80	EDXd 180/24.100	<b>187508</b>	220–240	409–375	32 / 256	0–3334	24	< 9	> 89	$\leq$ 1
150	EDXd 1150/24.101	<b>187509</b>	220–240	762–218	48 / 406	0–6253	24	< 6	> 90	$\leq$ 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.		
187507	-20	+60	20	90	-30	+85	20	90	+85	IP67
187508	-20	+60							+85	
187509	-20	+55							+85	

## 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

**PRI** Push-DIM  
 ■ DA  $\rightarrow$  L  
 ■ Black  
 ■ DA  $\rightarrow$  N  
 ■ Red  
 ■ L  
 ■ Brown  
 ■ N  
 ■ Blue  
 ■ Y/G

**VSLIGHTING SOLUTIONS**  
 Vossloh-Schwabe Deutschland GmbH  
 Stuttgarter Straße 61/1, 73614 Schorndorf  
 Electronic Controlgear for LED  
**Type EDXd145/24.099**  
 Ref.-No. 187507 Made in China

**PRI**  $U_N = 220...240 V\sim$   
 $f_N = 50/60$  Hz  
 $I_N = 0.3$  A max.  
 $\lambda = 0.95$

**SEC**  $U_{rated} = 24 V\equiv$   
 $I_{rated} = 1.88$  A max.  
 $P_{rated} = 45$  W max.  
 $t_a = 60^\circ C$   $t_c = 85^\circ C$

**SEC** + ■ Brown - ■ Blue

**DALI2** **IP67**  $t_c$  **SELV**

**PRI** Push-DIM  
 ■ DA  $\rightarrow$  L  
 ■ Black  
 ■ DA  $\rightarrow$  N  
 ■ Red  
 ■ L  
 ■ Brown  
 ■ N  
 ■ Blue  
 ■ Y/G

**VSLIGHTING SOLUTIONS**  
 Vossloh-Schwabe Deutschland GmbH  
 Stuttgarter Straße 61/1, 73614 Schorndorf  
 Electronic Controlgear for LED  
**Type EDXd180/24.100**  
 Ref.-No. 187508 Made in China

**PRI**  $U_N = 220...240 V\sim$   
 $f_N = 50/60$  Hz  
 $I_N = 0.6$  A max.  
 $\lambda = 0.95$

**SEC**  $U_{rated} = 24 V\equiv$   
 $I_{rated} = 3.33$  A max.  
 $P_{rated} = 80$  W max.  
 $t_a = 60^\circ C$   $t_c = 85^\circ C$

**SEC** + ■ Brown - ■ Blue

**DALI2** **IP67**  $t_c$  **SELV**

**PRI** Push-DIM  
 ■ DA  $\rightarrow$  L  
 ■ Black  
 ■ DA  $\rightarrow$  N  
 ■ Red  
 ■ L  
 ■ Brown  
 ■ N  
 ■ Blue  
 ■ Y/G

**VSLIGHTING SOLUTIONS**  
 Vossloh-Schwabe Deutschland GmbH  
 Stuttgarter Straße 61/1, 73614 Schorndorf  
 Electronic Controlgear for LED  
**Type EDXd1150/24.101**  
 Ref.-No. 187509 Made in China

**PRI**  $U_N = 220...240 V\sim$   
 $f_N = 50/60$  Hz  
 $I_N = 0.9$  A max.  
 $\lambda = 0.95$

**SEC**  $U_{rated} = 24 V\equiv$   
 $I_{rated} = 6.25$  A max.  $t_c$   
 $P_{rated} = 150$  W max.  
 $t_a = 55^\circ C$   $t_c = 85^\circ C$

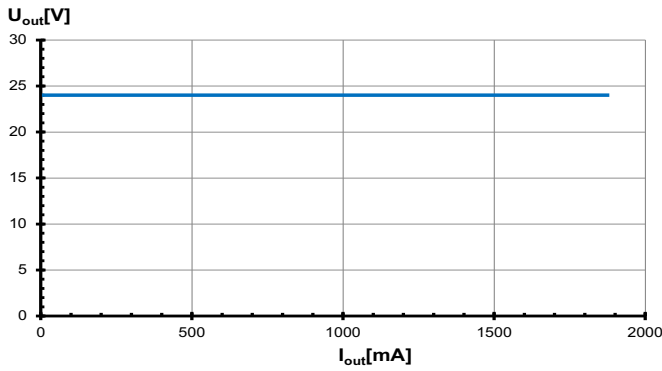
**SEC** + ■ Brown - ■ Blue

**DALI2** **IP67**  $t_c$  **SELV**

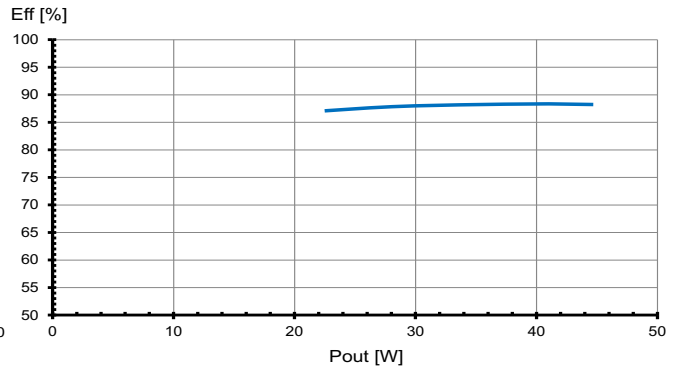
The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

## Typ. performance graphs for 187507 / Type EDXd 145/24.099

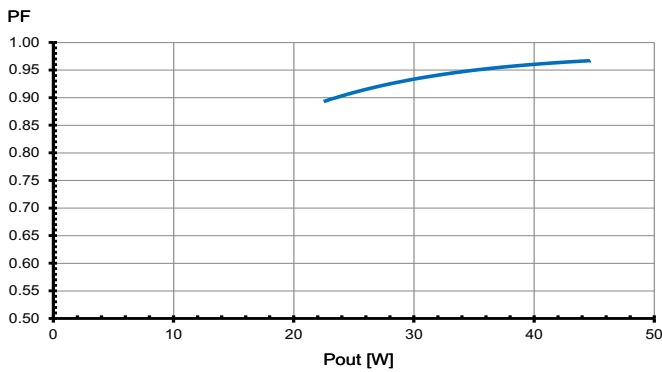
### Working area



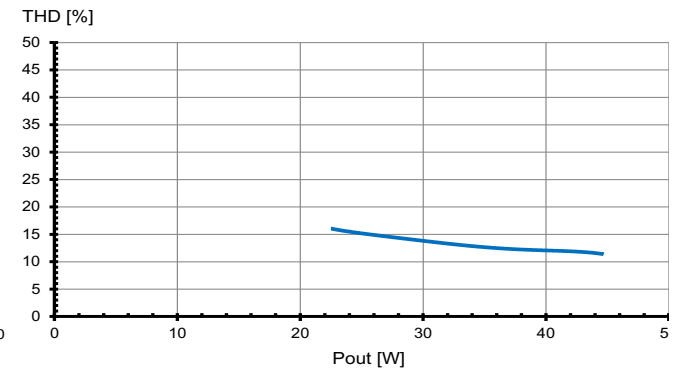
### Efficiency



### Power factor

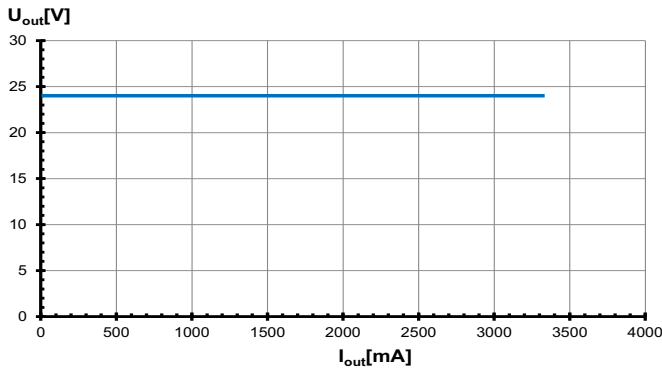


### Total harmonic factor (THD)

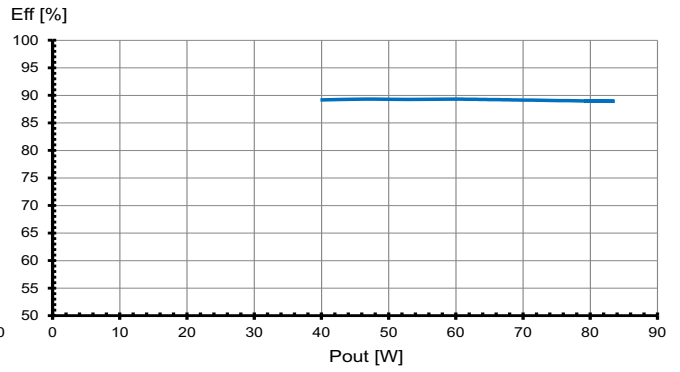


## Typ. performance graphs for 187508 / Type EDXd 180/24.100

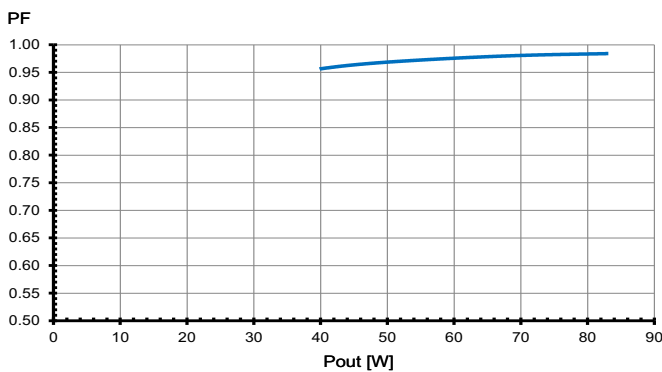
### Working area



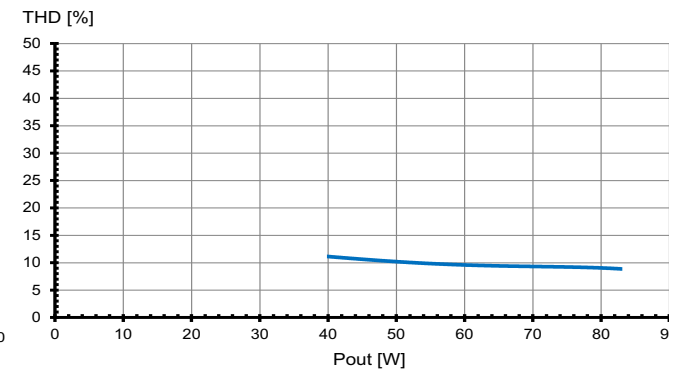
### Efficiency



### Power factor

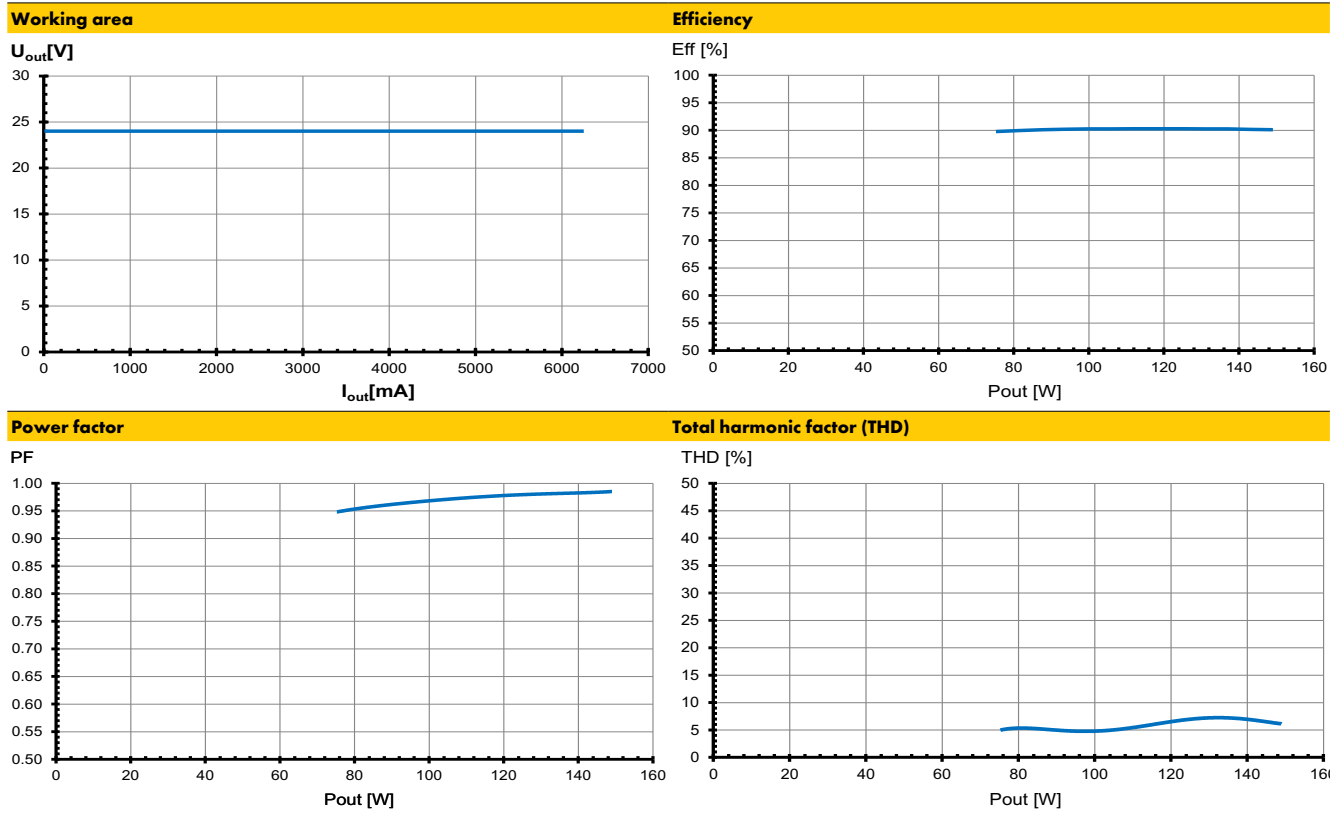


### Total harmonic factor (THD)



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## Typ. performance graphs for 187509 / Type EDXd 1150/24.101



### Safety features

- Transient mains peaks protection:
  - Values are in compliance with EN 61547 (interference immunity).
  - Surges between L/N: up to 4 kV
  - Surges between L–N/PE: up to 6 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

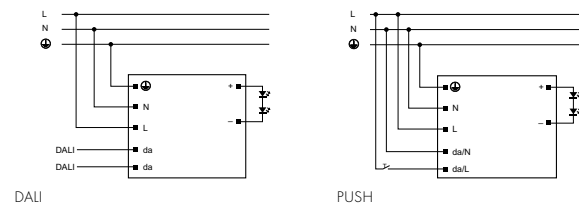
### Mechanical mounting

- Mounting position: Drivers are suitable for independent operation.
- Mounting location: Independent LED drivers do not need to be integrated into a casing.
- Degree of protection: IP67
- 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

- 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.

### Wiring diagram:



Note: Max. quantity of drivers at one push button: 30

- Corridor Function: Enter corridor mode: Long push (>120s)  
Exit corridor mode: Short push 5 times in 3 seconds  
(For detailed description of corridor functionality please contact your responsible sales person)

### 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 mm<sup>2</sup>] 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 145/24.099	<b>187507</b>	15	20	25	26	34	42
EDXd 180/24.100	<b>187508</b>	9	12	15	16	21	26
EDXd 1150/24.101	<b>187509</b>	4	5	6	6	8	10

- 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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