

# CC COMPACT DIP SWITCH DIMMABLE



## PRIMELINE DIP SWITCH C-R3 LOOP DALI2

**187217, 187218**

### Typical Applications

- Office lighting
- Retail lighting
- Residential lighting



**PUSH**

### PrimeLine DIP switch C-R3 loop DALI2

- **SELECTABLE OUTPUT CURRENT VIA DIP SWITCH**
- **DIMMABLE: DALI (ED. 2)**
- **VERY LOW RIPPLE CURRENT: < 3%**
- **THROUGH-WIRING**
- **SUITABLE FOR EMERGENCY ESCAPE LIGHTING SYSTEMS ACC. TO EN 50172**
- **WITH INTEGRATED CORD GRIP FOR INDEPENDENT OPERATION**
- **SELV**
- **LONG SERVICE LIFE: UP TO 100,000 HRS.**
- **PRODUCT GUARANTEE: 5 YEARS**



## PrimeLine DIP switch C-R3 loop DALI2

### Product features

- Compact casing shape
- With integrated cord grip
- For through-wiring

### Functions

- Selectable current output by DIP switch.
- The output current can be freely adjusted between 300 mA and 1050 mA (187217) or between 650 mA and 1400 mA (187218).
- Suitable for central battery system for emergency lighting acc. to EN 50172

### Electrical features

- Mains voltage: 220–240 V  $\pm 10\%$
- Mains frequency: 50–60 Hz
- DC operation: 176–275 V, 0 Hz
- Push-in terminals: primary 0.75–2.5 mm<sup>2</sup> and secondary 0.5–1.5 mm<sup>2</sup>
- Power factor at full load: 0.95
- Standby losses: < 0.5 W
- Open circuit voltage (U<sub>max.</sub>): 59 V
- Secondary side switching of LED modules is not allowed.

### Dimming

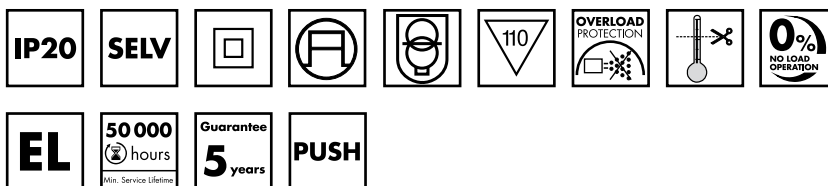
- Dimming range: 1 to 100%
- If no dimming interface is connected, brightness will stay at 100%.

### Safety features

- Protection against transient main peaks up to 2 kV (between L and N) or up to 4 kV (between L/N–PE)
- Electronic short-circuit protection
- Overload protection
- Overtemperature protection
- Protection against "no load" operation
- Degree of protection: IP20
- Protection class II
- SELV

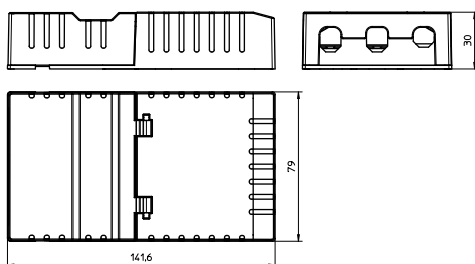
### Packaging units

Ref. No.	Packaging unit		
	Pieces per box	Boxes per pallet	Weight g
187217	30	40	171
187218	30	40	188



### Dimensions

- Casing: K3.3
- Length: 141.6 mm
- Width: 79 mm
- Height: 30 mm



### Applied standards

- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 61000-3-2:14
- EN 61000-3-3:13
- EN 2442-3:2014+A11:2017
- EN 55015
- IEC 62386 ed. 2 part 101/102/207/251/252/253
- VDE 0710-T14



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

### Dimming

Analogue



# LED Drivers – Primeline DIP switch C-R3 loop DALI2

## 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 ( $\pm$ 7.5%)	Voltage output DC (V)	THD %	Efficiency at full load % (230 V)	Ripple < 1000 Hz %
40	ECXd 1050.560	<b>187217</b>	220–240	260–196	5 / 50	300–1050	10–54	< 11	> 90	< 3
52	ECXd 1400.561	<b>187218</b>	220–240	330–256	5 / 50	650–1400	8–42	< 16	> 90	< 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.		
187217	-20	+50	5	95	-40	+50	5	95	+85	IP20
187218	-20	+45							+90	

## Expected service life time

at operation temperatures at  $t_c$  point

Operation current	Ref. No.	
	All	
All	75 °C	85 °C
hrs.	100,000	50,000

## Product labels



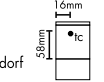
Vossloh-Schwabe Deutschland GmbH  
Stuttgarter Straße 61/1, 73614 Schorndorf  
Electronic Converter for LED

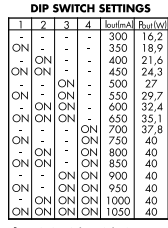
**Type ECXd 1050.560**  
Ref.No. 187217  
Made in Italy

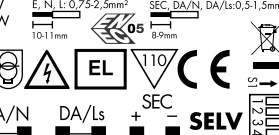
**PRI**  
 $U_n = 220...240V\sim$   
 $I_{max} = 200\text{ mA}$   
 $f_n = 50...60\text{ Hz}$   
 $\lambda = 0,95$


**SEC**  
 $I_{rated} = 300...1050\text{ mA}$   
 $U_{rated} = 10...54V$   
 $U_{out} = 59\text{ V}$   
 $P_{max} = 40\text{ W}$

Range of application  
DC 176...275V;  
 $I_{max}=260\text{mA}$

  
 $t_c = 85^\circ\text{C}$   
 $t_a = 20...50^\circ\text{C}$







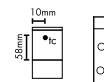
Vossloh-Schwabe Deutschland GmbH  
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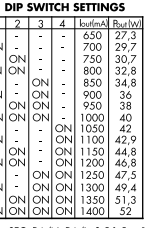
**Type ECXd 1400.561**  
Ref.No. 187218  
Made in Italy

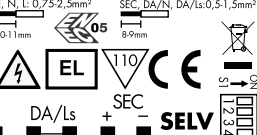
**PRI**  
 $U_n = 220...240V\sim$   
 $I_{max} = 300\text{ mA}$   
 $f_n = 50...60\text{ Hz}$   
 $\lambda = 0,95$

**SEC**  
 $I_{rated} = 650...1400\text{ mA}$   
 $U_{rated} = 8...42V$   
 $U_{out} = 59\text{ V}$   
 $P_m = 52\text{ W}$

Range of application  
DC 176...275V;  
 $I_{max}=330\text{mA}$

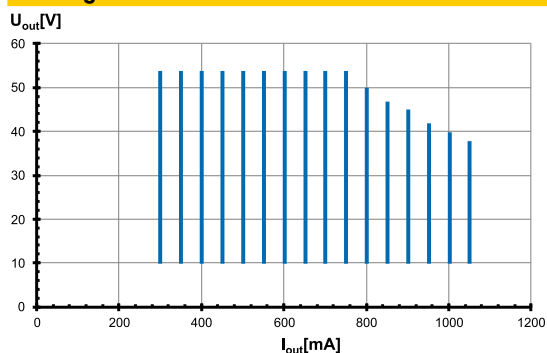
  
 $t_c = 90^\circ\text{C}$   
 $t_a = 20...45^\circ\text{C}$



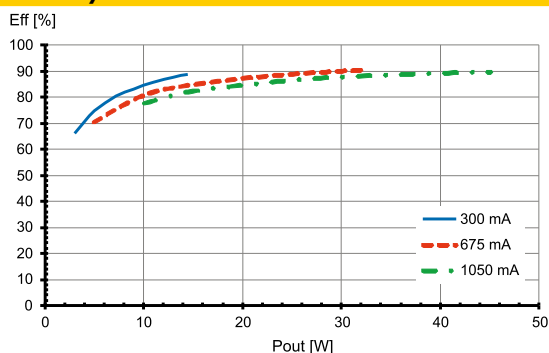


## Typ. performance graphs for 187217 / Typ ECXd 1050.560

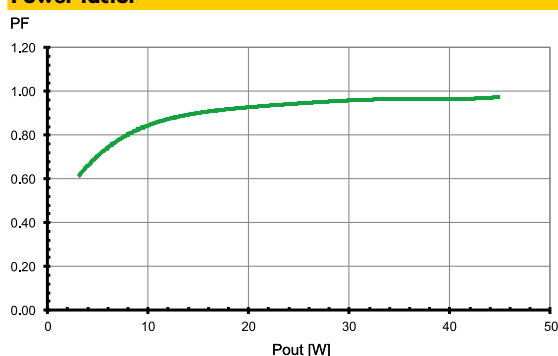
### Working area



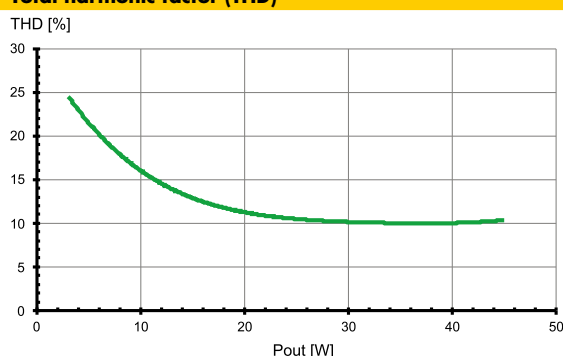
### Efficiency



### Power factor

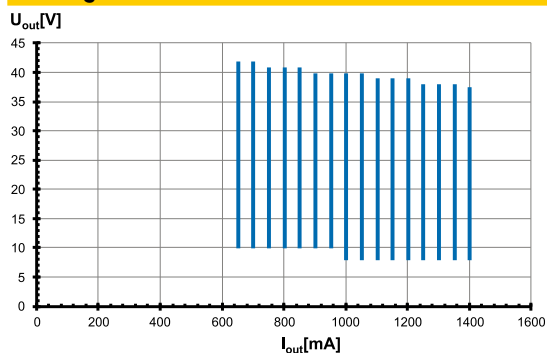


### Total harmonic factor (THD)

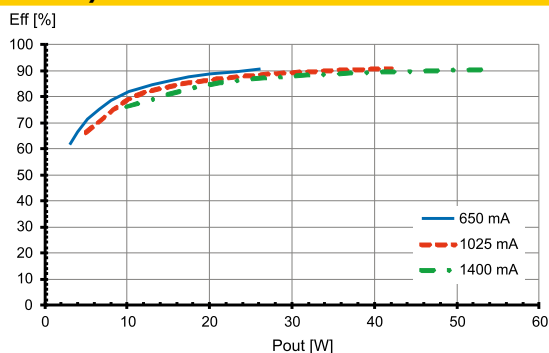


## Typ. performance graphs for 187218 / Type ECXd 1400.561

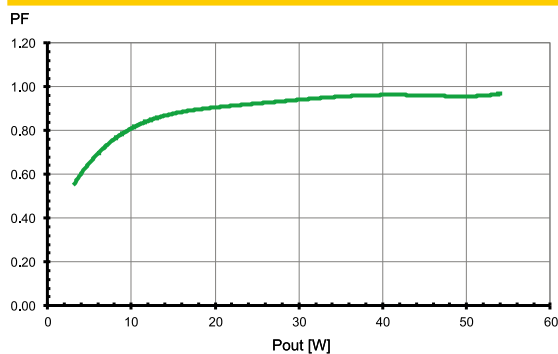
### Working area



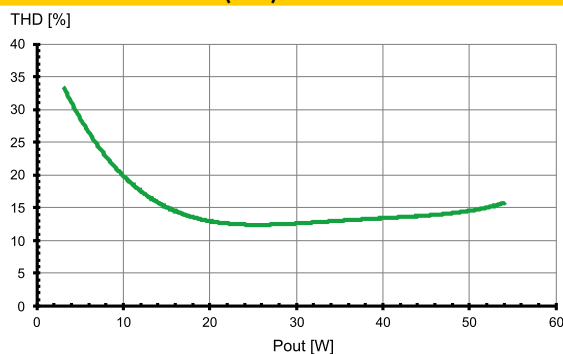
### Efficiency



### Power factor



### Total harmonic factor (THD)



## Safety functions

- Transient mains peaks protection:  
Values are in compliance with EN 61547  
(interference immunity).  
Surges protection between L-N: up to 2 kV  
Surge protection between L/N-PE: up to 4 kV
- Short-circuit protection:  
The control gear is protected against  
permanent short-circuit with automatic restart  
function.
- Overload protection: The control gears have overload protection  
due to limitation of DC output voltage 59 V.  
Please check before switch-on mains power  
supply that the selected LED load is suitable  
(see Electrical Characteristics on data sheet).
- Overheating: The control gears have overheating protection.  
In case of overheating the control gear will  
shut down. For restart switch of the mains for  
1 min. and start again.
- 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.

## DC and emergency lighting operation

The control gears are suitable for direct voltage operation (DC).  
Reliable DC operation is guaranteed if the specified working area  
of LED driver is maintained.

- Light level at DC operation (EOFx):  
100 % (not adjustable)
- DC range: 176–275 V
- DC operation: 3 hrs. (acc. to EN 50172)

## 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

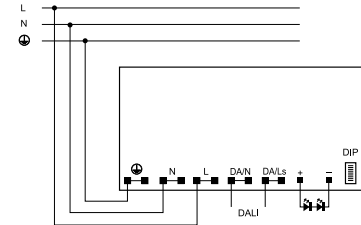
### Mechanical mounting

- Mounting position: Any position
- 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  $\geq 4$  (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

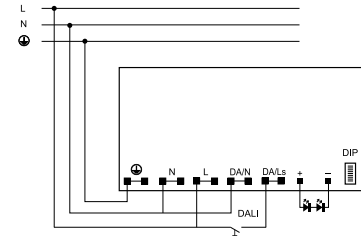
### Electrical installation

- Connection terminals: Push-in terminals for rigid or flexible conductors with a section of 0.75–2.5 mm<sup>2</sup> for primary side and 0.5–1.5 mm<sup>2</sup> for secondary side
- Stripped length: 10–11 mm (for primary side) and 8–9 mm (for secondary side)
- 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 for independent drivers: 1 m
- Polarity: Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- Parallel connection: At secondary side 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: DALI:



PUSH:



### 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		B 10 A	B 16 A	B 20 A
ECXd 1050.560	187217	32	62	78
ECXd 1400.561	187218	32	62	78
Automatic cut-out type C		C 10 A	C 16 A	C 20 A
ECXd 1050.560	187217	52	85	104
ECXd 1400.561	187218	52	85	104

- To limit capacitive inrush currents the current carrying capacity of each circuit breaker (fuse) can be increased with the help of our ESB (Ref. No.: 149820, 149821, 149822) inrush current limiters.