

CC COMPACT DIP SWITCH DIMMABLE



COMFORTLINE DIP SWITCH C-R4 DALI2

187270

Typical Applications

- Office lighting
- Retail lighting
- Residential lighting



ComfortLine DIP switch C-R4 DALI2

- **SELECTABLE OUTPUT CURRENT VIA DIP SWITCH**
- **DIMMABLE: DALI (ED. 2)**
- **VERY LOW RIPPLE CURRENT: < 4%**
- **WITH INTEGRATED CORD GRIP FOR INDEPENDENT OPERATION**
- **SELV**
- **LONG SERVICE LIFE: UP TO 100,000 HRS.**
- **PRODUCT GUARANTEE: 5 YEARS**



ComfortLine DIP switch C-R4 DALI2

Product features

- Compact casing shape
- With integrated cord grip

Functions

- Selectable current output by DIP switch.
- The output current can be freely adjusted between 350 mA, 500 mA, 600 mA and 700 mA.

Electrical features

- Mains voltage: 220–240 V \pm 10%
- Mains frequency: 50–60 Hz
- Push-in terminals: primary 0.5–1.5 mm² and secondary 0.5–1.5 mm²
- Power factor at full load: 0.95
- Standby losses: < 0.5 W
- Open circuit voltage (U_{max.}): 60 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)
- Electronic short-circuit protection
- Overload protection
- Overtemperature protection
- Protection against "no load" operation
- Degree of protection: IP20
- Protection class II
- SELV

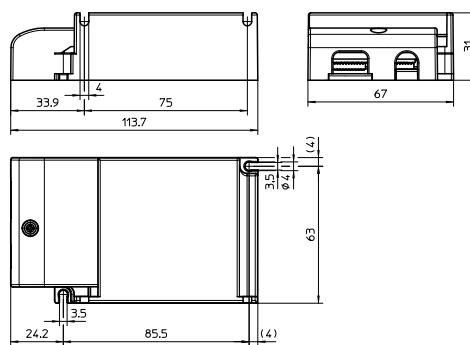
Packaging units

| Ref. No. | Packaging unit | | |
|----------|----------------|------------------|----------|
| | Pieces per box | Boxes per pallet | Weight g |
| 187270 | 20 | 165 | 133 |



Dimensions

- Casing: K96
- Length: 113.7 mm
- Width: 67 mm
- Height: 31 mm



Applied standards

- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 61000-3-2:14
- EN 61000-3-3:13
- EN 55015
- IEC 62386 ed. 2 part 101/102/207/251/252/253



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.

Dimming

Analogue



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 DIP switch C-R4 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 (\pm 7.5%) | Voltage output DC (V) | THD % | Efficiency at full load % (230 V) | Ripple < 100 Hz % |
|---------------|--------------|---------------|--------------------|------------------|----------------------------|------------------------------------|-----------------------|-------|-----------------------------------|-------------------|
| 32 | ECXd 700.596 | 187270 | 220–240 | 170–157 | 11 / 260 | 350–700 | 23–46 | < 20 | > 87 | < 4 |

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. | | |
| 187270 | -15 | +45 | 20 | 60 | -15 | +45 | 10 | 95 | +75 | IP20 |

Expected service life time

at operation temperatures at t_c point

| Operation current | Ref. No. | |
|-------------------|----------|--------|
| | 187270 | |
| t_c | 75 °C | 85 °C |
| hrs. | 100,000 | 50,000 |

Product labels

VS LIGHTING SOLUTIONS • t_c

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

Type ECXd 700.596

Ref.No. 187270
Made in China

| U _N | I _N | f _N | λ | U _o |
|----------------|----------------|----------------|-----------|----------------|
| 220-240Vac | 0,17A | 50/60Hz | 0,9C | 23-46Vdc |

| U _o max | I _o | P _o max | t _a | t _c |
|--------------------|----------------|--------------------|----------------|----------------|
| 60Vdc | 700mA | 32W | -15...45°C | 75°C |

| DIP Switch settings | I _o |
|----------------------------|----------------|
| I _{out} Pin1 Pin2 | |
| 350mA OFF OFF | |
| 500mA ON OFF | |
| 600mA OFF ON | |
| 700mA ON ON | |

0,5-1,5 □
18.9mm

SEC

0 1 2
N L

0,75-1,5 □
18.9mm

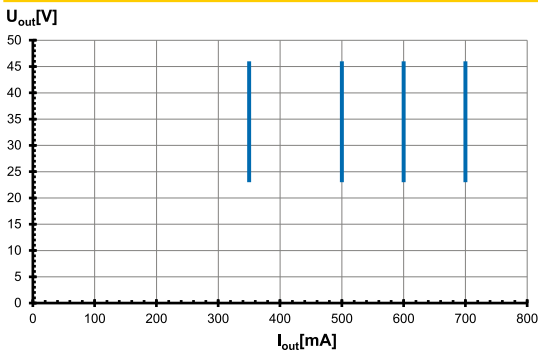
DA/N
DA/L
N
L

UK CA CE EAC DALI2 PUSH

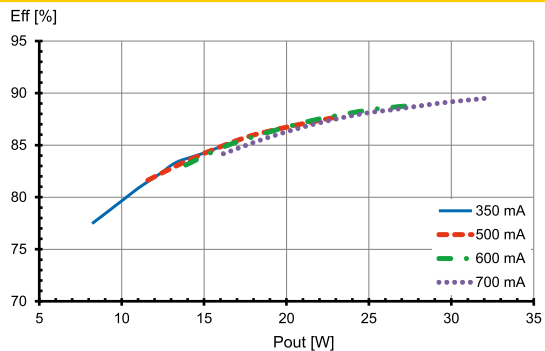
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Typ. performance graphs for 187270 / Type ECXd 700.596

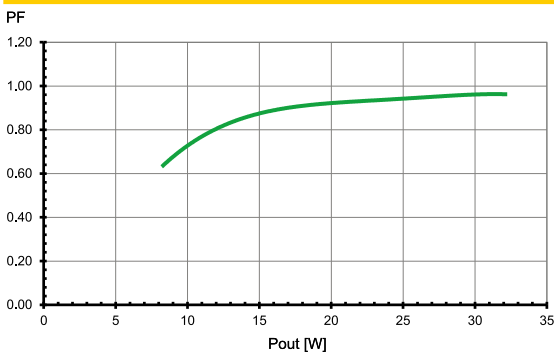
Working area



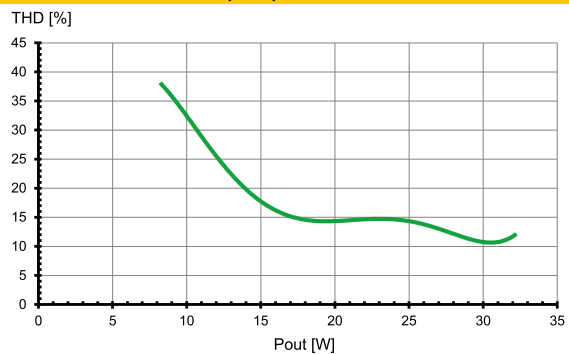
Efficiency



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
- 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 60 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.

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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

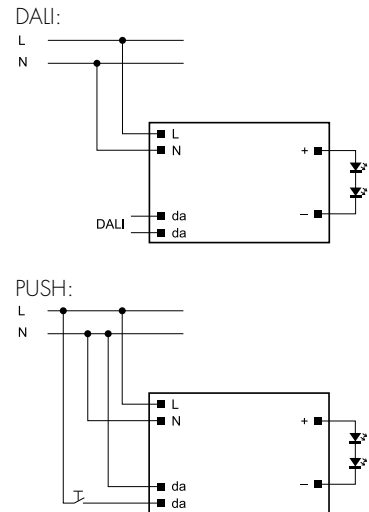
- Mounting position: Any position
- Mounting location: Independent LED drivers do not need to be integrated into a casing.
Installation in outdoor luminaires: degree of protection for luminaire with water protection rate ≥ 4 (e.g. IP54 required).
- Degree of protection: IP20
- Clearance: Min. 0.10 m 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 0.5–1.5 mm² for primary side and 0.5–1.5 mm² for secondary side
- Stripped length: 8–9 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 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:



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 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 | | | | |
| ECXd 700.569 | 187270 | B 10 A | B 16 A | B 20 A |
| Automatic cut-out type C | | | | |
| ECXd 700.569 | 187270 | C 10 A | C 16 A | C 20 A |

- 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.

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