

# CC TRACK DIP SWITCH



## COMFORTLINE DIP SWITCH UT-234

**186952, 186953**

### Typical Applications

For common track systems

- Retail lighting

### ComfortLine DIP switch UT-234

- **SELECTABLE OUTPUT CURRENT VIA DIP SWITCH**
- **VERY LOW RIPPLE CURRENT: < 3%**
- **COMPATIBLE WITH DIFFERENT 3-PHASE TRACK SYSTEMS**
- **SELV**
- **LONG SERVICE LIFE: UP TO 100,000 HRS.**
- **PRODUCT GUARANTEE: 5 YEARS**



## ComfortLine DIP switch UT-234

### Product features

- Adapter with integrated LED driver electronics for common 3-phase track systems (compatibility see page 5)
- Available in two different casing colours: white and black

### Functions

- Selectable current output by DIP switches
- The output current can be freely adjusted between 1050 mA.

### Electrical features

- Mains voltage: 220–240 V  $\pm$ 10%
- Mains frequency: 50–60 Hz
- DC operation: 174–275 V, 0 Hz
- Push-in terminals: 0.2–0.75 mm<sup>2</sup>
- Power factor at full load: > 0.95
- Open circuit voltage (U<sub>max.</sub>): 59 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
- Overtemperature protection
- Protection against overload
- Degree of protection: IP20
- Protection class II
- SELV

### Packaging units

Type	Packaging unit		
	Pieces per box	Boxes per pallet	Weight g
ECXe 1050.403	48	36	130

### 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.



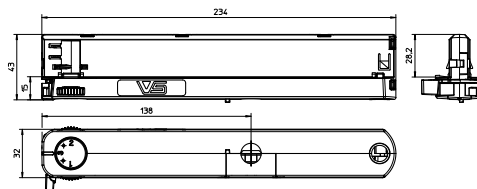
### Applied standards

- EN 61347-1
- EN 61347-2-13
- EN 61547
- EN 61000-3-2
- EN 62384
- EN 55015



### Dimensions

- Casing: UT-234
- Length: 234 mm
- Width: 32 mm
- Height: 43 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 DIP switch UT-234

## Electrical characteristics

Max. output W	Type	Ref. No.	Casing colour	Voltage 50–60 Hz V	Mains current mA	Inrush current A / $\mu$ s	Current output DC mA ( $\pm$ 5%)	Voltage output DC (V)	THD at full load % (230 V)	Efficiency at full load % (230 V)	Ripple 100 Hz %
40	ECXe 1050.403	<b>186952</b>	white	220–240	220	5 / 50	675–1050	5–42	< 15	> 86	< 3
		<b>186953</b>	black								

## Maximum ratings

Exceeding the maximum ratings can lead to reduction of service life or destruction of the drivers.

Type	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.		
ECXe 1050.403	0	+35	5	95	-40	+100	5	95	+85	IP20

## Expected service life time

at operation temperatures at  $t_c$  point

Operation current	Type ECE 1050.403	
All	75 °C	85 °C
hrs.	100,000	50,000

## Product labels

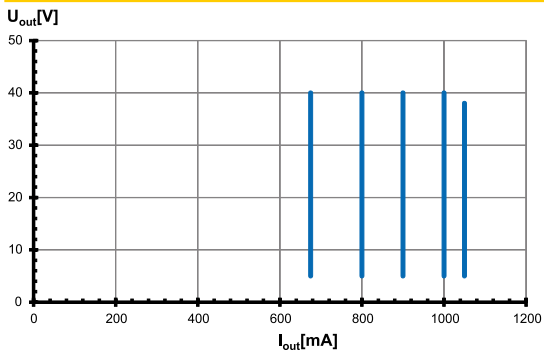
<b>VS LIGHTING SOLUTIONS</b> Vossloh-Schwabe Deutschland GmbH Hohe Steinert 8, D-58509 Lüdenscheid Electronic Converter for LED <b>Type ECE 1050.403</b> Ref.-No. 186952 Made in Italy	<b>PRI</b> U <sub>N</sub> = 220...240V~ I <sub>N</sub> = 220mA f <sub>N</sub> = 50...60Hz $\lambda$ = 0,9 C - 0,9S	  SELV	<b>SEC rated = 675...1050 mA</b> U = 5...42V $\approx$ 50V U <sub>max</sub> = 59 V P <sub>max</sub> = 40 W	1	2	3	4	I <sub>out</sub> (mA)	U <sub>out</sub> (V)	1	2	3	4	I <sub>out</sub> (mA)	U <sub>out</sub> (V)
				-	-	-	-	675	28	ON	-	-	875	35	-
-	-	-	-	700	29	ON	-	-	900	36	-	-	925	37	
-	-	-	-	725	30	ON	-	-	925	37	-	-	950	38	
-	-	-	-	750	31	ON	-	-	950	38	-	-	975	39	
-	-	-	-	775	32	ON	ON	-	975	39	-	-	1000	40	
-	-	-	-	800	33	ON	ON	-	1000	40	-	-	1025	40	
-	-	-	-	825	33	ON	ON	ON	1025	40	-	-	1050	40	
-	-	-	-	850	34	ON	ON	ON	1050	40	-	-	-	-	

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-	-	-	-	825	33	ON	ON	ON	1025	40	-	-	1050	40	
-	-	-	-	850	34	ON	ON	ON	1050	40	-	-	-	-	

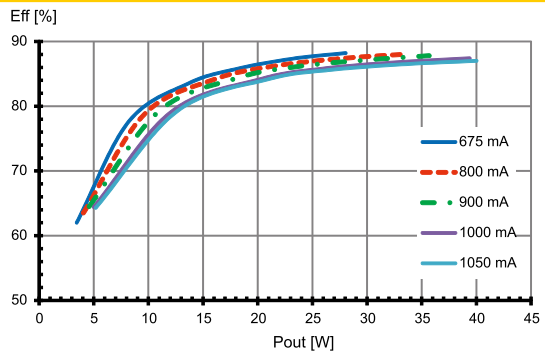
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## Typ. performance graphs for 186952, 186953 / Type ECXe 1050.403

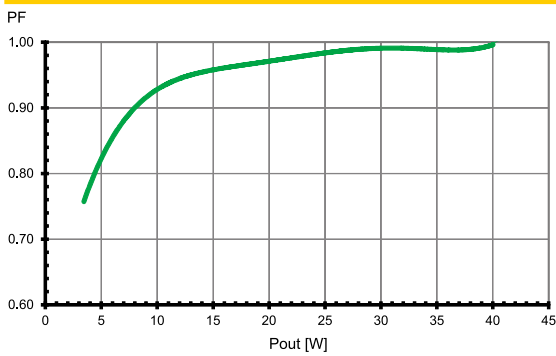
### Working area



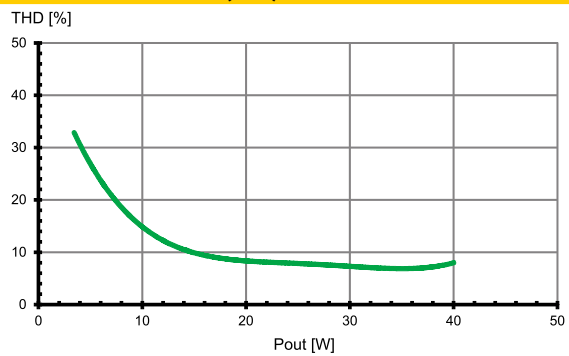
### Efficiency



### Power factor



### Total harmonic factor (THD)



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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 acc. to IEC 61347-1 C 5a).  
In case of overheating the control gear will not shut down and the service life time will reduce.
- 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.

## Compatibility of track rails

Suitable for following tracks

- Eutrac
- Globaltrac
- Stucchi

Not suitable for

- IG DALI

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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

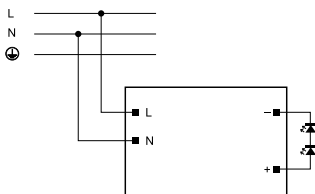
- DIN VDE 0100
- EN 60598-1

### Mechanical mounting

- Mounting position and location:
  - Common track system
- 3-phase option: 3 phases are selectable with a rotary switch. The neutral is in a fixed position in the track.
- Degree of protection: IP20
- Clearance: Min. 0.10 m from walls, ceilings and insulation
- Fastening: Double mechanical locking for perfect track fixing
- Load: max. up to 50 N

### Electrical installation

- Connection terminals: Push-in terminals for rigid or flexible conductors with a section of 0.2–0.75 mm<sup>2</sup>
- Stripped length: 8.5–10 mm
- Polarity: Please ensure the correct polarity of the leads prior to commissioning. Reversed polarity can destroy the modules.
- Through-wiring: Is not allowed.
- Secondary load: The sum of forward voltages of LED loads has to be within the tolerances which are mentioned in the table "Electrical Characteristics" in this 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 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.		
<b>Automatic cut-out type B</b>		B 10 A	B 16 A	B 20 A
ECXe 1050.403	<b>186952, 186953</b>	31	50	62
<b>Automatic cut-out type C</b>		C 10 A	C 16 A	C 20 A
ECXe 1050.403	<b>186952, 186953</b>	31	50	62

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