

CC TRACK DIP SWITCH GEN. 5



EASYLINE DIP SWITCH UT-145 GEN. 5

**187752, 187753, 187754,
187755, 187756, 187757,
187758, 187759, 187760,
187761, 187762, 187763,
187764, 187765, 187766**

Typical Applications

For common track systems

- Retail lighting

EasyLine DIP switch UT-145 Gen. 5

- **SELECTABLE OUTPUT CURRENT VIA DIP SWITCH**
- **COMPATIBLE WITH DIFFERENT 3-PHASE TRACK SYSTEMS**
- **SELV**
- **LONG SERVICE LIFE:
UP TO 100.000 HRS.**
- **PRODUCT GUARANTEE: 5 YEARS**
- **HIGH EFFICACY: UP TO 94.5%**



EasyLine DIP switch UT-145 Gen. 5

Product features

- Adapter with integrated LED driver electronics for common 3-phase track systems (compatibility see page 7)
- Available in three different casing colours: white (RAL 9003), black (RAL 9005) and grey (RAL 7040)

Functions

- Selectable current output by DIP switches
- The output current can be freely adjusted between 125 mA and 1050 mA over the complete product range

Electrical features

- Mains voltage: 220–240 V $\pm 10\%$
- Mains frequency: 50–60 Hz
- Power factor at full load: > 0.95
- Open circuit voltage ($U_{max.}$): 55 V
- Secondary side switching of LED modules is not allowed.
- SVM: < 0.4
- PstLM: < 1

Safety features

- Protection against transient main peaks up to 1 kV (between L and N)
- Electronic short-circuit protection
- Overload protection
- Degree of protection: IP20
- Protection class II
- SELV

Packaging units

Type	Packaging unit		
	Pieces per box	Boxes per pallet	Weight g
ECXe 300.847	50	55	109
ECXe 400.848	50	55	110
ECXe 600.849	50	55	110
ECXe 800.850	50	55	111
ECXe 1050.851	50	55	111

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.

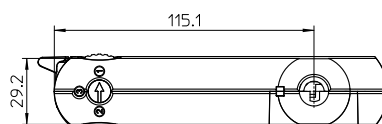
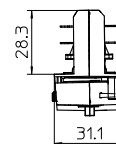
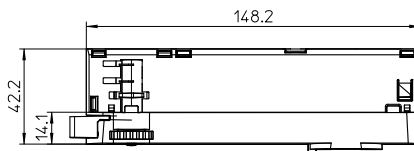


Applied standards

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

Dimensions

Type	Casing	Length mm	Width mm	Height (mm) visible
All types	UT-145	148.2	31.1	42.2 14.1

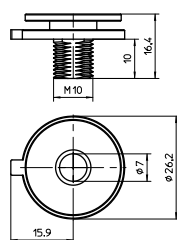


Connector nipple for track adapter

Material: zinc-die-cast

Ref. No.: 187360

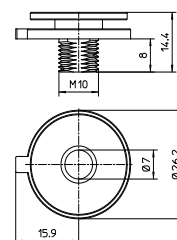
M10x1, length: 10 mm



Material: zinc-die-cast

Ref. No.: 187437

M10x1, length: 8 mm



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.	Casing colour	Voltage 50–60 Hz V	Mains current mA	Inrush current A / μ 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 %
13	ECXe 300.847	187752	white (RAL 9003)	220–240	70–50	10.8 / 130	150/200/250/300	24–42	8	93	3
		187753	black (RAL 9005)								
		187754	grey (RAL 7040)								
17	ECXe 400.848	187755	white (RAL 9003)	220–240	90–65	12.6 / 196	250/300/350/400	24–42	7	93	3
		187756	black (RAL 9005)								
		187757	grey (RAL 7040)								
25	ECXe 600.849	187758	white (RAL 9003)	220–240	130–100	14 / 194	450/500/550/600	24–42	4	94.5	3
		187759	black (RAL 9005)								
		187760	grey (RAL 7040)								
34	ECXe 800.850	187761	white (RAL 9003)	220–240	175–140	23.4 / 248	650/700/750/800	24–42	8	94.5	3
		187762	black (RAL 9005)								
		187763	grey (RAL 7040)								
44	ECXe 1050.851	187764	white (RAL 9003)	220–240	225–180	23.6 / 245	900/950/1000/1050	24–42	6	94.5	3
		187765	black (RAL 9005)								
		187766	grey (RAL 7040)								

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 300.847	-20	+35	20	60	-40	+85	5	95	+70	IP20
ECXe 400.848										
ECXe 600.849										
ECXe 800.850										
ECXe 1050.851										

Expected service life time

at operation temperatures at t_c point

Operation current	Ref. No.	
	All types	
All	60 °C	70 °C
hrs.	100.000	50.000

DIP switch settings

ECXe 300.847					
Pin 1	Pin 2	Output W	Current mA	Voltage V	Factory settings (mA)
OFF	OFF	6.5	150	24-42	300
OFF	ON	8.4	200		
ON	OFF	10.5	250		
ON	ON	12.5	300		

ECXe 400.848					
Pin 1	Pin 2	Output W	Current mA	Voltage V	Factory settings (mA)
OFF	OFF	10.5	250	24-42	400
OFF	ON	12.5	300		
ON	OFF	14.7	350		
ON	ON	16.8	400		

ECXe 600.849					
Pin 1	Pin 2	Output W	Current mA	Voltage V	Factory settings (mA)
OFF	OFF	18.9	450	24-42	600
OFF	ON	21.0	500		
ON	OFF	23.1	550		
ON	ON	25.2	600		

ECXe 800.850					
Pin 1	Pin 2	Output W	Current mA	Voltage V	Factory settings (mA)
OFF	OFF	27.9	650	24-42	800
OFF	ON	29.4	700		
ON	OFF	31.5	750		
ON	ON	33.6	800		

ECXe 1050.851					
Pin 1	Pin 2	Output W	Current mA	Voltage V	Factory settings (mA)
OFF	OFF	37.8	900	24-42	1050
OFF	ON	39.9	950		
ON	OFF	42.0	1000		
ON	ON	44.1	1050		

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Product labels

ECXe 300.847

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

ECXe 300.847
Ref.-No. 187752
Made in China

PRI
UN = 220...240 V ~
In = 75...25 mA
fn = 50/60 Hz
λ = 0.78C-0.90C
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
6.5	150	-	-
8.4	200	-	-
10.5	250	ON	-
12.5	300	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

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

ECXe 300.847
Ref.-No. 187753
Made in China

PRI
UN = 220...240 V ~
In = 75...25 mA
fn = 50/60 Hz
λ = 0.78C-0.90C
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
6.5	150	-	-
8.4	200	-	-
10.5	250	ON	-
12.5	300	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

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

ECXe 300.847
Ref.-No. 187754
Made in China

PRI
UN = 220...240 V ~
In = 75...25 mA
fn = 50/60 Hz
λ = 0.78C-0.90C
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
6.5	150	-	-
8.4	200	-	-
10.5	250	ON	-
12.5	300	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

ECXe 800.850

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

ECXe 800.850
Ref.-No. 187761
Made in China

PRI
UN = 220...240 V ~
In = 175...80 mA
fn = 50/60 Hz
λ = 0.86C-0.95
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
27.9	650	-	-
29.4	700	-	-
31.5	750	ON	-
33.6	800	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

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

ECXe 800.850
Ref.-No. 187762
Made in China

PRI
UN = 220...240 V ~
In = 175...80 mA
fn = 50/60 Hz
λ = 0.86C-0.95
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
27.9	650	-	-
29.4	700	-	-
31.5	750	ON	-
33.6	800	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

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

ECXe 800.850
Ref.-No. 187763
Made in China

PRI
UN = 220...240 V ~
In = 175...80 mA
fn = 50/60 Hz
λ = 0.86C-0.95
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
27.9	650	-	-
29.4	700	-	-
31.5	750	ON	-
33.6	800	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

ECXe 400.848

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

ECXe 400.848
Ref.-No. 187755
Made in China

PRI
UN = 220...240 V ~
In = 90...35 mA
fn = 50/60 Hz
λ = 0.80C-0.92C
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
10.5	250	-	-
12.5	300	-	-
14.7	350	ON	-
16.8	400	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

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

ECXe 400.848
Ref.-No. 187756
Made in China

PRI
UN = 220...240 V ~
In = 90...35 mA
fn = 50/60 Hz
λ = 0.80C-0.92C
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
10.5	250	-	-
12.5	300	-	-
14.7	350	ON	-
16.8	400	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

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

ECXe 400.848
Ref.-No. 187757
Made in China

PRI
UN = 220...240 V ~
In = 90...35 mA
fn = 50/60 Hz
λ = 0.80C-0.92C
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
10.5	250	-	-
12.5	300	-	-
14.7	350	ON	-
16.8	400	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

ECXe 1050.851

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

ECXe 1050.851
Ref.-No. 187764
Made in China

PRI
UN = 220...240 V ~
In = 225...170 mA
fn = 50/60 Hz
λ = 0.85C-0.96
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
37.8	900	-	-
39.9	950	-	-
42.0	1000	ON	-
44.1	1050	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

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

ECXe 1050.851
Ref.-No. 187765
Made in China

PRI
UN = 220...240 V ~
In = 225...170 mA
fn = 50/60 Hz
λ = 0.85C-0.96
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
37.8	900	-	-
39.9	950	-	-
42.0	1000	ON	-
44.1	1050	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

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

ECXe 1050.851
Ref.-No. 187766
Made in China

PRI
UN = 220...240 V ~
In = 225...170 mA
fn = 50/60 Hz
λ = 0.85C-0.96
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
37.8	900	-	-
39.9	950	-	-
42.0	1000	ON	-
44.1	1050	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

ECXe 600.849

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

ECXe 600.849
Ref.-No. 187758
Made in China

PRI
UN = 220...240 V ~
In = 135...85 mA
fn = 50/60 Hz
λ = 0.76C-0.95
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
18.9	450	-	-
21.0	500	-	-
23.1	550	ON	-
25.2	600	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

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

ECXe 600.849
Ref.-No. 187759
Made in China

PRI
UN = 220...240 V ~
In = 135...85 mA
fn = 50/60 Hz
λ = 0.76C-0.95
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
18.9	450	-	-
21.0	500	-	-
23.1	550	ON	-
25.2	600	ON	ON

CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

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

ECXe 600.849
Ref.-No. 187760
Made in China

PRI
UN = 220...240 V ~
In = 135...85 mA
fn = 50/60 Hz
λ = 0.76C-0.95
Uoutput=24...42V ~
Uout = 59 V ~ Max
ta=35 °C
tc=70 °C

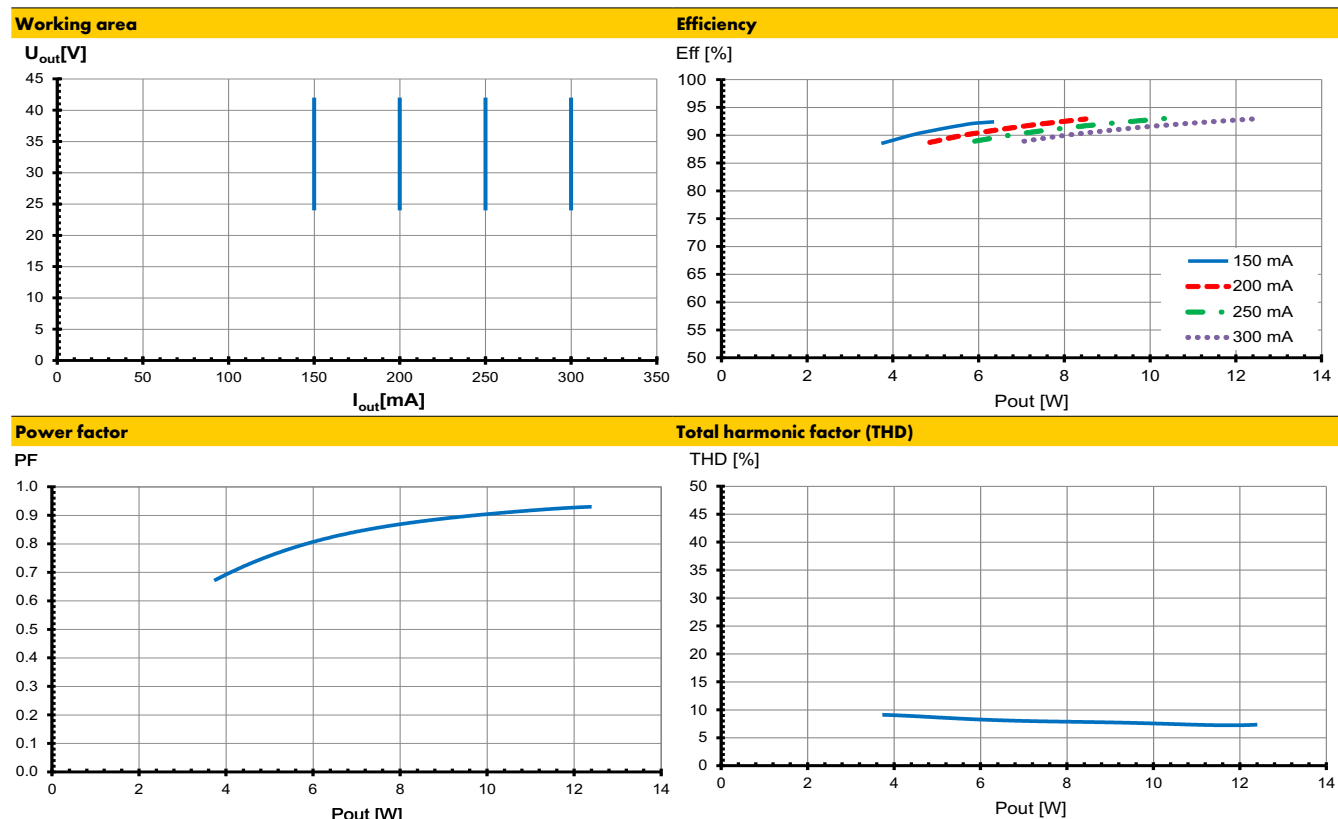
SELV
ON
OFF

Rated (W)	Rated (mA)	1	2
18.9	450	-	-
21.0	500	-	-
23.1	550	ON	-
25.2	600	ON	ON

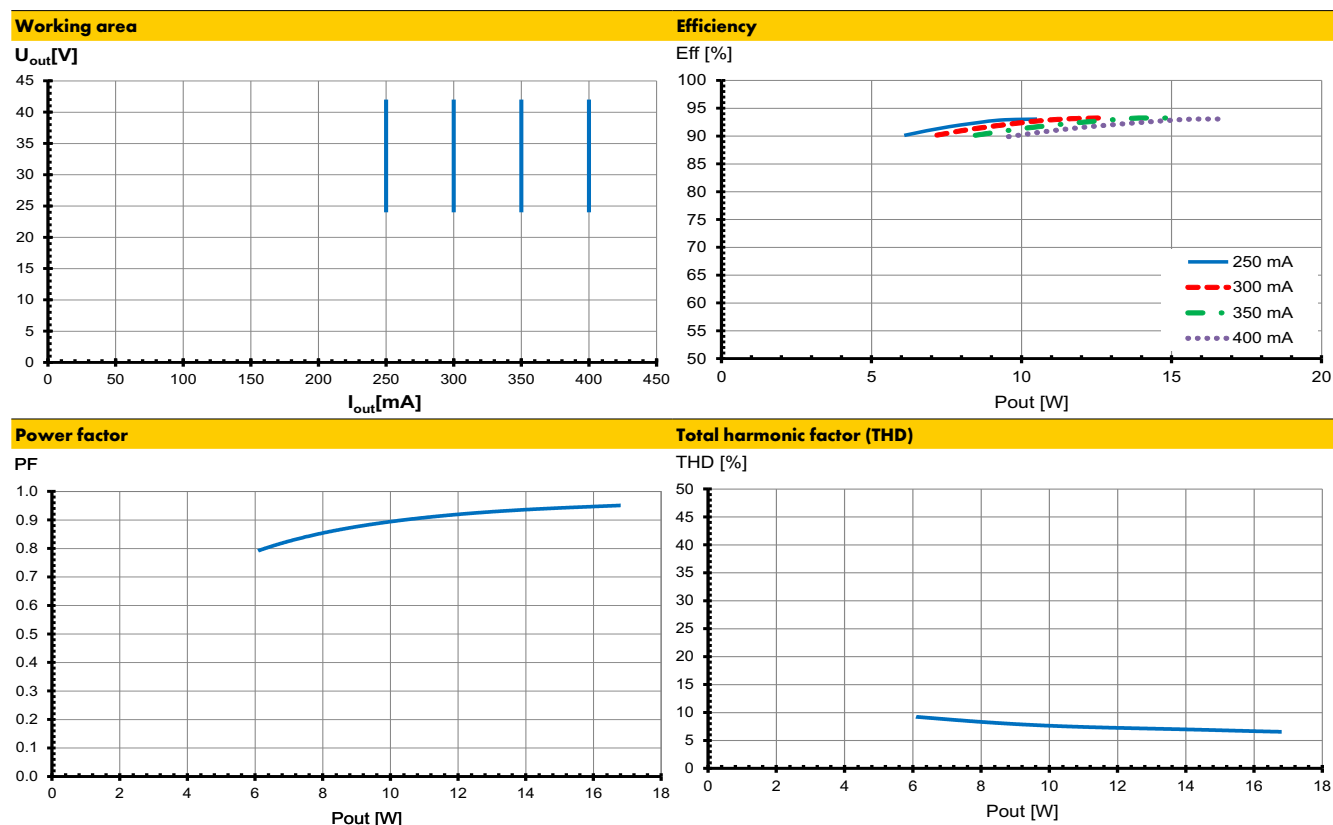
CE, RoHS, WEEE, SELV, ON/OFF, 110, 25, 10, 10, 10, 10

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 187752, 187753, 187754 / Type ECXe 300.847

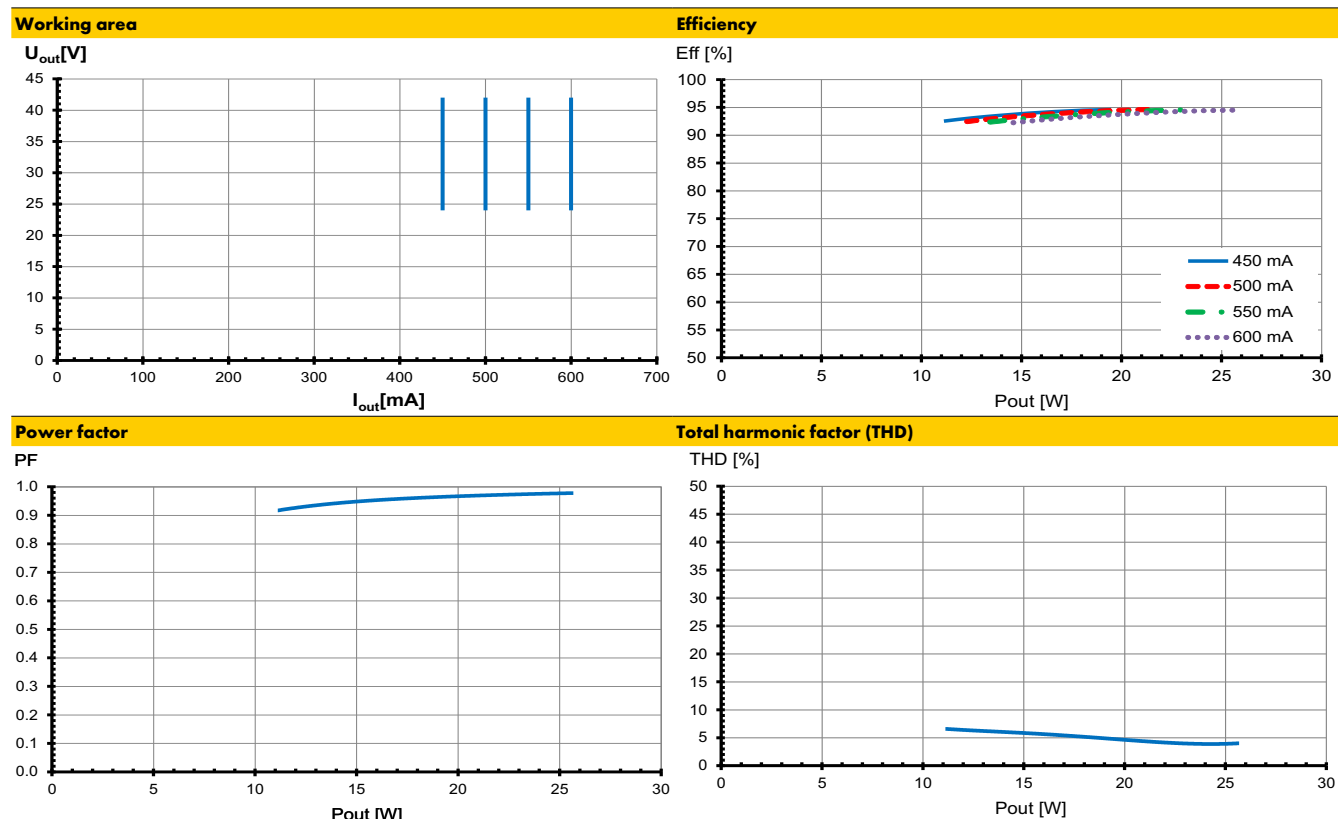


Typ. performance graphs for 187755, 187756, 187757 / Type ECXe 400.848

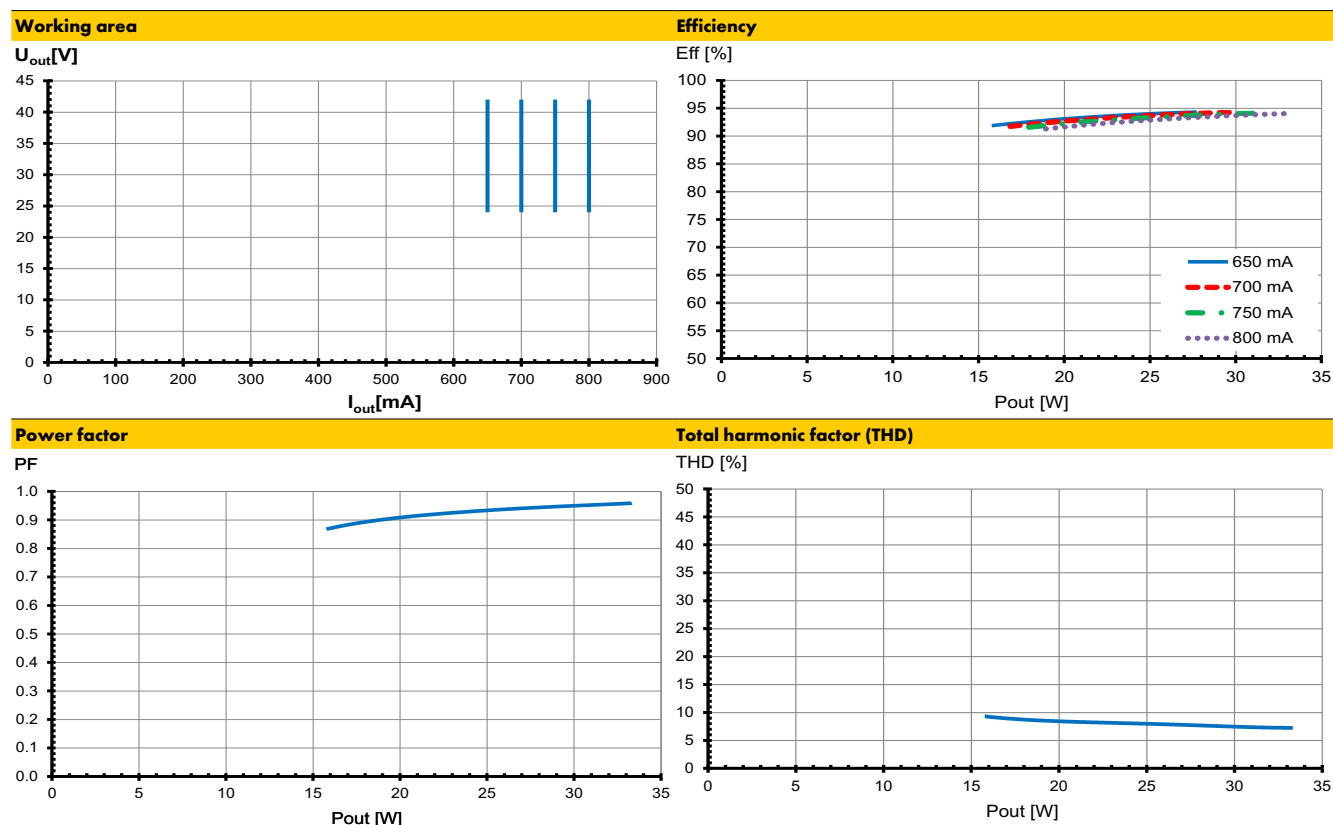


The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

Typ. performance graphs for 187758, 187759, 187760 / Type ECXe 600.849

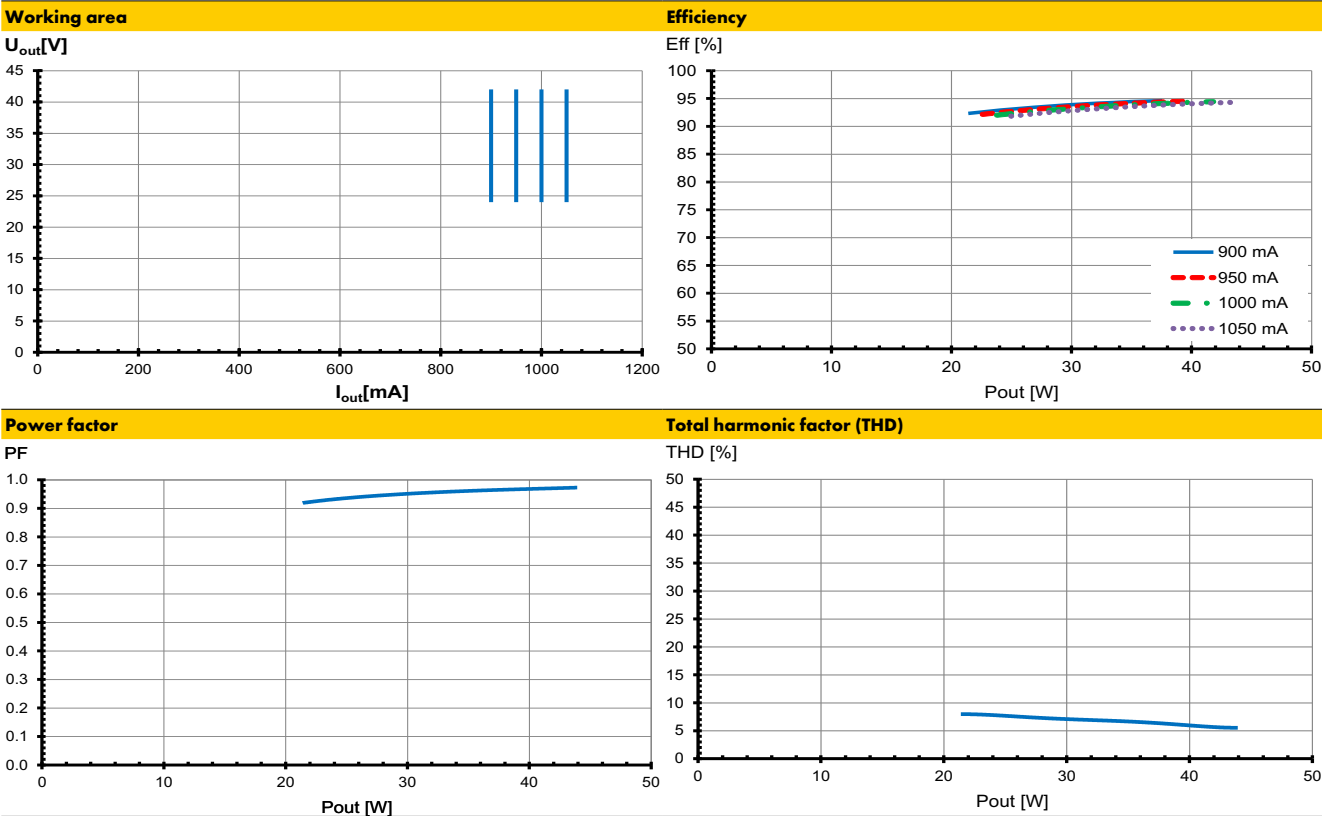


Typ. performance graphs for 187761, 187762, 187763 / Type ECXe 800.850



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 187764, 187765, 187766 / Type ECXe 1050.851



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 shut down 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 shut down and auto resume after temperature problem is removed.

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

Tested at the following tracks (3-phase, without DALI)

Manufacturer	Type	System	Horizontal Operation Recommended	Vertical Operation Recommended
EUTRAC	2510x	3P	Yes	No
Stucchi	9000xx Series	3P	Yes	No
Nordic Aluminium	Global XTS4&XTSF4	3P	Yes	Yes
Unipro	T32	3P	Yes	No
Powergear	Pro-0610	3P	Yes	Yes
Zumtobel	280 174	3P	Yes	No

Vossloh-Schwabe does not guarantee the compatibility of the tracks and the track-adaptor, because manufacturing tolerances of the tracks or changes made at the tracks by the manufacturer could affect the compatibility between the tracks and the adaptor.

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

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

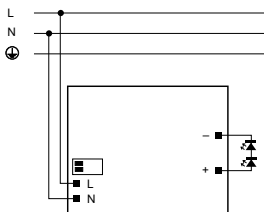
- DIN VDE 0100
- EN 60598-1

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
- Fastening: Double mechanical locking for perfect track fixing
- Load: max. up to 50 Nm

Electrical installation

- Connection terminals: Push-in terminals for rigid or flexible conductors with a section of 0.2–0.75 mm²
- 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 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
ECXe 300.847	187752	59	77	95	99	129	159
ECXe 300.847	187753	59	77	95	99	129	159
ECXe 300.847	187754	59	77	95	99	129	159
ECXe 400.848	187755	33	43	53	55	71	88
ECXe 400.848	187756	33	43	53	55	71	88
ECXe 400.848	187757	33	43	53	55	71	88
ECXe 600.849	187758	30	39	48	50	65	80
ECXe 600.849	187759	30	39	48	50	65	80
ECXe 600.849	187760	30	39	48	50	65	80
ECXe 800.850	187761	13	18	22	23	30	37
ECXe 800.850	187762	13	18	22	23	30	37
ECXe 800.850	187763	13	18	22	23	30	37
ECXe 1050.851	187764	13	18	22	23	30	37
ECXe 1050.851	187765	13	18	22	23	30	37
ECXe 1050.851	187766	13	18	22	23	30	37

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