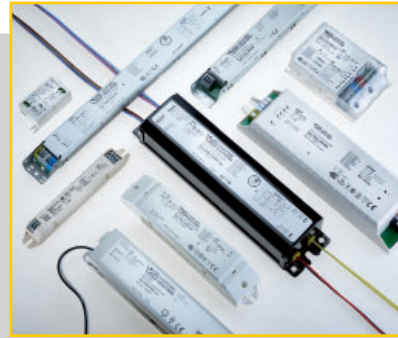


LEDLINE ECX

ELECTRONIC CONSTANT CURRENT DRIVERS



LED CONSTANT CURRENT DRIVERS

Electronic converters for LED modules operated with constant current

To ensure the safe operation of LEDs that are wired in series, the operating current must be limited to a constant value by the LED driver,

Light-emitting diodes are semiconductor devices with a light-emitting p-n junction, Due to the specific diode characteristics, the current can only flow through an LED in one direction, Coupled with the special properties of a semiconductor, this non-linear behaviour can increase the current and power uptake of an LED as it heats up,

If this effect is not limited, uncontrolled heating can finally destroy the semiconductor junction, For this reason, VS recommends using an external constant current driver to operate all constant current driven LED modules, To ensure that the same current flows through every LED, constant current driven LED modules can only be wired in series,

The constant current source has to be selected to suit the respective application, i.e, it must supply the required current and also provide sufficient voltage for the LED string,

The number of VS LED modules that can be connected to a single operating device is dependent on the forward voltage of the respective modules,

Product Classification and Overview of LED Drivers

The electronic constant current drivers are optimised to operate constant current driven LED modules, Before connecting LED modules ensure that the power supply is disconnected from mains,

Product guarantee

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.

Most drivers are designed for DC-operation (mains frequency: 0 Hz) and can be used for emergency power supplies,

Primeline
Programmability, intelligent functions,
maximum flexibility

ComfortLine
Convenient, intelligent functions

EasyLine
Focus on core functions, cost-efficient

Product overview by main application fields								
Main application field	Capacity range VV	Output current DC mA	Output voltage DC V	Ref. No.	Version	Current setting	Dimming	Max. service life time (hrs.)
Office	6/10/14	150/250/350	17-40	186530	EasyLine	Push-in terminal	—	50,000
	14	350	2-40	186229	ComfortLine	—	—	100,000
	15/18/21	500/600/700	17-30	186529	EasyLine	Push-in terminal	—	50,000
	27.5/33/38.5	125/150/175	110-220*	186486	ComfortLine	Push-in terminal	—	100,000
	2x14	2x250	160-120	186656	ComfortLine	Push-in terminal	—	100,000
	28.5	500	19-57	186554	ComfortLine	—	—	100,000
	35	500	30-70	186504	EasyLine	—	—	50,000
	4x9	4x60	110-150	186384	ComfortLine	—	DALI, PUSH	100,000
			110-150	186305	ComfortLine	—	—	100,000
	38	500	38-76	186714	EasyLine	—	—	50,000
	40	100-400	30-120*	186585	ComfortLine	LEDset	—	100,000
			30-70*	186586	ComfortLine	LEDset	—	100,000
			28-114*	186444	ComfortLine	Push-in terminal	—	100,000
	2x20	2x350	17-57	186407	ComfortLine	—	1-10 V	100,000
				186406	ComfortLine	—	—	100,000
	42	350-700	34-120*	186446, 186575, 186576	Primeline	Programmable	DALI, PUSH	100,000
				186565	ComfortLine	Resistor	DALI, PUSH	100,000
			350	186414	EasyLine	—	—	50,000
	44/47/47	200/225/250	94-220*	186487	ComfortLine	Push-in terminal	—	100,000
	45	100-400	30-130	186697	ComfortLine	NFC	—	100,000
			65-130	186713	EasyLine	—	50,000	
			30-70	186698	ComfortLine	NFC	—	100,000
			33-65	186715	EasyLine	—	50,000	
	46.8	275/300/325	72-170*	186488	ComfortLine	Push-in terminal	—	100,000
	47	250	84-188	186712	EasyLine	—	50,000	
	2x28.5/2x40	2x500/2x700	17-57	186410	ComfortLine	Dip switch	1-10 V	100,000
				186409	ComfortLine	Dip switch	—	100,000
	54	700	39-78	186716	EasyLine	—	50,000	
	60	700	46-86	186429	EasyLine	—	50,000	
	65	350	94-188	186760	EasyLine	—	50,000	
	77/84	350-700	60-220*	186445, 186577, 186578	Primeline	Programmable	DALI, PUSH	100,000
				186564	ComfortLine	Resistor	DALI, PUSH	100,000
79/84/84	350/500/700	60-225*	186443	ComfortLine	Push-in terminal	—	100,000	
82.5/84.8/85	375/400/425	100-220*	186491	ComfortLine	Push-in terminal	—	100,000	
84.7/84.6/85.1	550/600/650	65-154*	186492	ComfortLine	Push-in terminal	—	100,000	
85	100-400	100-225*	186587	ComfortLine	LEDset	—	100,000	
			186699	ComfortLine	NFC	—	100,000	
			186588	ComfortLine	LEDset	—	100,000	
			186700	ComfortLine	NFC	—	100,000	
107	500	90-215	186460	ComfortLine	—	DALI, PUSH	100,000	
			186315	ComfortLine	—	—	100,000	
2x70	2x700	42-100	186356	ComfortLine	—	DALI, PUSH	100,000	
			186355	ComfortLine	—	1-10 V	100,000	
			186354	ComfortLine	—	—	100,000	

* Depends on the adjusted current output

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Product Classification and Overview of LED Drivers

Product overview by main application fields								
Main application field	Capacity range W	Output current DC mA	Output voltage DC V	Ref. No.	Version	Current setting	Dimming	Max. service life time (hrs.)
Retail	10/14/20	250/350/500	17-40	186463	EasyLine	Push-in terminal	—	50,000
	14.9/20.7/28.3	350/500/700	14-34	186747	EasyLine LinkRay	Dip switch	—	50,000
	15	350	30-43	186591	EasyLine	—	—	50,000
	15/18/21	500/600/700	17-30	186464	EasyLine	Push-in terminal	—	50,000
	16	350	15-46	186719, 186720	EasyLine	—	—	50,000
	16-38	300-1050	10-54	186762, 186763	PrimeLine	Dip switch	DAI2	100,000
	17/19/22	400/450/500	25-43	186651	ComfortLine	Push-in terminal	—	100,000
	21.5	500	30-43	186592	EasyLine	—	—	50,000
	22/24/26	500/550/600	25-43	186671	ComfortLine	Push-in terminal	—	100,000
	22.4/31.2/42.6	350/500/700	30-53	186746	EasyLine LinkRay	Dip switch	—	50,000
	23	500	15-46	186720, 186725	EasyLine	—	—	50,000
	24	350-700	14-34	186465, 186573, 186574	PrimeLine	Programmable	DAI, PUSH	100,000
				186280	ComfortLine	—	DAI, PUSH	100,000
				186279	ComfortLine	—	1-10 V	100,000
	26/28/30	600/650/700	25-43	186652	ComfortLine	Push-in terminal	—	100,000
	28.5/34.2/40	500/600/700	25-57	186531	EasyLine	Push-in terminal	—	50,000
	30	700	30-43	186593	EasyLine	—	—	50,000
	30/32/34	700/750/800	25-43	186670	ComfortLine	Push-in terminal	—	100,000
	32	700	15-45	186721, 186726	EasyLine	—	—	50,000
	34/37/39	800/850/900	25-43	186653	ComfortLine	Push-in terminal	—	100,000
	34.4/39.8/45	800/925/1050	25-43	186532	EasyLine	Push-in terminal	—	50,000
	37	350-700	30-53	186503, 186571, 186572	PrimeLine	Programmable	DAI, PUSH	100,000
				186308	ComfortLine	—	DAI, PUSH	100,000
				186306	ComfortLine	—	—	100,000
	38	900	15-42	186722, 186727	EasyLine	—	—	50,000
	38.5	700	30-55	186594	EasyLine	—	—	50,000
	38.7	900	30-43	186669	EasyLine	—	—	50,000
	39	150-900	25-43	186650	ComfortLine	LEDset	—	100,000
	41/43/45	950/1000/1050	25-43	186654	ComfortLine	Push-in terminal	—	100,000
	42	1050	15-40	186723, 186728	EasyLine	—	—	50,000
	45	150-900	25-43	186664	ComfortLine	LEDset	—	100,000
	45	300-1050	25-43	186653	ComfortLine	LEDset	—	100,000
				186595	EasyLine	—	—	50,000
77/84.8/85.5	350/400/450	100-220	186737	ComfortLine	Push-in terminal	—	100,000	
Residential	5-10	250	20-40	186708	EasyLine	—	—	50,000
				186710	EasyLine	—	C	50,000
	5.6	700	2,8-8	186348	EasyLine	—	—	50,000
	6	150	27-41	186447	EasyLine	—	C	50,000
	6-12	300	20-40	186709	EasyLine	—	—	50,000
				186711	EasyLine	—	C	50,000
	7	350	8,4-20	186342	EasyLine	—	—	50,000
	8.75	350	3-25	186519	ComfortLine	—	—	100,000
	10	500	13-20	186448	EasyLine	—	C	50,000
	11	350	2-32	186679	ComfortLine	—	—	100,000
	12	250	27-48	186449	EasyLine	—	C	50,000
	12.6	350	8,4-36	186341	EasyLine	—	—	50,000
	15	500	8-30	186349	EasyLine	—	—	50,000
	16	500	2-32	186680	ComfortLine	—	—	100,000
	17	700	2-25	186681	ComfortLine	—	—	100,000
	18	350	32-52	186415	EasyLine	—	C	50,000
				186450	EasyLine	—	C	50,000

* Depends on the adjusted current output

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Product Classification and Overview of LED Drivers

Product overview by main application fields																						
Main application field	Capacity range W	Output current DC mA	Output voltage DC (V)	Ref. No.	Version	Current setting	Dimming	Max. service life time (hrs.)														
Residential	20	350	18-57	186431	EasyLine	—	—	50,000														
		1050	2-19	186682	ComfortLine	—	—	100,000														
	20.3	700	8-29	186350	EasyLine	—	—	50,000														
	21	500	28-42	186505	EasyLine	—	C	50,000														
	25	700	22-36	186416	EasyLine	—	C	50,000														
	25.2	700	22-36	186353	EasyLine	—	—	50,000														
	30	350	57-86	186430	EasyLine	—	—	50,000														
	31	700	30-45	186501	EasyLine	—	—	50,000														
	31.5	1050	20-30	186351	EasyLine	—	—	50,000														
	37.8	700	32-52	186451	EasyLine	—	C	50,000														
	47	1050	27-45	186502	EasyLine	—	—	50,000														
	60	700	43-86	186548	EasyLine	—	—	50,000														
1050		40-58	186522	EasyLine	—	—	50,000															
Street	38.5	700	32-55	186490	ComfortLine	—	1-10 V	100,000														
				186489	ComfortLine	—	—	100,000														
	60	1050	28-57	186316	ComfortLine	—	1-10 V	100,000														
									75	500-1400	36-107	186774	ComfortLine	iProgrammer	1-10 V	100,000						
	700	54-107	186400	ComfortLine	—	1-10 V	100,000															
								700/400									54-107	186397	ComfortLine	—	Power reduction	100,000
	100	600-1400	47-143	186775	ComfortLine	iProgrammer	1-10 V	100,000														
									700	70-143	186401	ComfortLine	—	1-10 V	100,000							
																700/400	70-143	186398	ComfortLine	—	Power reduction	100,000
	150	350-1050	85-260*	186442	PrimeLine	Programmable	1-10 V	100,000														
									600-1400	72-214	186776	ComfortLine	iProgrammer	1-10 V	100,000							
																700	107-214	186402	ComfortLine	—	1-10 V	100,000
									700/400	107-214	186509	ComfortLine	—	Power reduction	100,000							
									700/400	48-375	186202, 186203	ComfortLine	—	Power reduction	100,000							
	700	107-214	186399	ComfortLine	—	—	100,000															
	200	600-1400	75-190	186777	ComfortLine	iProgrammer	1-10 V	100,000														
	250	600-1400	90-238	186778	ComfortLine	iProgrammer	1-10 V	100,000														
Industry	19.95/28.5/34.2/39.9	350/500/ 600/700	20-57	186581	ComfortLine	Rotary switch	1-10 V	100,000														
	38.7/45.1/51.6/60.2	900/1050/1200/1400	20-43	186208	ComfortLine	Rotary switch	1-10 V	100,000														
	50	700	35-72	186452	EasyLine	—	—	50,000														
	75	1050	35-72	186453	EasyLine	—	—	50,000														
	100	1400	30-72	186454	EasyLine	—	—	50,000														
	112	700	85-160	186299, 186300	ComfortLine	—	DAI, PUSH	100,000														
				186297, 186298	ComfortLine	—	—	100,000														
	120	400-800	88-280	186695	ComfortLine	LEDset	—	100,000														
	121.8	1050	60-116	186617	EasyLine	—	—	50,000														
	122.4	1700	30-72	186455	EasyLine	—	—	50,000														
	126	1050	85-120	186303, 186304	ComfortLine	—	DAI, PUSH	100,000														
				186301, 186302	ComfortLine	—	—	100,000														
	151.2	2100	45-72	186456	EasyLine	—	—	50,000														
	165	400-800	120-360	186696	ComfortLine	LEDset	—	100,000														
	172.8	2400	45-72	186510	EasyLine	—	—	50,000														
	201.6	2800	45-72	186477	EasyLine	—	—	50,000														
	320	700-2100	90-225	186779	ComfortLine	iProgrammer	1-10 V	100,000														
Accessories																						
iProgrammer	Ref. No. 186428	The iProgrammer is designed to let you configure LED drivers using the 3C function.																				
iProgrammer NFC	Ref. No. 186646	The iProgrammer is designed to let you configure LED drivers with NFC function.																				

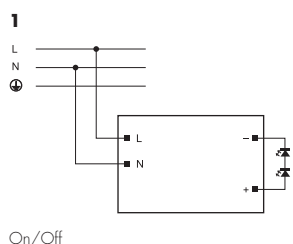
* Depends on the adjusted current output

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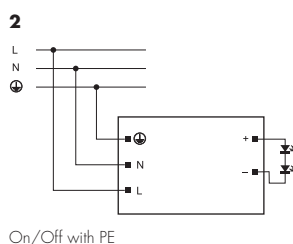
Wiring diagrams for LED drivers – Linear

LED products may only be installed and commissioned by authorised and fully qualified staff. Before any work is carried out on the equipment, it must be disconnected from the mains. All valid safety and accident-prevention regulations must be observed.

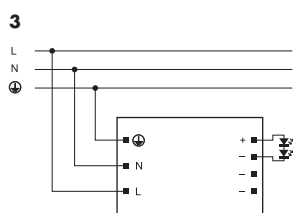
Diagram no.	Description	LED driver
1	On/Off	186229
2	On/Off with PE	186315, 186414, 186429, 186504, 186554
3	Selectable current – Terminal 1	186443, 186444, 186486, 186487, 186488, 186491, 186492, 186529, 186530
4	Selectable current – Terminal 2	186443, 186444, 186486, 186487, 186488, 186491, 186492, 186529, 186530
5	Selectable current – Terminal 3	186443, 186444, 186486, 186487, 186488, 186491, 186492, 186529, 186530
6	LEDset	186585, 186586, 186587, 186588
7	LEDset, dimmable DALI	186564, 186565
8	LEDset, dimmable DALI (PUSH)	186564, 186565
9	Dimmable DALI	186445, 186446, 186460
10	Dimmable DALI (PUSH)	186445, 186446, 186460
11	2-channel output	186354, 186406, 186409, 186656
12	2-channel output, dimmable DALI	186356
13	2-channel output, dimmable DALI (PUSH)	186356
14	2-channel output, dimmable 1–10 V	186355, 186407, 186410
15	4-channel output	186305
16	4-channel output, dimmable DALI	186384
17	4-channel output, dimmable DALI (PUSH)	186384



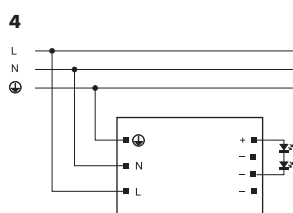
On/Off



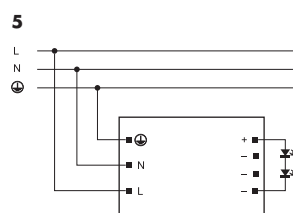
On/Off with PE



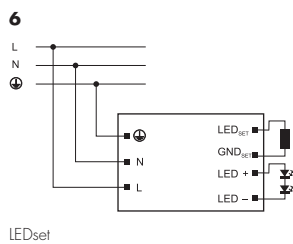
Selectable current – Terminal 1



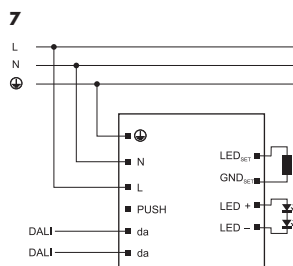
Selectable current – Terminal 2



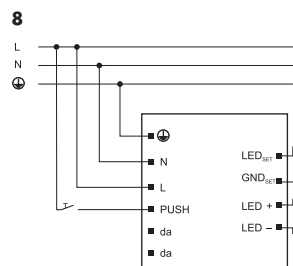
Selectable current – Terminal 3



LEDset



LEDset, dimmable DALI

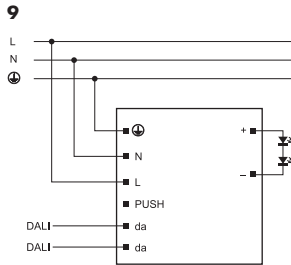


LEDset, dimmable DALI (PUSH)

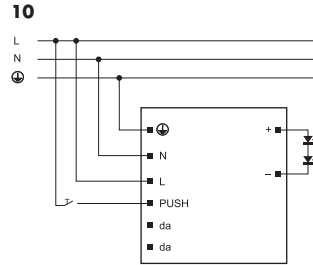
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Wiring diagrams for LED drivers – Linear

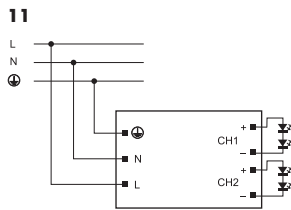
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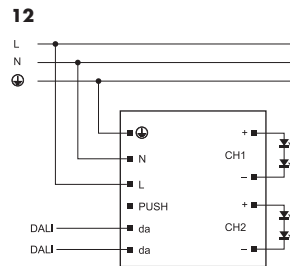
Dimmable DALI



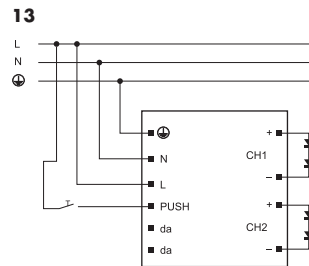
Dimmable DALI (PUSH)



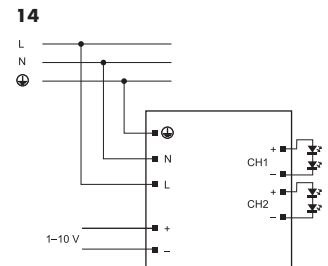
2-channel output



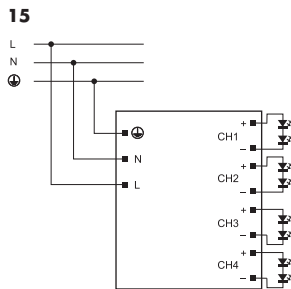
2-channel output, dimmable DALI



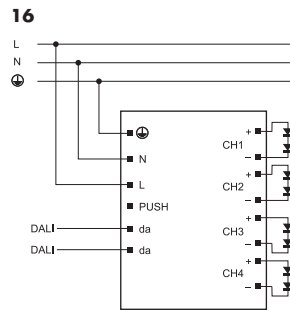
2-channel output, dimmable DALI (PUSH)



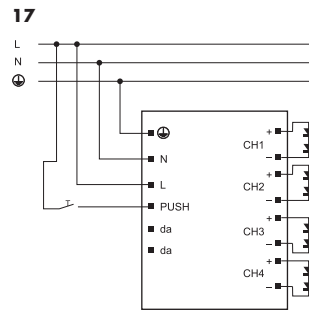
2-channel output, dimmable 1-10 V



4-channel output



4-channel output, dimmable DALI

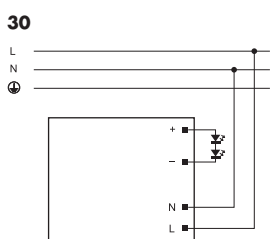


4-channel output, dimmable DALI (PUSH)

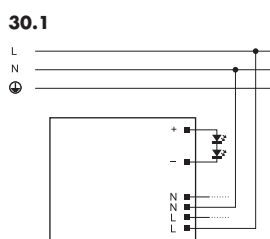
Wiring diagrams for LED drivers – Compact

LED products may only be installed and commissioned by authorised and fully qualified staff. Before any work is carried out on the equipment, it must be disconnected from the mains. All valid safety and accident-prevention regulations must be observed.

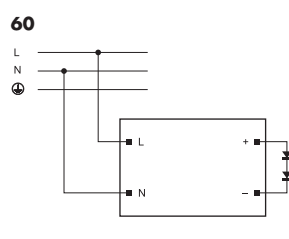
Diagram no.	Description	LED driver
30	On/Off	186278, 186306, 186363, 186364, 186365, 186393, 186679, 186680, 186681, 186682, 186394, 186395, 186556
30.1		186593, 186594, 186595, 186669
60	On/Off	186447, 186448, 186449, 186450, 186451, 186505
60.1		186591, 186592
61	On/Off with PE	186180, 186341, 186342, 186348, 186349, 186350, 186351, 186353, 186415, 186416, 186430, 186431, 186458, 186501, 186502, 186508, 186519, 186522, 186548
37	Dimmable DALI	186280, 186308, 186445, 186503, 186571, 186572, 186573, 186574
38	Dimmable DALI (PUSH)	186280, 186308, 186445, 186503, 186571, 186572, 186573, 186574
39	Dimmable 1–10 V	186279
40	Selectable current – Terminal 1	186531, 186532
41	Selectable current – Terminal 2	186531, 186532
42	Selectable current – Terminal 3	186531, 186532
43	Selectable current – Bridge 1	186463, 186464
44	Selectable current – Bridge 2	186463, 186464
45	Selectable current – Bridge 3	186463, 186464
46	Selectable current – Terminal 1	186651, 186652, 186653, 186654, 186670, 186671, 186684, 186685, 186686, 186687, 186688, 186689
47	Selectable current – Terminal 2	186651, 186652, 186653, 186654, 186670, 186671, 186684, 186685, 186686, 186687, 186688, 186689
48	Selectable current – Terminal 3	186651, 186652, 186653, 186654, 186670, 186671
49	LEDset	186650, 186664



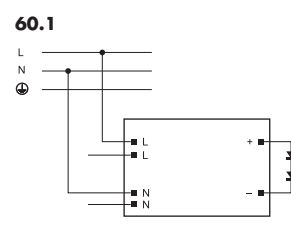
On/Off



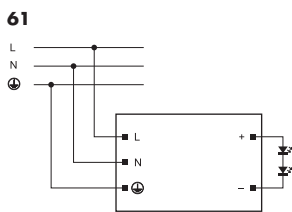
On/Off



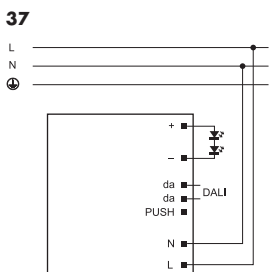
On/Off



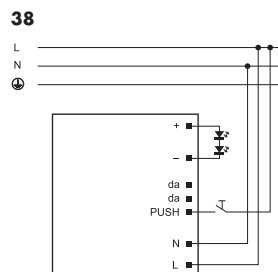
On/Off



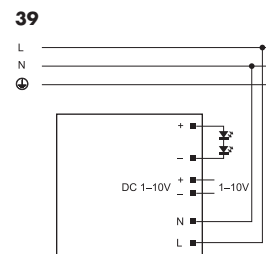
On/Off with PE



Dimmable DALI



Dimmable DALI (PUSH)

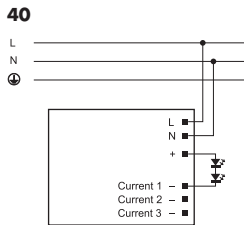


Dimmable 1–10 V

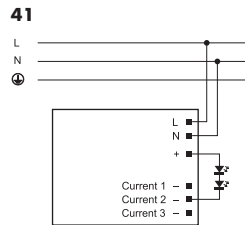
The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

Wiring diagrams for LED drivers – Compact

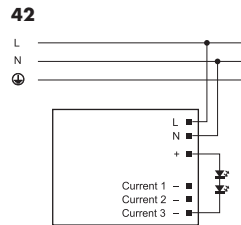
LED products may only be installed and commissioned by authorised and fully qualified staff. Before any work is carried out on the equipment, it must be disconnected from the mains. All valid safety and accident-prevention regulations must be observed.



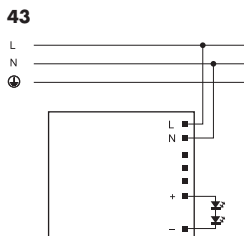
Selectable current – Terminal 1



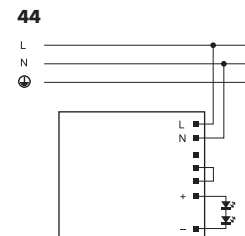
Selectable current – Terminal 2



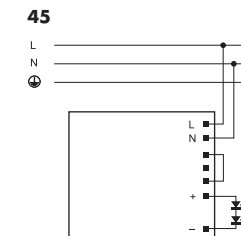
Selectable current – Terminal 3



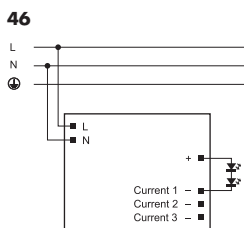
Selectable current – Bridge 1



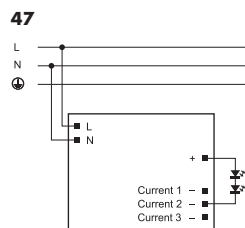
Selectable current – Bridge 2



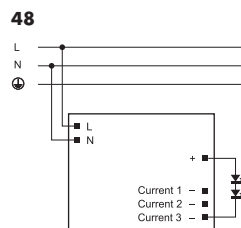
Selectable current – Bridge 3



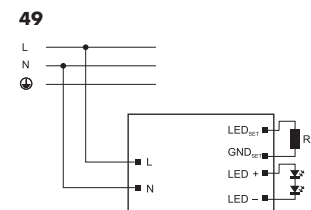
Selectable current – Terminal 1



Selectable current – Terminal 2



Selectable current – Terminal 3



LEDset

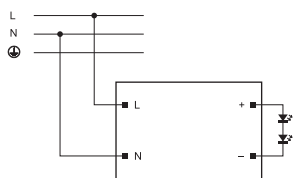
The values contained in this data sheet can change due to technical innovations. Any such changes will be made without separate notification.

Wiring diagrams for LED drivers – Street

LED products may only be installed and commissioned by authorised and fully qualified staff. Before any work is carried out on the equipment, it must be disconnected from the mains. All valid safety and accident-prevention regulations must be observed.

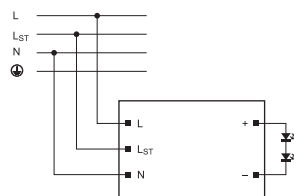
Diagram no.	Description	LED driver
60	On/Off	186399
62	Power reduction	186397, 186398, 186489, 186509
63	Power reduction	186397, 186398, 186489, 186509
64	Power reduction with PE	186202, 186203
65	Power reduction with PE	186202, 186203
66	Programmable	186442
67	Programmable	186442
69	Dimmable 1–10 V	186400, 186401, 186402, 186490
70	Dimmable 1–10 V with NTC interface	186316

60



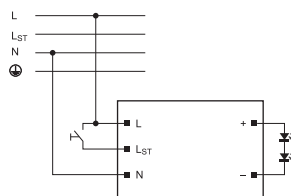
On/Off

62



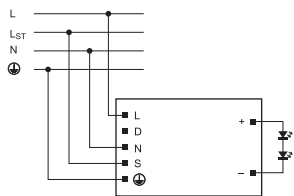
Power reduction

63



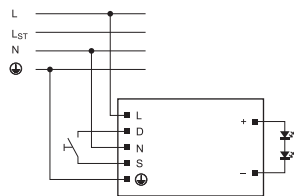
Power reduction

64



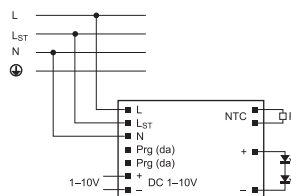
Power reduction with PE

65



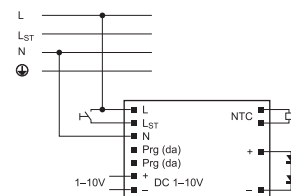
Power reduction with PE

66



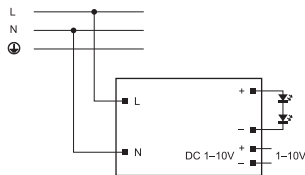
Programmable

67



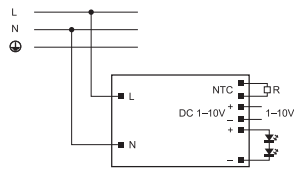
Programmable

69



Dimmable 1–10 V

70

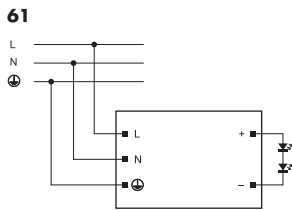


Dimmable 1–10 V with NTC interface

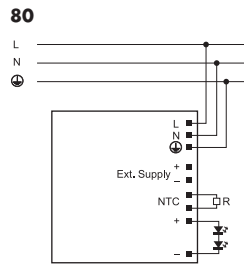
Wiring diagrams for LED drivers – Industry

LED products may only be installed and commissioned by authorised and fully qualified staff. Before any work is carried out on the equipment, it must be disconnected from the mains. All valid safety and accident-prevention regulations must be observed.

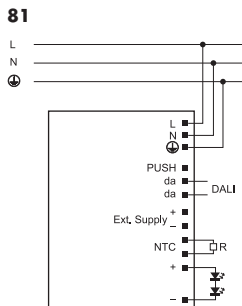
Diagram no.	Description	LED driver
61	On/Off with PE	186452, 186453, 186454, 186455, 186456, 186477, 186510, 186617
80	On/Off with PE and NTC interface	186297, 186298, 186301, 186302
81	Dimmable DALI	186299, 186300, 186303, 186304
82	Dimmable DALI (PUSH)	186299, 186300, 186303, 186304
83	Dimmable 1–10 V	186208, 186581



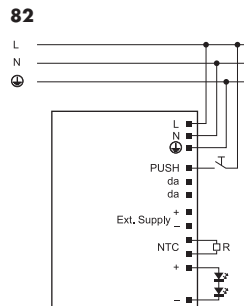
On/Off with PE



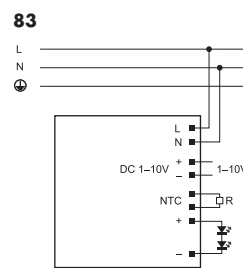
On/Off with PE and NTC interface



Dimmable DALI



Dimmable DALI (PUSH)



Dimmable 1–10 V