

LUMINAIRE POWER ADJUSTMENT



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In view of the drive to cut spending on energy and also in the light of environmental policies to protect resources, reducing the power consumption is very important.

This data sheet presents power reduction products and components with which the output current of LED drivers can be adjusted.



Automatical Power Switch for LED Drivers – PR 12 K LC

The PR 12 K LC can be used for power switching of LED drivers with LST control input.

A control phase is not needed.

Once it's connected to the mains supply voltage the power switch will switch automatically.

The power switch complies with the specification of DIN EN 61347 and is suitable for the application in luminaires of protection class I and II.



PR 12 K LC

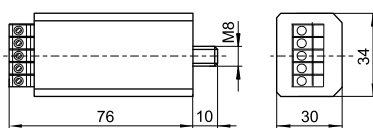
Casing: PC

Dimensions (LxWxH): 76x34x30 mm

Weight : 100 g

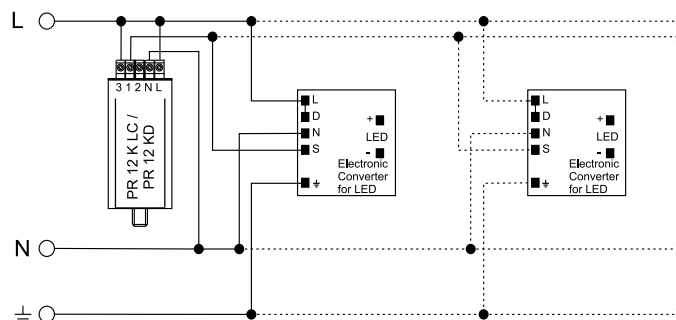
Screw terminals: 0.75–2.5 mm²

Ref. No.: 142170



Wiring diagram

For example with VS LED drivers ECXd 700.023 (Ref. No. 186509)



Type	Ref. No.	Nominal voltage/frequency V ±10%	Max. switching capacity (VA)	Max. contact current (A) $\lambda = 0.5$ $\lambda = 1$	Internal loss W	Inherent heating K	Switching-time	Max. permitted casing temperature (°C)	Min. permitted ambient temperature (°C)	Fixation
PR 12 K LC	142170	220–230 V/50 Hz 220 V/60 Hz*	3000	8 12	< 1	< 12	selectable	80	–30	M8x10

* 120–240 V ±10% available on request

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

Programmable Power Switch for LED Drivers – PR 12 KD

The PR 12 KD can be used for power switching of LED drivers with LST control input. A control phase is not needed. The constant switching-time is selectable.

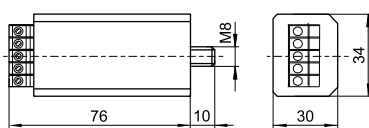
The left side of the rotary switch is used for reset to full power after eleven hours; the right side is for continuous power reduction after programmed time has been reached.

The power switch complies with the specification of DIN EN 61347 and is suitable for the application in luminaires of protection class I and II.

PR 12 KD

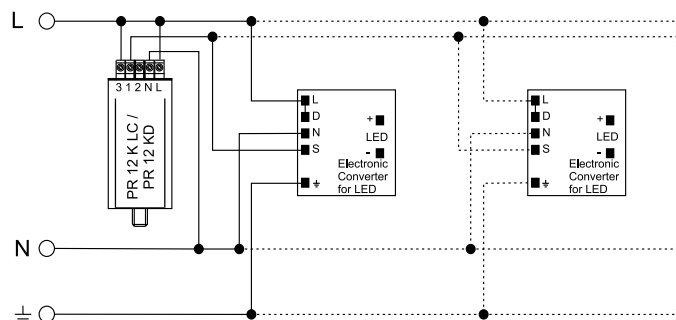
Casing: PC
Dimensions (LxWxH): 76x34x30 mm
Weight: 100 g
Screw terminals: 0.75–2.5 mm²

Ref. No.: 142150



Wiring diagram

For example with VS LED drivers ECXd 700.023 (Ref. No. 186509)



Type	Ref. No.	Nominal voltage/frequency V ±10%	Max. switching capacity (VA)	Max. contact current (A) $\lambda = 0.5$ $\lambda = 1$	Internal loss W	Inherent heating K	Switching-time*	Max. permitted casing temperature (°C)	Min. permitted ambient temperature (°C)	Fixation
PR 12 KD	142150	220–230 V/50 Hz 220 V/60 Hz**	3000	8 12	< 1	< 12	selectable	80	–30	M8x10

* Switching-time selectable: 3 | 3.5 | 4 | 4.5 | 5 | 5.5 | 6 hrs. at 50 Hz

** 120–240 V ±10% available on request

Switch Units for Electronic Operating Devices with 1-10 V Interface

Vossloh-Schwabe's switch units are designed to enable one-step power reduction of lamps (FL, CFL, LED, HS, HI and C-HI) with the help of the respective electronic ballast or converter.

To this end, the switch unit utilises the 1-10 V interface of the control gear unit. The switch unit is mainly intended for outdoor luminaires in systems with or without a control phase.

Dimensions (LxWxH): 56x28x27 mm

Casing: PC

Screw terminals: 0.75-2.5 mm²

Max. permissible casing temperature t_c : 80 °C

Min. permissible ambient temperature t_a : -30 °C

Fastening: plastic male nipple with pre-assembled washer and nut

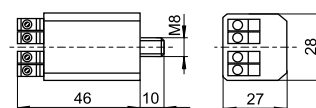
Power reduction SU 1-10 V K for lighting systems featuring an L_{ST} control phase

The switch unit employs a positive switching to reduce power, i.e. power is reduced when the control phase is switched off (L_{ST} = 0 V).

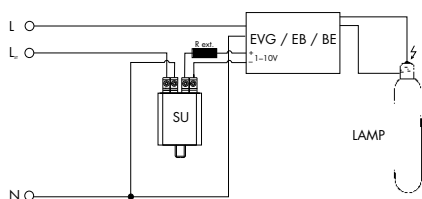
The 1-10 V interface of the electronic ballast is addressed at the moment that power reduction is effected.

Power reduction PR 1-10 V K LC for lighting systems without a control phase

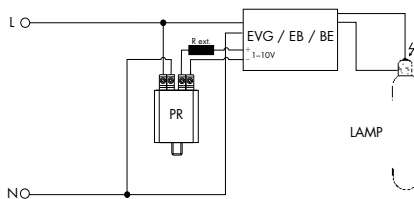
This switch unit can be used to effect power reduction in lighting systems that do not feature a control phase. The 1-10 V interface is addressed on the basis of the fundamental operating principle used by Vossloh-Schwabe's PR 12 K LC power switch (details of which can be made available on request). This power switch is capable of determining the starting time of reduced-power operation over the measured operating time of a lighting system. As a result, it is no longer necessary to spend valuable time modifying the power-reduction unit to suit the continually changing day-night cycle; changing the clocks in line with daylight saving measures in the summer and winter is equally unnecessary. The 1-10 V interface of the electronic ballast is addressed as soon as the system is switched to reduced power.



Circuit diagram SU 1-10 V K



Circuit diagram PR 1-10 V K LC



Type	Ref. No.	Control voltage L _{ST} V, 50/60 Hz	Externally (on site) connected resistor (R _{ext.}) kΩ (min. 0.1 W)	Inherent heating K	Weight g
For lighting systems with control phase					
SU 1-10 V K	149992	220-240 V ±10%	1-70	< 10	50
For lighting systems without control phase					
PR 1-10 V K LC	149993	—	1-70	< 10	50

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Resistor Networks for LEDset Interfaces

This resistor network is used to adjust the output currents of LED drivers.

With DIP switch up to 255 different resistance values can be adjusted.

Max. permitted casing temperature t_c : 80 °C

Min. permitted ambient temperature t_a : -30 °C

The component is designed for use in protection class II luminaires.



Resistor network for LEDset interface

Casing: PC

Dimensions (LxWxH): 32x25x15 mm

Weight: 20 g

Connection leads, solid: 0.5 mm²

Max. lead length: 150 mm

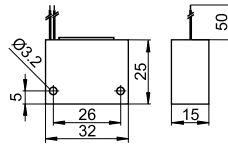
Ref. No.: 149801 R12,5K-45,8K

Ref. No.: 149802 R6,25K-70K

Ref. No.: 149803 R25K-40K

Ref. No.: 149804 R12,5K-20K

Ref. No.: 149805 R7,15K-70,9K



Type	Ref. No.	Number of dip switch pcs.	Max. internal loss of resistors W	Max. voltage at resistors V	Resistor steps kΩ	Output current LED driver mA
R12,5K-45,8K	149801	8	0.25	200	0.23	110-400
R6,25K-70K	149802	8	0.25	200	0.25	71-800
R25K-40K	149803	3	0.25	200	3.5	150-201
R12,5K-20K	149804	6	0.25	200	0.75	250-404
R7,15K-70,9K	149805	8	0.25	200	0.25	70-700

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