

LLC7210 Dynadimmer

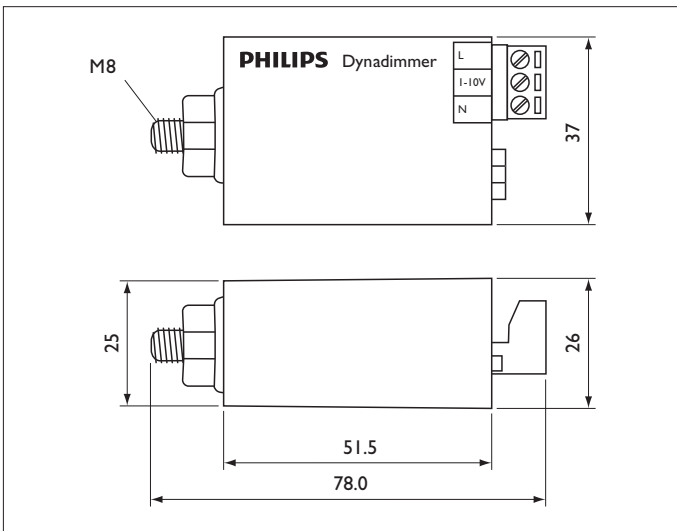


General Description

The Dynadimmer is a lamp driver control device that enables high-energy savings with low installation efforts in a variety of applications. The small stand-alone luminaire-based device can drive a 1-10V electronic driver to facilitate on-demand light levels. The Dynadimmer does not require an additional switching wire. The Dynadimmer dimming schedule is flexible up to five dimming levels and five time periods. Easy-to-operate software and programming equipment enable municipal councils to re-program the dim times and dim levels as and when they wish.

The Dynadimmer family consists of:

- LLC7210 Dynadimmer
- KIT7210 Dynadimmer Programming kit consists of the Programmer (LCU7210), Programming Cable (LCC7210) and Programmer PC Cable (LCC7220).



Dimensions in mm

Applications

Each Dynadimmer can control a driver-lamp combination in a stand-alone manner. It is designed for use in residential, street and road lighting applications, including parking lots, ports, train stations and industrial complexes. The design of the Dynadimmer is optimized for mounting in a luminaire.

The Philips Dynadimmer is designed and released to interact with Philips 1-10V gear and is compatible with dimmable drivers with a standard 1-10V interface.



Benefits and advantages

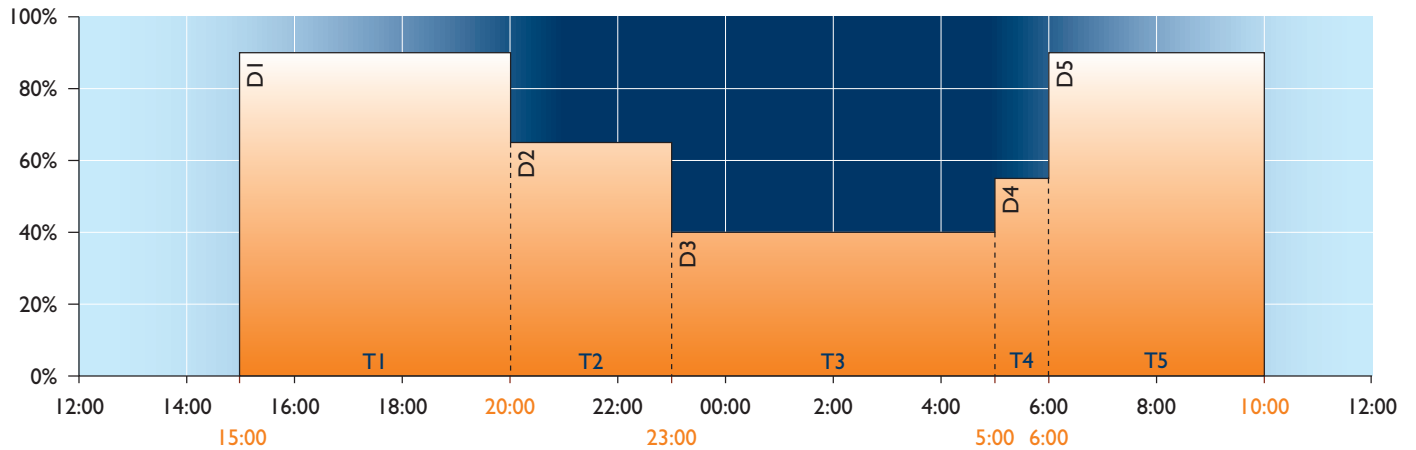
The major benefits and advantages of using the Dynadimmer solution are:

- Energy savings through dimming
- Reduced light nuisance
- Very small size, fits inside almost any luminaire
- Software provides a forecast of energy savings
- Easy-to-use software

General operation

The dimming schedule is created in the Dynadimmer software. This easy-to-use software enables the user to obtain not only a quick dimming shape configuration but also a forecast of energy savings. The dimming schedule may be fine-tuned and, by means of the Programmer, programmed into each individual Dynadimmer. Quick multiple Dynadimmer programming is achieved via the Programmer's gang-programming mode.

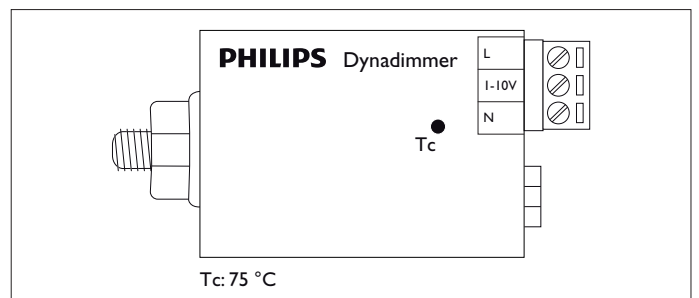
The Dynadimmer has no internal clock and uses a midnight point calculation to determine the absolute time. The midnight point is calculated as the middle point between switch on and switch off. Depending on the selected country, a time is allocated to this midnight point. The Dynadimmer needs two nights to check the consistency of the duration of both nights. The dimming schedule will start to operate on the third night after installation.



Dimming shape example

Mounting information

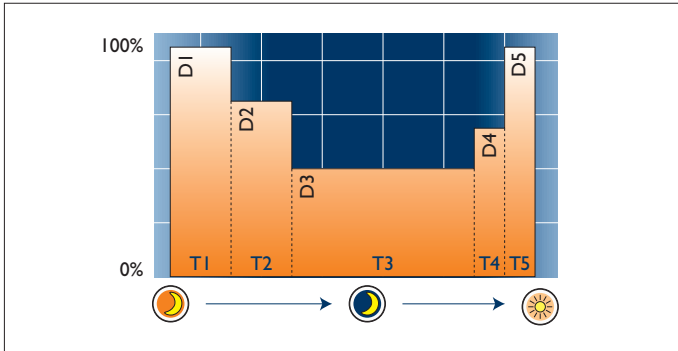
The Dynadimmer is designed to be built into a luminaire, a box, an enclosure or the like and is not intended to be mounted outside a luminaire, etc. without special precautions. The control gear compartment in the base of a road lighting pole is considered to be an enclosure. The electronics are potted and therefore safeguarded from environmental influence, yet the contacts are bare for easy connection. The Dynadimmer can therefore be mounted in any position if the enclosure is IP43 or higher. Wiring has to be in accordance with EN60598.



Tc point Dynadimmer

Dynadimmer software

The dimming schedule is created in the Dynadimmer software. The Dynadimmer software can be downloaded free of charge from the Philips website at www.philips.com/dynadimmer. There are several variables that allow the configuration of a dimming schedule. The light levels D1 to D5 can be chosen within the range that the selected driver allows. The time frames T1 to T5 can be chosen freely to accommodate any requirement.



Dimming shape

Dynadimmer Programmer

Once defined, the dimming shape can simply be downloaded into the Dynadimmer Programmer. The Dynadimmer Programmer then enables the user to swiftly program the individual Dynadimmers on-site or off-site. The Dynadimmer Programmer is powered by 4 AA or LR6 batteries for easy on-site use.

The Dynadimmer Programmer has 3 buttons

- On/Off (green), to switch the Programmer On and/or Off
- Select dimming shape (orange), to preload the dimming shape so as to program the Dynadimmer
- Write (black), to actually write the dimming shape into the Dynadimmer

The Dynadimmer Programmer contains a LCD screen to inform the user about action statuses.



Dynadimmer Programmer

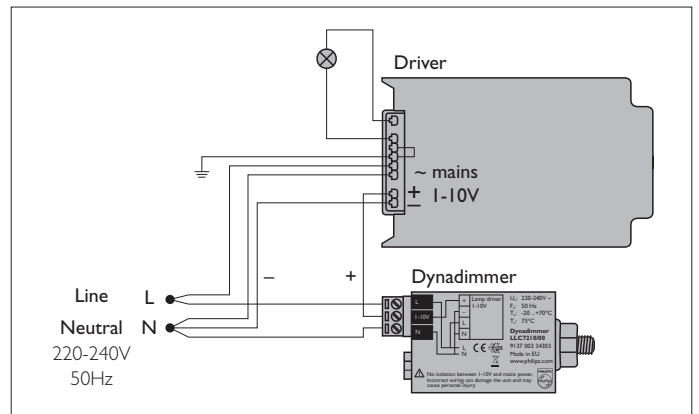
Released drivers

The drivers released to interact with the Dynadimmer's 1-10V dimming interface are currently:

- Philips HF-Regulator PL-T/C EII 26-42W
- Philips HF-Regulator PL-L EII 24-55W
- Philips HID-DynaVision 1-10V 150 SON
- Philips HID-DynaVision 1-10V 100 SON
- Philips HID-DynaVision 1-10V 70 SON
- Philips HID-DynaVision 1-10V 150 CDO
- Philips HID-DynaVision 1-10V 100 CDO
- Philips HID-DynaVision 1-10V 70 CDO
- Philips HID-DynaVision Controller 1-10V 250 SON
- Philips HID-DynaVision Controller 1-10V 400 SON

Wiring the Dynadimmer

In accordance with the requirements laid down in the regulations relating to luminaires (EN60589)



Dynadimmer wiring diagram



Warnings

- 1-10V signal is not electrically isolated from mains power supply.
- Be sure that wiring is done correctly by checking the product's rated voltage and the terminal layout. Incorrect wiring could result in damage or erroneous operation.
- Completely turn off the external power supply when installing or placing wiring. Not doing so could cause electric shock or personal injury.



Warning

Disconnect mains power supply before connecting the Dynadimmer Programmer to the Dynadimmer.

Technical data

Storage conditions

Temperature	-25°C ... +85°C
Relative humidity	5% ... 95% RH

Operating conditions

Ambient temperature	-20°C ... +70°C
Case temperature	75°C
Relative humidity	10% ... 90% RH

Mains connection

Rated voltage	220-240V ±10%
Frequency	50Hz ±5%
Maximum load	Not applicable

Mains / I-10V connections

Connector type	IMO - 21.950M/3 - plug
Drivers per Dynadimmer	2 max.
Wire range	0,2 ... 2,5mm ² solid 0,2 ... 1mm ² (2-wires per connector pin)
Wire strip length	0.7mm
Flathead screwdriver tip	0.6 x 3.5mm
Screw tightening torque	0.5Nm
Power consumption	<0.5W

Programming connector

Connector type	Micro MATE-N-LOK connector
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Dim interface

Control voltage	I-10V
Max. current	0.3mA sinking
Dim curve	Defined by selected driver

Norms

Safety	EN61347-2-11; EN60598
Immunity	EN61547
Emission	CISPR15 ed. 7.1
Approbation	Product complies with the relevant European Directive (CE) ENEC

Housing

Protection class	IP20
Dimensions (HxWxL)	25.5mm x 36.5mm x 51.5mm
Weight	0.07kg
Material	ABS (Novodur P2H-AT)
Glow wire test	700 °C (2mm)
Flammability	UL94 HB
Fixation	M8x16 Polyamide (nylon) bold (class 6.6)

Safety

I-10V interface	The interface is not electrically isolated from the mains supply.
Class I applications	I-10V and mains wiring shall have basic insulation
Class II applications	I-10V and mains wiring shall have double or reinforced insulation.
Class III applications	Not allowed!

Packing data

Type	Box dimensions (mm)	Qty	Material	Weight (Kg)	
				net	gross
LLC7210 Controller	365 x 265 x 80	48	cardboard	3.36	3.79
KIT7210 Programming kit	150 x 280 x 65	1	cardboard	0.73	0.83

Ordering Data

Type	MOQ	Ordering number	EAN code level 1	EAN code level 3	EOC
LLC7210 Controller	48	9137 003 34303	n.a.	87279 00854701	854701 00
KIT7210 Programming kit	1	9137 003 34703	n.a.	87279 00857177	857177 00

322 636 36080 06/2009 Data subject to change
www.philips.com/dynadimmer

