

Datasheet DimWheel Color



Integrated Network Dimmer

DimWheel

The DimWheel is the perfect device for digitally controlling the dim level and color of LED lighting. With a LedSync and DMX interface it allows 8 or 16 bit control of all compatible lighting devices. Due to its very small size the dimmer can be integrated in any industry-standard mounting space used for traditional lighting dimmers. The DimWheel Color is available as an RGB (3-channel) and RGBW (4-channel) version.

DimWheel Color

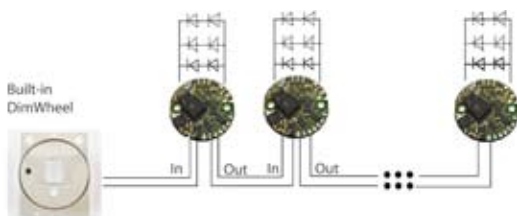
The central shaft encoder allows for 0.5 - 100% brightness control and On/Off switching similar to normal household lighting dimmers. Pressing and holding down the encoder for 1 second while the light is switched on activates the color selection mode, in which you can set hue and saturation.

We have added a ballistic effect for a truly unique user experience: a fast swing switches the lights on or off, while slow turning gives you a bit-by-bit brightness and color control. A LED on the Print Circuit Board gives feedback on the brightness level and color set by the dimmer. Switch Off and the dimmer will preserve its last setting and return to this when switching On again.

A Dimwheel Color guarantees smooth brightness and color control for all L, LM and V-Series drivers!

LedSync and DMX

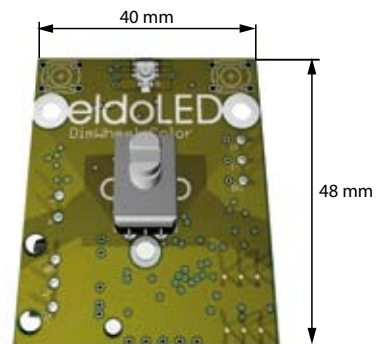
The LedSync network interface allows high resolution, quick setup and lower cabling costs compared to other networking solutions. With its 16 bit resolution output the DimWheel is capable of extremely fine dimming and color mixing. The DimWheel also broadcasts standard DMX as output protocol.



Principle schematic of dimmer wiring

Features

- Complete solution for LED lighting dimming and color selection
- On/off switch on encoder
- 12V-32V DC supply range
- LedSync and DMX
- 8- or 16-bit control
- Long life (5 years)
- LED for feedback
- On/off, dimming setting and color preserved during system power off-on cycle
- Low EMI due to smart electronics design



Form Factor

The DimWheel is a breakthrough in network dimming form factor. This very small size enables integration of the DimWheel in existing housing (EU & US standard) replacing traditional lighting dimmers without the need of installing special (large) and difficult to operate control units.

Advantages

- Network control with widely known, established user interface
- Can be used and built in like normal household dimmer
- Fewer and shorter cables
- Simplifies total system solution
- Accurate dimming and color selection solution
- Easy network setup



Component side and user interface side for easy build-in

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Dynamic effects

- Control channel 1-127: 0 – 100%
- Control channel 128-256: 0 or 100%

Thermal

Cooling: Passive. No cooling required.
Maximum ambient temperature: 60°C
Minimum ambient temperature: 0°C

Network control

Outgoing signal communications protocol:
LedSync or USITT DMX512A
Ingoing signal communications protocol:
LedSync - optional connection of
external DMX controller
Network output: based on RS485
specification
Output signal update rate: 22ms
Number of network channels: 256
Network resolution: 8- or 16-bit,
configurable by way of DIP switch
Communication: bi-directional for
configuration or reading of sensor values

Electrical

Power: 12V-32V DC
Reverse polarity power protection
Processor: eldoLab DimLogic 4200 Series

User interface

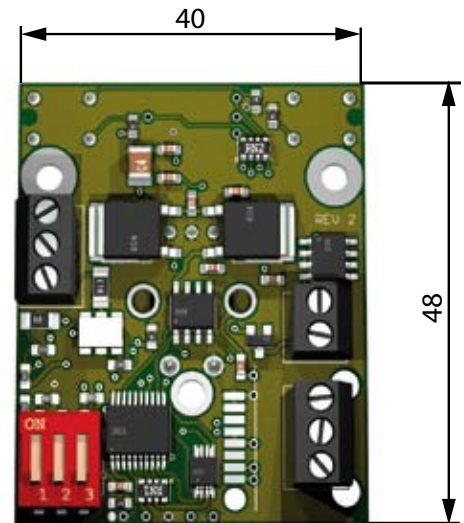
Encoder type: detentless
Resolution: 20 steps in 360°
Ballistic output

Connections

Power connection: (2x) Screw terminals
Data connection: (6x) Screw terminals

Miscellaneous

Orientation: any
Relative Humidity: Non-condensing
Storage ambient Temperature:
-40°C to 95°C



Note: All dimensions are in millimeters

Ordering information

Description	Product	Ordernr	Qty
3-Channel LedSync Dimmer	DimWheel-C 3010	DLC30101	10
4-Channel LedSync Dimmer	DimWheel-C 4010	DLC40101	10

For special form factors, connectors or other customised solutions, please contact our OEM support desk.

More information, application notes and user manuals available at www.eldoled.com

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