

# Model railway electronic

Components for control, digital switching and feedback monitoring on digital model railways!



## *Be a Digital-Professional! Novelties 2017*

**1. LS-DEC-CFL: Light-Signal Decoder for Light signals of the National Railway Company of Luxembourg, CFL.**

**2. LS-DEC-USA: Light-Signal Decoder for 4 US Color Light signals.**



**Low cost kits, finished modules and finished modules in a case**

## **Littfinski DatenTechnik - LDT**

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**[www.ltd-infocenter.com](http://www.ltd-infocenter.com)**

Our **Light-Signal Decoder (LS-DEC)** are a valuable **accessory** for **Digital-Layouts**, if a **prototypical switching** of **light signals** are expected. With **one digital switch command** is it possible to **constitute** with the **Light-Signal Decoder** as well **complex signal aspects**.

The **signal aspects** are **different** by the **various railway companies**. Therefore we offer many **variances** of the **LS-DEC** to **suit** the **requirement** of the **particular railway company**.

Till now we have **Light-Signal Decoder** within our program for **Light signals**

of the **Deutschen Bahn** (German Railways) (**DB** and **KS**),

of the **Deutschen Reichsbahn** (Imperial German Railways) (**DR**),

of the **Austrian Federal Railway** (**OEBB**),

of the **Swiss Federal Railway** (**SBB**),

of the **Nederlandse Spoorwegen** (**NS**),

of the **Nationale Maatschapping of the Belgian Spoorwegen** (**NMBS**),

of the **British Railway** (**BR**),

of the **Governmental Railway Corporation of Italy** (**FS**),

of the **Swedish State Railway** (**SJ**) and

of the **Governmental Railway Corporation of French** (**SNCF**).

With the **LS-DEC-CFL** for **light signals** of the **National Railway Company of Luxembourg** and the **LS-DEC-USA** for **US Color Light signals** we complete our range with two further **Light-Signal Decoder**.

## 1. LS-DEC-CFL:

Light-Signal Decoder for up to 4 Light signals of the National Railway Company of Luxembourg, CFL.



With the **Light-Signal-Decoder LS-DEC-CFL** will be **CFL-Light signal-aspects** switched via **accessory addresses**.

It can be **CFL-main-signals**, **advance-signals**, **line-close signals** as well as **combined main-/ line-close signals** connected and controlled.

If there will be one **main-** and one **advance-signal** installed on **one pole** there will be a **dark-switching** available.



If the **dark-switching** is activated the advance-signal will remain exemplary dark as long as the **main-signal** indicates “**Stop**”.

The **signal aspects** will not simply be cross faded but as in reality the prior aspect will be firstly dimmed-down and after a short **dark phase** the new signal aspect will appear.

The **light emitting diodes (LED)** will be **dimmed up and down** during this process.

The **Light-Signal Decoder LS-DEC-CFL** is suitable for all **LED-assembled light signals** with **common anode** or **common cathode**.

Via a **jumper** is it possible to **select the data format Märklin-Motorola** or **DCC**. Therefore is it possible to use the decoder **in interaction** with any **digital central unit** which is transmitting the **Märklin-Motorola** and/or **DCC** data format.

The **signal current** has **not necessarily** to be supplied by a **booster** but can be directly fed into a separate input from a model railroad transformer. This **saves expensive digital current**.

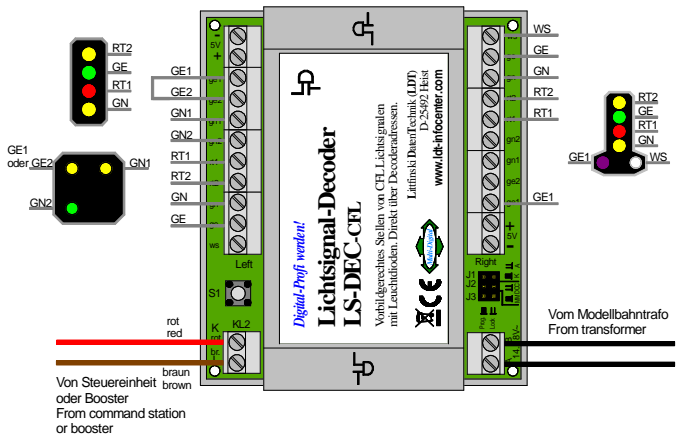
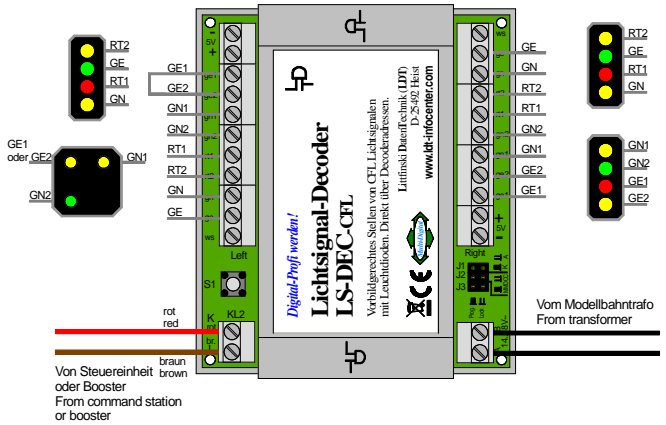
For the **programming** of the **decoder addresses** has the decoder to be set into the programming mode via the **push button S1**. If the **connected signals** are **controlled** via the **digital central unit** or by the **model railway control software** the decoder will **recognize** those. **It's as simple as that!**

**Order code:**

**LS-DEC-CFL-B** (Part-No. 514011): Light-Signal Decoder LS-DEC-CFL as **kit**.

**LS-DEC-CFL-F** (Part-No. 514012): Light-Signal Decoder LS-DEC-CFL as **finished module**.

**LS-DEC-CFL-G** (Part-No. 514013): Light-Signal Decoder LS-DEC-CFL as **finished module in a case**.





## 2. LS-DEC-USA:

### Light-Signal Decoder for 4 American Color Light signals.



With the **Light-Signal Decoder** is it possible to switch **American Color Light Signals** via accessory addresses.

With each **Decoder** can be **four 2- or 3-aspect signals** connected and controlled.

The **signal aspects** will not simply be cross faded but as in reality the prior aspect will be firstly dimmed-down and after a short **dark phase** the new signal aspect will appear. The **light emitting diodes (LED)** will be **dimmed up and down** during this process.

The **Light-Signal Decoder LS-DEC-USA** is suitable for all **LED**-assembled **light signals** with **common anode** or **common cathode**. Via a **jumper** is it possible to **select the data format Märklin-Motorola** or **DCC**.

#### Order code:

**LS-DEC-USA-B** (Part-No. 510611): Light-Signal Decoder LS-DEC-USA as **kit**.

**LS-DEC-USA-F** (Part-No. 510612): Light-Signal Decoder LS-DEC-USA as **finished module**.

**LS-DEC-USA-G** (Part-No. 510613): Light-Signal Decoder LS-DEC-USA as

**finished module in a case.**

