



# Train Influence Module (ZBM)

## for the light signal-decoder LS-DEC

from the *Digital-Professional-Series* !

**ZBM-G Part-No.: 600013**

>> finished module in a case <<

- ⇒ If a signal which is controlled by the light signal-decoder LS-DEC stays in position "red" the track section in front of the signal will be switched to current free.
- ⇒ 4 track sections in front of signals can be switched by each train influence module.
- ⇒ The relay outputs can switch launch- and brake-modules as well.

This product is not a toy! Not suitable for children under 14 years of age! The kit contains small parts, which should be kept away from children under 3! Improper use will imply danger or injuring due to sharp edges and tips! Please store this instruction carefully.



## Introduction/Safety instruction:

You have purchased the model railway train influence module (**ZBM**) for the light signal-decoder LS-DEC.

The **ZBM** is a high quality product that is supplied within the *Digital-Professional-Series* of Littfinski DatenTechnik (LDT).

We are wishing you having a good time using this product.

- Please read the following instructions carefully. Warranty will expire due to damages caused by disregarding the operating instructions. LDT will also be not liable for any consequential damages caused by improper use or installation.
- We designed our devices for indoor use only.

The finished module and the finished modules in a case comes with a **24 month warranty**.

## Connecting the train influence module to your digital model railway layout:

- **Attention:** Before starting the installation switch off the drive voltage by pushing the stop button or disconnect the main supply.

The train influence module receives the **power supply** via the clamp **KL5**. The voltage of 14...18V~ of a model railway transformer (ac output) is acceptable.

## Operation mode:

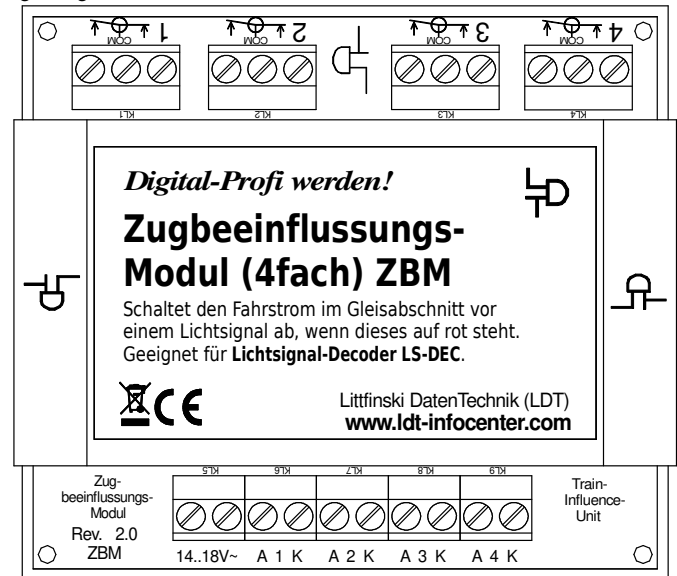
The train influence module includes **4 relays** with one **shift contact** each. The relays will be controlled by switch amplifiers from the light signal-decoder LS-DEC. Thus makes it possible to switch the **track section in front of** the respective **signal current free**.

The **connection circuits** referring to the following description can be found on the **rear side** of this instruction.

As each light signal-decoder is able of a digital control of 4 signals the train influence module includes 4 relays for switching the track section in front of each controlled signal current free.

Connect the clamps of the **train influence module** marked "A" with the connection marked "+" of the **light signal-decoder**.

As the inputs of the ZBM are galvanic separated by opto couplings is it possible that the switch signals come from different light signal-decoders.



Each connection marked "K" has to be connected to the respective output of the light signal-decoder which supplies the **red light emitting diode** of the signal which is switched "ON" by **Hp0** only.

The **sample connections** of the following page shows that the track section in front of a **main signal** will be switched **current free** by **Hp0**. The light emitting diode supplied by connection **RT2 of the light signal-decoder** will be switched "ON".

The **train influence module** has to get the supply from the **connection RT2** to the respective input connection "K" as well to assure that the track section will now be switched current free.

To assure that older **loc decoders** do not **lose the drive direction information** during the waiting period in front of a signal the track gets a small **current supply** via a **1.5 kOhm resistor**.

Further sample connections for the **train influence module ZBM** can be found at the Internet on our Web Site ([www.ldt-infocenter.com](http://www.ldt-infocenter.com)) at the section "Sample Connections".

## Further Products from our Digital-Professional-Series:

### LS-DEC

**Light signal decoder** for up to 4 LED train signals. Signal signs will be originally dimmed up and down and directly positioned via the decoder address.

### S-DEC-4

**4-fold turnout decoder** for four magnet accessories and 1 Amp. switching power each. With free programmable decoder addresses and possible external power supply.

### M-DEC

**4-fold decoder for motor driven turnouts**. For motors up to 1A. With free programmable decoder addresses. Drives can be connected directly with the decoder output.

