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RC SCALE EQUIPMENT & MORE

Operating instructions light module SMLM.S1.4

Description, installation instructions, function as well as important notes.

Please read carefully before starting up!

Description:

The light module has 7 outputs, 2 inputs and has 5 or 10 different modes (programs). For the foreseen functions of the light module it needs two signals of the receiver of your vehicle (one signal is required at least).
The light module receives the operating voltage from the receiver (6.0V - 7.4V). The light module does not need an external voltage source.
The output voltage of the outputs depends on the supply voltage of the light module.
The outputs of the light module are exclusively for the use of LEDs.
To connect LEDs to the outputs of the light module, series resistors are required. The maximum current per output is 500mA.
The brightness of the LEDs you use depends on their series resistors and the technical data of the LEDs.
The light module works exclusively with the drive controller setting "Fwd/Rev" (scaler/crawler).

Features of the SMLM.S1.3/SMLM.S1.4 at a glance:

- compact design (33x20mm)

- simple operation, structured arrangement

- 5 or 10 modes programmable by pushbuttons
  (several modes of the predecessor replaced by switchable function replaced)

- several LEDs can be operated per output

- 1 output main headlights   1 output additional lights
  1 output rear lights   1 output brake lights
  1 output reversing lights   1 output parking lights
  1 output interior lights

- Brake light and reversing light are always functional, even when the main light is switched off (like original)

- Parking lights, main headlights and the additional headlights can be switched with one channel

- Main headlights can be switched in two steps (low beam/high beam)

- Auxiliary headlights two-stage switchable "normal" or flashing light (front flasher), no more mode necessary

- Sleep mode after 30 sec. standstill (interior light starts to shine, main lights, main headlights extinguish completely)

- brake light with 4 sec. timer or set to "continuous light adjustable

- Mode for tail light & brake light "together or separately (imitates the two-phase bulb, therefore only one chamber of the tail light per side is required)

- Brightness of the tail light can be adjusted in two steps

- For drift cars: With the output "ST" an "exhaust fire" can be "exhaust fire" (deactivated thrust cutoff) can be realized (3 different intervals), switchable!

- **Attention: Resistors in front of the LEDs are necessary!**
  Thereby a maximum brightness of the LEDs can be achieved, independent of the number of LEDs per output

Installation:

Switch off your vehicle. Route all cables in your vehicle and mount the module near the receiver. Unplug the signal cable connector from the drive controller from the receiver and connect the supplied Y-cable to the signal cable of your drive controller. Plug the connectors back into the "THR" (or "Signal 2") input of the receiver as well as into the "THR" input of the light module (drive signal/main signal). To use the switching functions, connect another signal cable to a free channel of your receiver and the "AUX" input of the light module.

Operation:

Switch on the transmitter. Leave the throttle lever of the transmitter in neutral position and now switch on the speed controller. Now the module is supplied with power by the speed controller or the receiver. After a few seconds the orange LED in the housing starts to light up and the module is ready for use.
To change the programming or to select/change the modes see below "Programming the modes".
Info: When switching on the speed controller, the throttle lever of the remote control must be in neutral position. To ensure the switching functions for "ST", "FR" and "TOP", no trim or "EXPO" for "THR" and "AUX" may be changed/set on the remote control.

Inputs:

"THR" = Input for general signal acquisition of the throttle and must be connected with a Y-cable between receiver and controller.
"AUX" = Input for another signal cable, this must be connected to a free switch channel of the receiver.
        This channel of the remote control must be operated by a push button switch. A rotary control (potentiometer) is useless.
        (The pushbutton switch must work like this when actuated: -100 -> +100 or opposite.)
        If this signal cable is connected, the module or the functions can be switched by the pushbutton switch of the remote control.
        If this signal cable is not is not connected, the switchable outputs light up permanently (to be able to use them anyway).

Outputs:

"FR" = Main headlights (low beam, high beam).
"TOP" = auxiliary headlights and front flashers
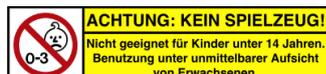"RUE" = rear lights (+ brake lights, if mode 2 is deactivated)
"BR"= brake lights
"RF" = reversing lights
"ST" = parking lights or for drift vehicles: "thrust cutoff" (exhaust pop) flashing after accelerating
"IR" = interior lights

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Switch functions:

The module has 5 switch functions, which can be switched by a push button switch on the remote control, provided that the signal "AUX" is connected.
The first functions are based on the switch position of the main light switch of the real car.
If no switching function is desired, and the module is only connected with the signal "THR", all switchable outputs are switched on permanently, so that you can still use them.
The order of the switching functions does not have to be according to this listed order. So it is also possible to switch on the low beam directly before you switch on the parking light.
The output for the additional headlights can also be switched when the main light is switched off.

After switching on the module or controller (position 0) -> main light off, but outputs brake light (BRE) and reverse light (RF) always in function

1.   1x actuation of the button on the remote control (position 1) -> outputs parking light (ST) and rear light (RUE) in function

2.   2x Press the button on the remote control twice in quick succession (position 2) -> outputs for parking light, tail light and dipped beam/main headlight (FR) in function

The second time 2x press the button on the remote control -> output dipped beam/main headlight switch to high beam
(repeat to switch back to low beam)

The second time 1x press the button on the remote control (position 0) -> main light off, outputs brake light and reverse light in function

3.   3x Press the button on the remote control 3 times in succession -> the auxiliary headlight output (TOP) is in function.
(repeat to switch off the function)

4.   4x Press the button of the remote control 4 times in a row -> output of additional headlights as flashing light in function (e.g. front flasher or rear warning system).
(repeat to switch off the function)

5.   5x Press the button of the remote control 5 times in a row -> output parking light "exhaust fire" simulation in function (for drift cars).
(repeat to switch off the function)

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Programming the modes:

For different requirements the module has 5 different modes, which can be programmed/set via SET key.

Depending on the desired function, the mode can be either selected or not selected (see table*).

To program the desired modes, press the SET button on the module while it is switched on (the SET button is located in the housing and can be pressed through a small opening using the supplied needle) until the orange LED in the housing briefly goes out. The module is now in programming mode and the modes run through one after the other. Now a blue LED flashes differently often, depending on the mode. Between each mode there is a pause of 3 seconds. In this time span the mode can be confirmed. If you want to confirm a mode, press the SET key briefly after the blue LED has blinked. If you press the SET key, this is confirmed by the orange LED. After all modes have been run through, i.e. the LED has blinked 5 times at the end, the module is ready for use and the orange LED lights up permanently again.

Programmier-Tabelle* der Modes:

Nicht Betätigung der SET Taste	Mode	Betätigung der SET Taste
- Brake lights illuminate permanently in neutral position	1	- Brake lights go out after 4 sec. in neutral
- Tail light and brake light together in the tail light	2	- Taillight and brake light separately
- Reversing light reverse deactivated	3	- Reversing light reverse activated
- Sleep mode activated ("IR" begins to light up after 30 sec. seconds, "FR" goes out) Sleep mode ends after throttle response Throttle response ("IR" goes out, "FR" lights up again)	4	- Sleep mode deactivated ("IR" lights up permanently, "FR" does not go out after 30 sec. idle time)
- Rear light brightness 70 % (ratio to brake light)	5	- Tail light brightness 50% (ratio to brake light)

Technical specifications:

- Output current of one output: max. 500mA
- but -> total load current: max. 1.5A
- operating voltage: 6,0V - 7,4V
- output voltage = input voltage
- Manufacturer: Scale Man Modellbau
- dimensions: 33x20x10mm
- Weight: 6g

Usage Notes:

- The module works exclusively with the speed controller setting "Fwd/Rev".
- For the switching functions a 3 channel remote control with a push button switch is required
- Only a RC receiver (6.0V - 7.4V DC) is used as voltage source
- Maximum output current of one output 500mA, where maximum total current does not exceed 1.5A!
- Check the signal contact plugs and pay attention to the correct polarity of the plugs
- The module is not protected against moisture
- ATTENTION: Protect the module from overload! Pay attention to the maximum permissible current! Pay attention to polarity reversal and short circuit! In case of a short circuit of an output the module is immediately defective. Any liability in case of improper use is excluded!

Labeling: (SMLM.S1.4)

TOP	BRE	IR	RUE	FR	ST	RF

TOP	Output additional headlights and front flashers, etc.
BRE	Output brake lights
IR	Output interior lights
RUE	Output rear lights
FR	Output main headlights (low beam/high beam)
ST	Output parking light or exhaust fire
RF	Output reversing light
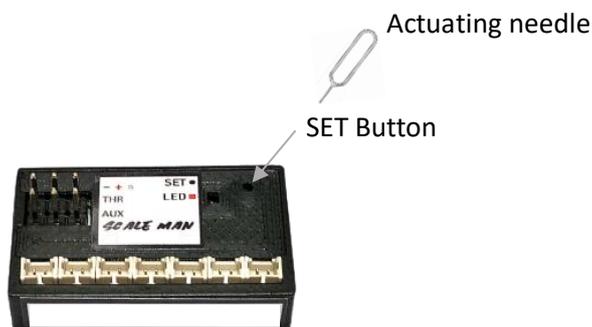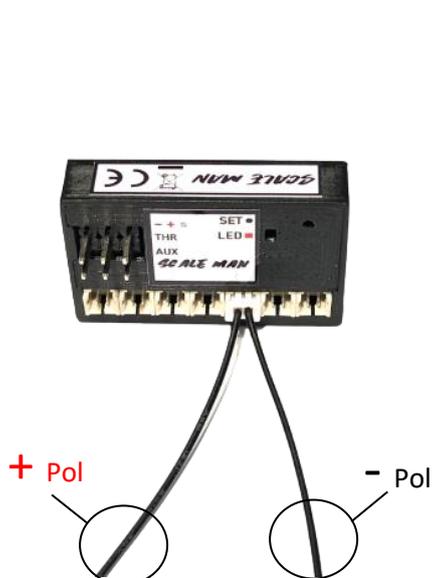
Actuating needle

SET Button

+ Pol

− Pol

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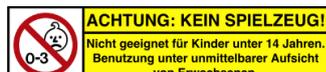
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Product description

RC light module, built in SMD technology. Application: Use in RC model building (crawler, scaler, truck)

Intended use

The light module is designed for use in RC model vehicles. It simulates the lighting of a motor vehicle and works together with the driving electronics of the RC vehicle (speed controller and receiver). The module works exclusively with the drive controller setting "Fwd/Rev" (scaler/crawler).

General notes

The module has left production in a safe condition. To maintain this condition and to ensure safe operation, the user must observe the warnings, safety instructions and cautionary notes contained in this manual!

Warning notes

The module as well as all small parts must not get into the hands of children. Danger of swallowing! Protect the module against moisture, humidity and dirt. If any liquid penetrates into the module, it could be damaged. If you spill any liquid on the module, it must be switched off immediately and checked by us. The module must not be surrounded by any material, as it must be possible to dissipate any heat that may be generated. The module must not be used in connection with easily flammable and combustible liquids and substances. The module may only be operated at the voltage provided for it. For this purpose, only use the voltage source from the drive receiver, not directly to a battery. Make sure that the polarity is correct. Avoid short circuits at all costs. The permissible ambient temperature must not fall below or exceed -15 °C and +50 °C during operation. Do not operate the module in an environment where flammable gases, vapors or dusts are or may be present.

Safety note

Live cables or lines to which the module is connected must always be checked for insulation faults or breaks. If a fault is detected in the supply line, the module must be taken out of operation immediately until the defective line has been replaced. When using the module, always ensure exact compliance with the characteristic data for electrical variables specified in the associated description (Technical data). This applies especially to the maximum permissible operating voltage and the maximum permissible operating current of the inputs and the outputs! Please note that operating and connection errors are beyond my control. Understandably, I cannot accept any liability for any damage resulting from them. In each case it is to be checked whether the module is suitable or may be used for the respective application and place of operation. All wiring work may only be carried out in a de-energized state.

Liability and warranty

The legal warranty regulations valid at the time of purchase apply. Prerequisite is the intended use in the non-commercial area. Damage caused by improper use, such as incorrect connection of the voltage source, exceeding the maximum output power (e.g. wrong consumers connected, too many LEDs requiring too much current) or by water, is excluded. Tampering and modifications will also void the warranty. My liability remains in any case limited to the purchase price. Liability for consequential damages is excluded.

Note on environmental protection:

Waste electrical and electronic equipment does not belong in household waste! Please dispose of these devices at the municipal collection points. The delivery there is free of charge.
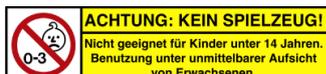
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Impressum

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