

## KNX LED controller 5-gang

Ref.-no.: 39005 1S LED R

### Operating instructions

#### 1 Safety instructions



Electrical devices may only be mounted and connected by electrically skilled persons.

Serious injuries, fire or property damage possible. Please read and follow manual fully.

Danger of electric shock. During installation and cable routing, comply with the regulations and standards which apply for SELV circuits.

These instructions are an integral part of the product, and must remain with the end customer.

#### 2 Device components

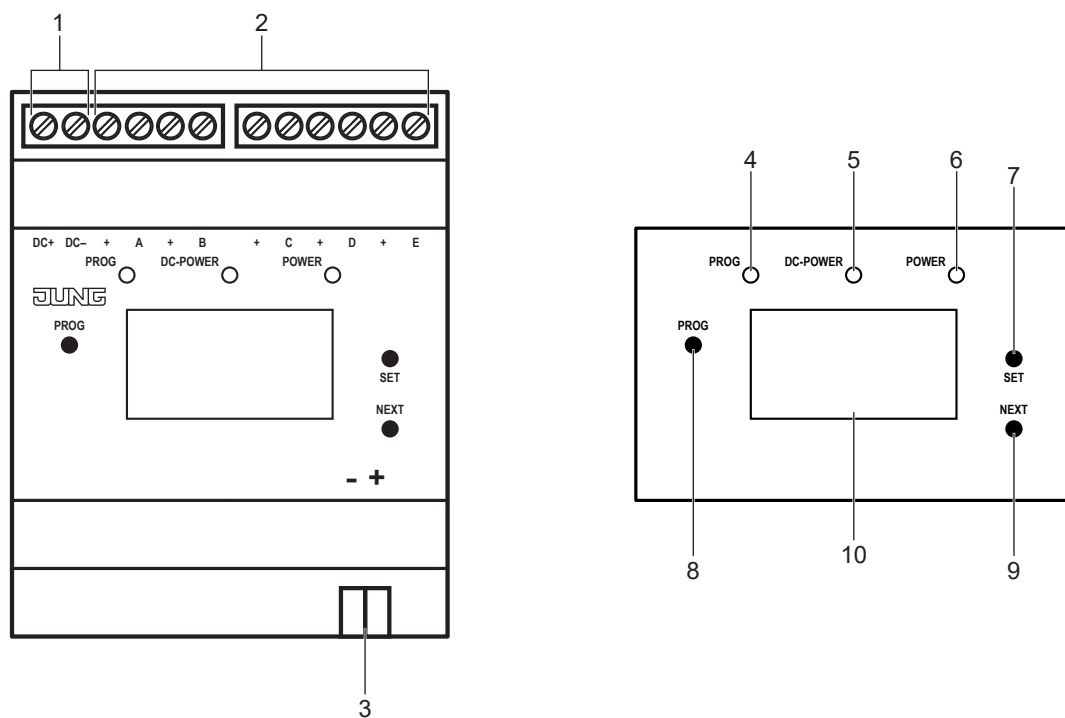


Fig. 1 and fig. 2: Device components

- (1) Power supply connection
- (2) LED module connection
- (3) KNX connection
- (4) PROG LED
- (5) DC-POWER LED
- (6) POWER LED
- (7) PROG button
- (8) SET button
- (9) NEXT button
- (10) Display

### 3 Function

#### System information

The device can be updated. Firmware can be easily updated.

The device is KNX Data Secure capable. KNX Data Secure offers protection against manipulation in building automation and can be configured in the ETS project. Detailed specialist knowledge is required. A device certificate, which is attached to the device, is required for safe commissioning. During mounting, the certificate must be removed from the device and stored securely.

Planning, installation and commissioning of the device are carried out with the aid of the ETS, version 5.7 and above.

#### Intended use

- Dimmer to control LEDs, LED modules, LED spots, halogen lamps and incandescent lamps of between 5 V ... 48 V (pulse width-modulated).
- Mounting on DIN rail according to EN 60715 in distribution boxes

#### Product characteristics

- Dimmer for colour temperature and coloured light control (RGB/HSV)
- Different dimming characteristics settable (soft dimming, deep-down dimming)
- PWM frequency settable (211 ... 1200 Hz)
- Commissioning with display support
- Free configuration of the channels
- Integrated scenes and bit scenes
- Predefined and freely-definable sequences
- Time-controller dimming or Human Centric Lighting (HCL)
- Staircase light function
- Disabling function
- Measurement and meter function
- Diagnostics/message of the protection function via KNX group addresses and shown on display
- Electronic overtemperature switch-off of the load current (automatic reset)
- Protection functions for LED modules and power supply

## 4 Information for electrically skilled persons

### Installation and electrical connection



#### DANGER

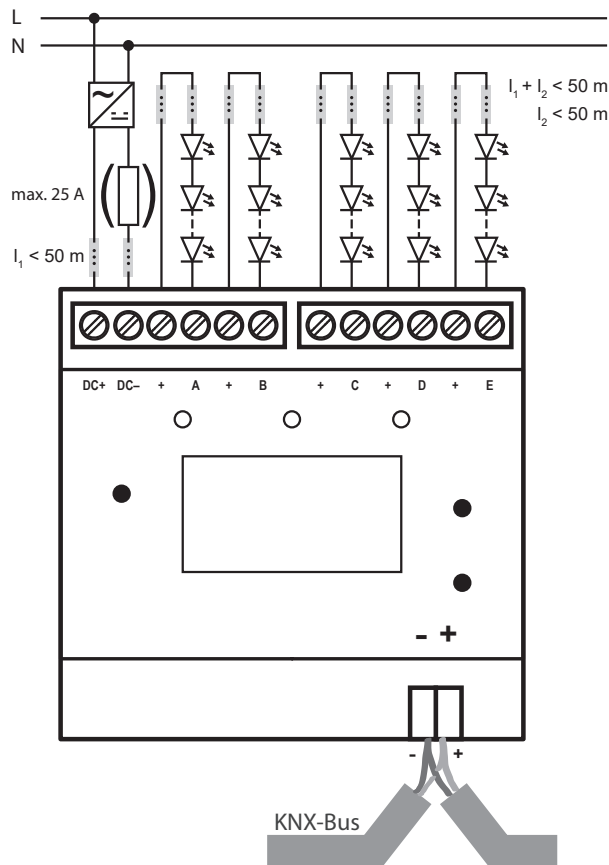
Electrical shock on contact with live parts in the installation environment.

Electrical shocks can be fatal. Before working on the device, disconnect the power and cover live parts in the area.

### Mounting

- Mount device on DIN rail.

### Connection



Channel/ Mode	A	B	C	D	E
RGBCCT	R	G	B	CW	WW
RGBW + 1 x IC	R	G	B	W	IC
RGB + 2 x IC	R	G	B	IC	IC
RGB + TW	R	G	B	CW	WW
2 x TW + 1 x IC	IC	CW1	WW1	CW2	WW2
1 x TW + 3 x IC	IC	IC	IC	CW	WW

CCT: Correlated Color Temperature

RGBW: Red, Green, Blue, White

IC: Independent Channel

CW: Cold White

WW: Warm White

TW: Tunable White

Fig. 3 and fig. 4: Connection

#### Requirements:

- Power supply (5 ... 48 V DC)
- KNX/EIB bus connection

For position of the connections, see device components.

- Connect the power supply to the DC+ and DC- according to the connection diagram. (fig. 3)  
DC-POWER LED lights up in yellow.



With power supplies with a rated current < 25 A and overload and/or overcurrent function, it is not necessary to use a fuse.

- Connect the KNX.
- Connect the LED modules according to the connection plan (fig. 3) and the table (fig. 4).

Recommended dimming frequency: up to 488 Hz

Observe the technical data:

Do not exceed the max. load per channel.

Do not exceed the max. total current of all five channels.

Do not exceed the max. cable lengths.

Do not undershoot or exceed the conductor cross-section.

## 5 Commissioning

After connecting, the device is switched on automatically. The POWER LED turns green.

## 6 Operation

### Display

The display switches itself off automatically after one minute.

Switching on display:

- Press the NEXT button.

Scrolling through menu:

- Press the NEXT button repeatedly while the display is switched on.

Menu structure:

- Page 1, 2 and 3:  
Display of the status of the power supply/LED modules, overvoltage, undervoltage, overtemperature protective functions and the overcurrent total/single channel
- Page 4:  
1-touch commissioning and status total
- Page 5, 6 and 7:  
1-touch commissioning and status channel A to E
- Page 8:  
Test mode of various dimming properties
- Page 9 and 10:  
Display of the current measurement, DC voltage measurements, bus and device temperature
- Page 11 and 12:  
Display of the brightness and adjustment of the channels in percent
- Page 13:  
Display of various device properties
- Page 14:  
Displaying the Data Secure FDSK (Factory Default Setup Key)  
This is only displayed if the device has not yet been set to secure mode.

### LED displays

There are three LEDs on the front of the device. The LEDs indicate the following device statuses during operation:

- PROG LED lights up red:  
Programming mode is activated.
- DC-POWER LED lights up yellow:  
Voltage at DC input is normal.
- POWER LED lights up green:  
Device is ready for operation.

### Programming mode

Program device:

- Press the PROG button.  
PROG LED lights up red.

Terminate programming mode:

- Press the PROG button again.

## 7 Configuration

The device is configured via parameters in the ETS product database.

You can find detailed information about the configuration or parameterisation of the device in the product documentation. The product documentation can be downloaded from our website.

### KNX Data Secure

Requirements:

- Dedicated application program
- Safe commissioning activated
- FDSK entered/scanned or device certificate added

 Document all passwords and store them securely.

## 8 Technical data

Rated voltage	DC 5 ... 48 V SELV
Rated current without fuse	max. 25 A
KNX	
KNX Medium	TP256
Commissioning mode	S-Mode
Rated voltage	DC 21 ... 32 V SELV
KNX current consumption	< 30 mA
KNX connection	connection terminal
Outputs	
Rated voltage	DC 5 ... 48 V SELV
Dimming frequency	211 ... 1200 Hz
Current per output at 5 ... 24 V	
Channel A, max. 13 m cable length ( $I_1 + I_2$ )	
up to 488 Hz	max. 20 A
600 Hz	max. 20 A
832 Hz ... 1200 Hz	max. 10 A
Channel A ... E, max. 50 m cable length ( $I_1 + I_2$ )	
up to 488 Hz	max. 15 A
600 Hz	max. 12 A
832 Hz ... 1200 Hz	max. 7 A
Current per output at 48 V	
max. 50 % of the maximum currents of 5 ... 24 V	
Total current over all 5 channels	
at 5 ... 24 V	max. 20 A
at 48 V	max. 10 A
Ambient temperature	-5 ... +45 °C
Storage/transport temperature	-25 ... +75 °C
Relative humidity	max. 93 % (no moisture condensation)
Installation width	72 mm (4 rail units)
Connection mode: screw terminals	
single wire	0.5 ... 4 mm <sup>2</sup>
stranded without ferrule	0.5 ... 4 mm <sup>2</sup>
stranded with ferrule	0.5 ... 2.5 mm <sup>2</sup>

## 9 Warranty

The warranty follows about the specialty store in between the legal framework as provided for by law.