

DALI-Gateway

Order no.: 1060 00

System information

This device is a product of the Instabus KNX/EIB-system and complies with KNX directives. Technical knowledge obtained in Instabus KNX training courses is a prerequisite to proper understanding.

The functionality of this device depends on the software. Detailed information on loadable software and attainable functionality as well as the software itself can be obtained from the manufacturer's product database.

Planning, installation and commissioning of the unit is effected by means of KNX-certified software. The full functionality with KNX commissioning software from version ETS3.0d. onwards.

The product database, technical descriptions and conversion programs and other utilities are available in the Internet at www.gira.de.



Safety instructions

Electrical equipment must be installed and fitted by qualified electricians only.

Failure to observe the instructions may cause damage to the device and result in fire or other hazards.

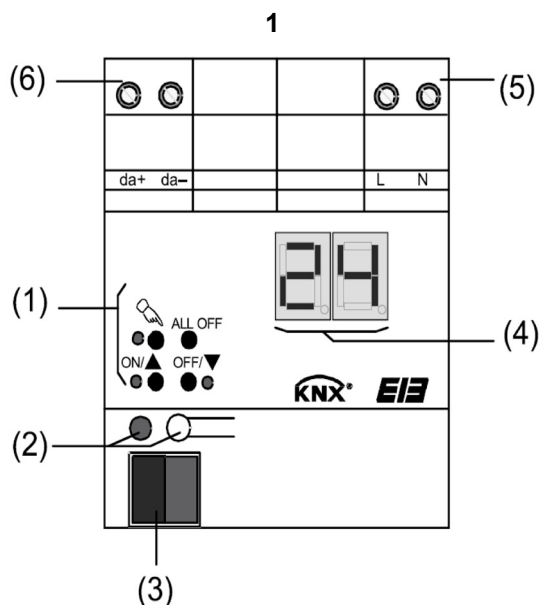
The device is not suited for safe disconnection of the mains supply.

The DALI control voltage is a functional extra-low voltage (FELV). Safe separation between KNX/EIB and DALI in installations must be ensured.

These operating instructions are part of the product and must be left with the final customer.

Device components

- (1) buttons for manual control
- (2) programming button and LED
- (3) Instabus KNX/EIB bus terminal
- (4) DALI group display
- (5) mains supply terminal
- (6) DALI output



Operation

Designated use

- Controlling of luminaires and other applications with DALI devices in Instabus KNX/EIB installations, e.g. electronic ballasts
- Installation on DIN rail in small distribution boards

Product features

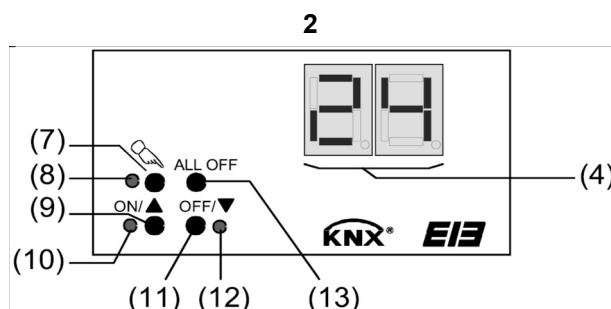
- Controlling of 64 DALI devices max. in 32 groups max.
- 16 light-scenes
- Readout of the DALI device status via the Instabus KNX/EIB, e.g. brightness, luminaire malfunction
- Manual control of the DALI groups
- Forced control
- Checkback of switching status and brightness level in bus and manual control mode
- Central switching function
- Disabling function for each group
- Separate ON and OFF delays
- Staircase lighting application with early-warning function
- DALI commissioning with ETS plug-in
- Short-circuit protection
- Overload protection
- Over-voltage protection
- Replacement of a single DALI device in operation possible without software



State of delivery: provisional operation, control of DALI groups via keypad possible. All DALI devices are controlled in common.

Controls

- (4) DALI group display (1...32)
- (7) key Manual control mode
- (8) LED on: permanent manual control mode active
- (9) key **ON/▲** Switching on or increasing brightness
- (10) LED **ON/▲** on: DALI group activated, brightness 1...100%
- (11) key **OFF/▼** Switching off or reducing brightness
- (12) LED **OFF/▼** on: DALI group deactivated, brightness 0%
- (13) key **ALL OFF** Deactivating all DALI group



Control modes

- Bus mode: operation from touch sensors or other bus devices
- Temporary manual control mode: manual operation locally with keypad, automatic return to bus mode
- Permanent manual control mode: only manual control locally on device



Bus operation in manual control mode disabled.
Manual control in the event of bus failure enabled.
After failure and return of bus voltage, the device switches over to the bus mode.
After failure and return of mains voltage, the device switches over to the bus mode.
Manual control mode can be disabled in operation via bus telegram.

Activating the temporary manual control mode

Keypad operation is programmed and not disabled.

- Press the  key briefly < 1 s.
01 is displayed, LED  remains off.
- or -
bc is displayed: The device is not programmed; all DALI devices connected are controlled in common. In this broadcast mode it is not possible to control DALI devices individually.



After 5 s without key-press, the device returns automatically to the bus mode.

Deactivating the temporary manual control mode

The device is in the temporary manual control mode.

- No key-press for 5 s.
- or -
• Press the  key briefly < 1 s several times until the device quits the temporary manual mode.
The display is off.

Activating the permanent manual control mode

Keypad operation is programmed and not disabled.

- Press the  key for at least 5 s.
The  LED is on, **01** is displayed, the permanent manual control mode is activated.
- or -
bc is displayed: The device is not programmed; all DALI devices connected are controlled in common. In this broadcast mode it is not possible to control DALI devices individually.

Deactivating the permanent manual control mode

The device is in the permanent manual control mode.

- Press the  key for at least 5 s.
The  LED is off, display is off, bus mode is activated.

Controlling the DALI groups

The device is in the permanent or temporary manual control mode.

- Press the  key several times briefly < 1 s until the desired group is displayed.
The **ON/▲** and **OFF/▼** LEDs indicate the status.
- Controlling the DALI group with the **ON/▲** or **OFF/▼** key.
Brief press: on / off
Long press: increase / reduce brightness
Release: dimming stop
LEDs **ON/▲** and **OFF/▼** indicate the status.

Deactivating all DALI groups

The device is in the permanent manual control mode.

- Press the **ALL OFF** key.
All DALI groups are deactivated.

Disabling individual DALI groups

The device is in the permanent manual control mode.

- Press the  key several times briefly < 1 s until the desired group is displayed.
The status is indicated by the **ON/▲** and **OFF/▼** LEDs.
- Press the **ON/▲** and **OFF/▼** keys simultaneously for at least 5 s.
The number of the selected DALI group flashes.
The DALI group is disabled.
- Activate the bus mode (deactivate the permanent manual control mode).



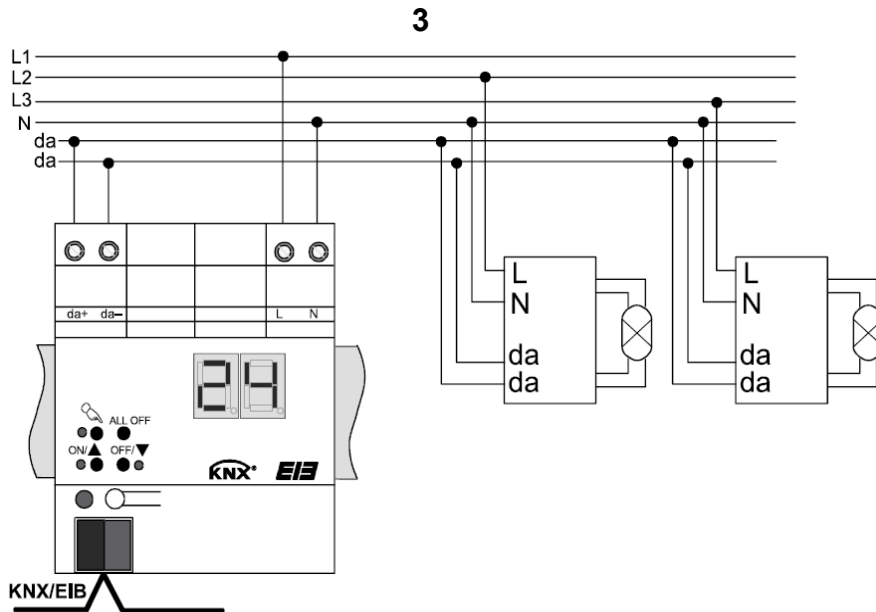
A disabled DALI group can be operated in the manual control mode.

Re-enabling DALI groups

The device is in the permanent manual control mode.

- Press the  key several times briefly < 1 s until the desired group display flashes.
- Press the **ON/▲** and **OFF/▼** keys simultaneously for at least 5 s.
The selected DALI group is re-enabled.
The display stops flashing.
- Activate the bus mode (deactivate the permanent manual control mode).

Connection



Information for qualified electricians

DANGER! Electric shock in case of accidental contact with live parts. Electric shocks may be fatal. Before working on the device, cut out the mains supply and cover up live parts in the surroundings.

Fitting and electrical connection

Fitting the device

Observe the temperature range (Technical data).
Ensure sufficient cooling.

- Fit the device by snap-fastening on a mounting rail in acc. with DIN EN 60715. The connecting terminals must be at the top.

- Connect the device (Fig. 3).
- Connect the bus line to the bus terminal.



DALI devices can be connected to different phase conductors.

Electrical connection



DALI devices from some manufacturers have enlarged functions and can be controlled by means of a mains voltage at the DALI terminal. When retrofitting existing DALI installations, remove all corresponding circuits.

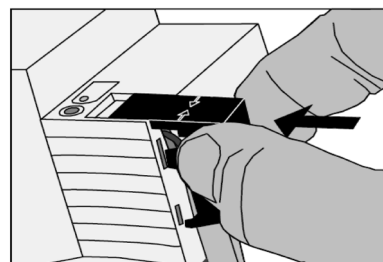
The DALI control voltage is a functional extra-low voltage (FELV). Plan the installation in such a way that all lines carrying DALI voltage as well as mains voltage are disconnected when the supply to a sector is disconnected.

Sliding on the protective cap

To protect the bus lines against dangerous voltages at the connecting terminal, slide on the protective cap.

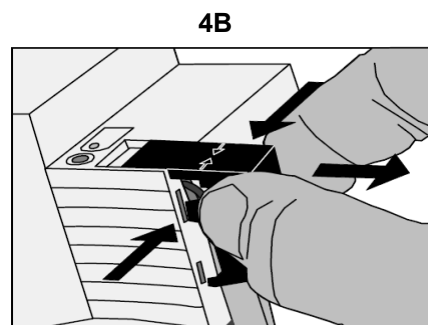
- Lead out the bus line at the rear of the device.
- Slide the cap over the bus terminal (Fig. 4A) until it is heard to engage.

4A



Removing the cap

- Press the sides of cap and withdraw (Fig. 4B)

**Commissioning****Loading the address and the application software**

- Switch on the mains voltage (switch on the automatic circuit breaker).
- Switch on the bus voltage.
- Allocate the physical address.
- Put the DALI system into operation with the commissioning software. For further details refer to the product documentation.
- Download the application software into the device.



Programming is not possible if the mains voltage is not connected.

Technical data

KNX medium:	TP1	Line length Gateway – Device	
Mode of commissioning:	S-Mode (ETS)	with line cross-section 1.5 mm ² :	max. 300 m
Instabus KNX/EIB supply:	21...32 V DC	with line cross-section 1.0 mm ² :	max. 238 m
Instabus KNX/EIB power consumption:	typically 150 mW	with line cross-section 0.75 mm ² :	max. 174 m
Mains supply:	110...240 V AC ±10%	with line cross-section 0.5 mm ² :	max. 116 m
Mains frequency:	50/60 Hz	Resistance of DALI line:	max. 4 Ω single length (8 Ω return length)
Total dissipated power:	max. 3 W	DALI line type:	not specified (2 free wires in NYM cable)
Number of DALI devices:	max. 64 (power consumption 2 mA each)	Instabus KNX/EIB connection:	connecting termi- nal
DALI voltage:	typically 16 V	DALI connection:	screw terminals
DALI transmission rate:	1200 bit/s	single-wire:	0.2...4 mm ² or 2 x 0.2...2.5 mm ²
DALI protocol:	DIN EN 60929 Annex E4	stranded wire without ferrule:	0.75...4 mm ²
		stranded wire with ferrule:	0.5...2.5 mm ²
		Ambient temperature:	-5 °C ...+45 °C
		Storage temperature:	-25 °C ...+70 °C
		Mounting width:	72 mm (4 modules)

Help in case of trouble

Display shows Er, connected DALI devices not operational, control not possible

Cause: mains voltage on DALI line.

Installation faulty; remove mains and bus voltage from device and from other connected DALI devices; correct faulty installation.

Display shows bc in manual control mode; controlling of individual luminaires not possible

Cause: The device is not programmed.

Program the device, put the DALI system into operation.

Individual DALI device not operational

Cause 1: consumer defective, e.g. lamp.

Replace the consumer.

Cause 2: DALI device defective.

Replace defective DALI device.
Switch on the power supply.

Press the  and the **ALL OFF** keys together for at least 10 s.



The DALI-Gateway identifies the replaced DALI device and downloads the required data into the device. The display shows LE.

Simultaneous replacement of several DALI devices only with commissioning software and project data.

Manual control with keypad not possible

Cause 1: manual control mode not programmed.

Reprogram the device, activate the manual control.

Cause 2: manual control disabled via the bus.

Enable the manual control mode.

DALI group control not possible

Cause: DALI group disabled via the bus or via manual control.

Re-enable the output.

None of the DALI groups operational

Cause 1: all DALI groups disabled via the bus or via manual control.

Re-enable the output.

Cause 2: permanent manual control is activated.

Deactivate the permanent manual control mode.

Cause 3: application software stopped, programming LED flashing.

Make a reset: disconnect the device from the bus, reconnect after 5 seconds.

Cause 4: no or faulty application software.

Check programming and rectify.

Acceptance of guarantee

We accept the guarantee in accordance with the corresponding legal provisions.

Please return the unit postage paid to our central service department giving a brief description of the fault:

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