

One

GIRA

Operating instructions

DALI actuator Colour, 4-gang
Art. no. 2113 00



Product image non-binding

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1 Safety instructions



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

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

Danger of electric shock. Always disconnect before carrying out work on the device or load. In so doing, take all the circuit breakers into account, which support dangerous voltages to the device and or load.

DALI is an FELV (functional extra-low voltage). On installing, ensure safe isolation between Gira One and DALI and mains voltage. A minimum distance of at least 4 mm must be maintained between bus conductors and DALI mains voltage cores.

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

2 Device components

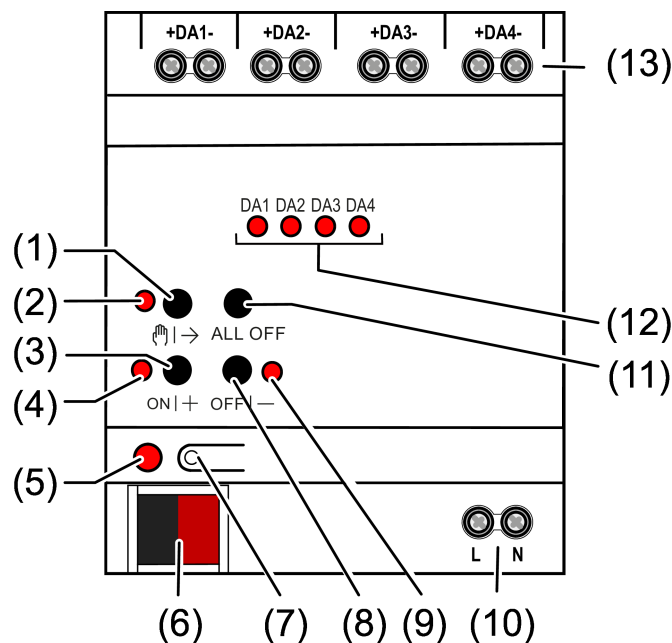


Figure 1: Device components

- (1) Button ALL OFF
Manual control
- (2) LED
On: continuous manual operation active
Flashing: temporary manual operation active
- (3) Button ON|+
Short press (< 1 s): ON / long press (1...5 s): dims brighter.
- (4) LED ON|+
LED ON in manual operation indicates a switched-on DALI system (brightness: 1...100 %).

- (5) Programming LED
- (6) Gira One connection
- (7) Programming button
- (8) Button **OFF|–**
Short press (< 1 s): OFF / long press (1...5 s): dims darker.
- (9) LED **OFF|–**
LED ON in manual operation indicates a switched-off DALI system (brightness: 0 %).
- (10) Terminals for mains supply
- (11) Button **ALL OFF**
All DALI subscribers OFF (only in permanent manual operation).
- (12) Status LED of the DALI systems DA1 ... DA4
On: DALI system switched on
Flashes slowly: manual operation active
Flashes quickly: DALI system blocked
- (13) Terminals for DALI systems DA1 ... DA4

3 System information

This device is a product for the Gira One Smart Home system. The Gira One system is commissioned easily and in a time-saving manner using the Gira Project Assistant.

The Gira One Smart Home system enables the control and automation of lighting, heating and shading, as well as connection to various third-party systems and much more. It can be operated via Gira One switches, by app from home or securely from a remote location. Electrically skilled persons can maintain the Gira One project remotely free of charge.

Data transmission between the Gira One devices is encrypted. This provides protection against third-party access and manipulation.

Commissioning is carried out with the free Gira Project Assistant (GPA). Free function and security updates are also transferred to the Gira One devices with the GPA. Always use the latest version of the Gira Project Assistant (GPA).

The Gira One system is based on the globally proven KNX smart home standard.

4 Intended use

- Operation in Gira One system
- Controlling of luminaires and other applications with DALI operating device in Gira One installations, e.g. electronic ballast
- Mounting on DIN rail according to EN 60715 in distribution boxes

5 Product characteristics

- Programming and commissioning are carried out with the Gira Project Assistant (GPA)
- DALI-2 certified
- Multi-master capable; DALI-2 sensors can be used as application controllers
- Control of up to 128 DALI devices in 4 DALI systems
- Broadcast control of each of the four DALI systems
- Setting the colour temperature or light colour (RGB, RGBW) for luminaires with DALI Device Type 8 in accordance with IEC 62386-209
- Short-circuit, overload and overvoltage protected
- Operating hours counter
- Automatic colour wheel sequence or brightness sequence
- Suitable for operation of emergency lighting systems with DC voltage
- Manual control of DALI systems
- Restraint or disabling functions
- Collective feedback
- Central switching and dimming function
- Disabling function for every DALI system
- Separate switch-on and switch-off delay for each DALI system
- Staircase lighting timer with run-on time
- Standby switch-off of the DALI devices

Delivery state: Construction site mode, manual control is enabled. The connected DALI operating devices of the four DALI systems can be controlled via the keypad via the broadcast function.

- i** The complete functionality of the DALI system can only be ensured if DALI-2 operating device is used exclusively.
- i** A complete list of DALI-2 operating and control devices can be found here: <https://www.DALI-alliance.org/products>

6 Operation

When operating the DALI systems with the keypad, the device differentiates between short and long actuation.

- Short: Pressing for less than 1 second
- Long: Pressing for between 1 and 5 seconds

Switching on temporary manual operation

Operation using the button field is programmed and not disabled.

- Press the  (1) button briefly.

The LED (12) of the first DALI system flashes.

After 5 seconds without a button actuation, the device returns automatically to bus mode.

Switching on/off the permanent manual operation

Operation using the button field is programmed and not disabled.

- Press the  (1) button for at least 5 seconds.

LED  (2) lights up, LED (12) of the first DALI system flashes. Permanent manual operation is switched on.

- or in case of repeated actuation for at least 5 seconds -

LED  (2) is off, LED (12) is off, bus mode is switched on.

Operating DALI systems

The device is in permanent or temporary manual operation.

- Keep pressing the button  (1) until the LED (12) of the desired DALI system flashes.
- Operate the system using the button **ON|+** (3) or the button **OFF|–** (8).
Short: switch on/off.
Long: dim brighter/darker.
Release: Stop dimming.
The LEDs **ON|+** (4) and **OFF|–** (9) indicate the status.

 Short-term manual operation: After running through all of the DALI systems the device exits manual operation after another brief press

Switch off all DALI devices

The device is in permanent manual operation.

- Press the **ALL OFF** (11) button briefly.

All DALI systems switch off.

Locking/unlocking an individual DALI system

The device is in permanent manual operation and the lock is released.

- Keep pressing the button  (1) until the LED (12) of the desired DALI system flashes.
- Press the **ON|+** (3) and **OFF|–** (8) buttons simultaneously for at least 5 seconds.

The LED of the selected DALI system (12) flashes quickly.

DALI system is blocked.

- or in case of repeated actuation -

The LED (12) flashes slowly.

DALI system is enabled.

- Activate bus mode (see section Switching the permanent manual operation on/off).

DALI systems blocked via manual control can be operated in manual operation.

7 Information for electrically skilled persons

7.1 Mounting and electrical connection



DANGER!

Electric shock when live parts are touched.

Electric shocks can be fatal.

Always disconnect before carrying out work on the device or load. To do so, switch off all corresponding circuit breakers, secure them against being switched on again and check that there is no voltage. Cover up any adjacent live parts.

Mount device

- Mount device on DIN rail.

Connect device

Control cable: appropriate type, cross-section and routing for the specifications for 230 V cables. DALI and mains voltage wires can be run together in a cable, e.g. NYM 5x1.5 mm². The connected DALI subscribers may be operated on different phases.

- The DALI control voltage is a functional extra-low voltage (FELV). When installing, perform the installation in such a way that when an area is disconnected, the lines carrying both the DALI and also the mains voltage are disconnected.
- If multiple circuit breakers supply dangerous voltages to the device or load, couple the circuit breakers or label them with a warning to ensure tripping.
- DALI participants from some manufacturers have expanded functions and can e.g. be controlled via mains voltage on the DALI connection. When existing DALI installations are refitted, remove all corresponding operator controls.
- Attach the cover cap to the bus cable connection as protection against hazardous voltages.
- Connect device as shown in the connection example (see figure 2).



The mains voltage supply can also be provided by the DC voltage of an emergency lighting system.

- i** The four DALI systems are supplied with power exclusively via the DALI actuator. The connection of an additional power supply to one of the DALI systems is not permitted.

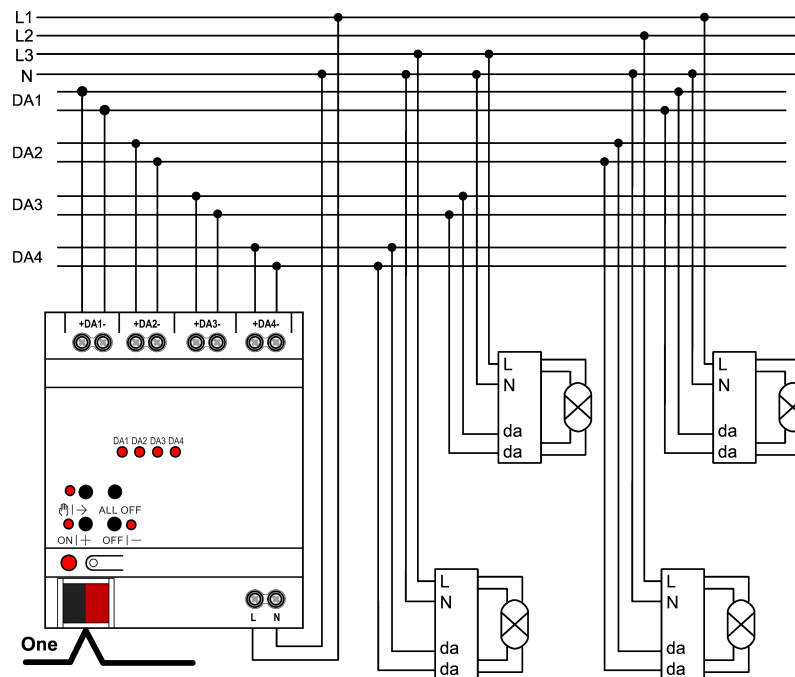


Figure 2: Connection example

7.2 Commissioning

The device can be put into operation, after mounting of the device and connection of the bus line, the mains supply and the DALI cables. The following procedure is generally recommended...

Commissioning the device

- Switch on the mains supply to the device.
- Switch on the bus voltage.

Voltage check: When the programming button is pressed, the red programming LED must light up.

- The device is commissioned using the Gira Project Assistant (GPA). Please ensure that you always use the latest version of the Gira Project Assistant.

The DALI actuator initialises all connected DALI operating devices and sets the DALI parameters (power ON level, system failure level ...) according to the programming.

The DALI actuator is ready for operation.

- i** No programming is possible if no mains voltage supply is connected.

- i** After each mains voltage return, the DALI actuator sends the DALI parameters (power ON level, system failure level ...) to all connected DALI devices. This means that when DALI operating devices are replaced, the DALI parameters within a DALI system are always configured the same.

Safe-state mode

The safe-state mode stops the execution of the program. Only the system software of the device is still functional. Diagnosis functions and programming of the device are possible. Manual operation and control of the DALI operating devices are not possible.

Activating safe-state mode

There are two options for activating the safe state mode.

Option 1:

- Switch off the mains voltage supply.
- Wait approx. 10 seconds.
- Press and hold down the programming button.
- Switch on the mains supply. Release the programming button only after the programming LED starts flashing slowly.

Safe-state mode is activated.

Option 2:

Prerequisite: The mains voltage supply must be switched on without interruption.

- Switch off the bus voltage or remove the device connection terminal.
- Press and hold down the programming button.
- Switch on the bus voltage or attach the device connection terminal. Release the programming button only after the programming LED starts flashing slowly.

Safe-state mode is activated.

Deactivating safe-state mode

- Switch off the mains voltage supply (wait approx. 10 s),
or
- perform the programming operation,
or
- cause bus voltage failure.

Master reset

The master reset restores the basic device settings (firmware remains in place). The device must then be recommissioned with the GPA. Manual control is possible.

Performing a master reset

Prerequisite: safe-state mode is activated.

- Press and hold down the programming button for > 5 s.

The programming LED flashes quickly.

The device performs a master reset, restarts and is ready for operation again after approx. 5 s.

8 Technical data**Gira One**

Rated voltage	DC 21 ... 32 V SELV
Current consumption, bus	3 ... 4 mA
Bus connection type	Device connection terminal

Supply

Rated voltage	AC 110 ... 240 V ~
Mains frequency	50 / 60 Hz
Rated voltage	DC 110 ... 240 V
Power loss	max. 3 W
Power consumption	<5.0 W

DALI

- i** The four DALI systems are supplied with power exclusively via the DALI actuator. The connection of an additional power supply to one of the DALI systems is not permitted.

Rated voltage DALI	DC 15.2 V (typ.)
Output current per DALI system	Typ. 64 mA, max. 250 mA for short periods
Guaranteed bus current per DALI system	80 mA
Number DALI operating devices	Max. of 40 per DALI system
	Σ DA1 ... DA4 max. 128

- i** If additional DALI sensors are connected, it must be ensured that the total current consumption of 80 mA per DALI system is not exceeded.

DALI transmission rate	1.2 kBit/s
DALI protocol	EN 62386
Duration of the starting operation	Max. 5 s
Cable type	Sheathed cable 230 V, e. g. NYM
DALI cable length (see figure 3)	

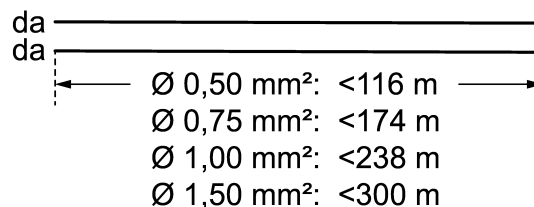


Figure 3: DALI cable length

Ambient conditions

Ambient temperature	-5 ... +45 °C
Storage temperature	-5 ... +45 °C
Transport temperature	-25 ... +70 °C

Clampable cable cross-sections (see figure 4)

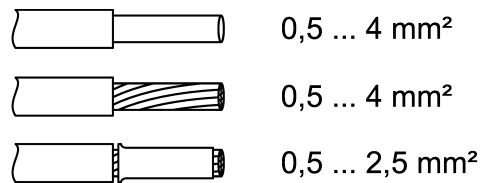


Figure 4: Clampable cable cross-sections

Installation width

72 mm / 4 HP

Terminals

Connection mode

Screw terminal

Stripping length

8 mm

Suitable tool

Phillips screwdriver (recommended)

PZ1 Plusminus (Pozidriv/slotted)

Phillips screwdriver

PZ1

Slotted screwdriver

4 mm

Connection torque

max. 0.8 Nm

9 Troubleshooting

DALI systems cannot be operated

Cause 1: DALI systems disabled via bus or manual control.

Cancel disabling.

Cause 2: Permanent manual operation is switched on.

Deactivate permanent manual operation.

Cause 3: Application programme has been stopped; programming LED is flashing.

Perform reset: Disconnect device from bus, switch on again after approx. 5 seconds.

Cause 4: Application programme is not loaded.

Check and correct the programming.

Individual DALI devices have no function

Cause 1: Load is defective, e.g. lamp.

Exchange load.

Cause 2: DALI device is defective.

Exchange defective device.

10 Parameter list

Parameters that can be set via the GPA:

Output

Minimum brightness value	1 5 ... 100
The value set here cannot be undershot in any switched-on operating state of the dimming channel, i.e. under no circumstances can the light be dimmed darker than the value set here.	
Switch-on brightness	Fixed switch-on brightness Last brightness value
Here you can specify the brightness value with which the lamp is to be switched on by pressing the button briefly: – Fixed switch-on brightness In this case, you can select a fixed value (1 - 100%) in the "Switch-on brightness value" field that opens. – Last brightness value The lamp is switched on with the brightness value that was active and saved internally before it was last switched off.	
Switch-on brightness value	1 5 ... 100
Here you can specify the switch-on brightness. This parameter is only available if the setting "Fixed switch-on brightness" has been selected for the parameter "Switch-on brightness".	
Maximum brightness value	1 5 ... 100
The value set here cannot be overshoot in any switched-on operating state of the dimming channel, i.e. under no circumstances can the light be dimmed brighter than the value set here.	

Minimum colour temperature	1000 ... 10000 K
This parameter defines the lower colour temperature value, which is not undercut in any operating state of the DALI actuator. In this way, the colour temperature of the controlled lamps of the DALI operating devices can be limited individually and adapted to the respective application. The configured minimum colour temperature must be lower than the maximum colour temperature.	
Maximum colour temperature	1000 ... 10000 K
This parameter defines the upper colour temperature value, which is not exceeded in any operating state of the DALI actuator. In this way, the colour temperature of the controlled lamps of the DALI operating devices can be limited individually and adapted to the respective application. The configured maximum colour temperature must be greater than the minimum colour temperature.	
Colour temperature when switching ON	Last colour temperature Fixed colour temperature
Here you can specify the colour temperature to be set when the light is switched on: – Last colour temperature When switching on, the colour temperature is set that was active and stored internally before switching off the last time. This memory value is stored in a non-volatile manner in the DALI actuator so that the value is retained after the bus or mains voltage returns. After an programming operation, the memory colour temperature value is predefined to "2,700 K". This value is optionally limited by the minimum or maximum colour temperature. – Fixed colour temperature In this case, you can select a fixed value (1000–10,000 K) in the "Fixed colour temperature" field that appears.	
Fixed colour temperature	1000 ... 10000 K
Here you can set the switch-on colour temperature. This parameter is only available if "Fixed colour temperature" has been selected for the "Colour temperature on switch-on" parameter.	
Switch-on delay	0 ... 3599 s (0 ... 59:59 min)
This parameter is used for setting the duration of the switch-on delay. After receipt of an ON-telegram, the time that can be configured here is started. The lamp is switched on after the set time has elapsed. An OFF-telegram received during the switch-on delay will end the delay and set the switching status to "OFF".	
Switch-off delay	0 ... 3599 s (0 ... 59:59 min)
This parameter is used for setting the duration of the switch-off delay.	

Switch-off delay	0 ... 3599 s (0 ... 59:59 min)
After receipt of an OFF-telegram, the time that can be configured here is started. The lamp is switched off after the set time has elapsed. An ON-telegram received during the switch-off delay will end the delay and set the switching status to "ON".	
Run-on time	0 ... 65535 s (0 ... 18:12:15 h)
The duration of the switch-on time for the staircase function is configured here. Once the time set here has elapsed, the lighting is switched off or (if configured) the pre-warning time is started. A further ON-telegram during the run-on time re-triggers the time, i.e. the time set here is started again. The staircase function is only active if the function "Staircase" has been selected for the push-button of this dimming channel.	
Pre-warning time	0 ... 3599 s (0 ... 59:59 min)
In accordance with DIN 18015-2, the pre-warning is intended to warn persons still on the staircase that the light will soon be switched off automatically. The pre-warning time set here follows on from the time set in the 'Run-on time' parameter. As a pre-warning, a pre-warning brightness that is to apply before the channel switches off permanently can be set using the parameter "Dimming brightness value". The pre-warning brightness is normally reduced in the brightness value compared to the switch-on brightness.	

Standby output

Switch-off delay	0 ... 3599 s (0 ... 59:59 min)
This is where the duration of the switch-off delay is set. Delaying the switch-off of the mains voltage is useful, for example, if the DALI device is to be prevented from being switched off prematurely in the event of frequent changes to the state of the brightness values.	
Switch-on delay	0 ... 59 s
This parameter is used for setting the duration of the switch-on delay. The delayed restoration of the mains supply gives DALI devices sufficient time to initialise once the mains supply has been restored, so that they can respond correctly to commands from the DALI actuator.	

11 Warranty

The warranty is provided by the specialist trade in accordance with statutory requirements. Please submit or send faulty devices postage paid together with a fault description to your responsible salesperson (specialist trade / installation company / electrical specialist trade). They will forward the devices to the Gira Service Center.

Gira
Giersiepen GmbH & Co. KG
Elektro-Installations-
Systeme

Industriegebiet Mermbach
Dahlienstraße
42477 Radevormwald

Postfach 12 20
42461 Radevormwald

Deutschland

Tel +49(0)21 95 - 602-0
Fax +49(0)21 95 - 602-191

www.gira.de
info@gira.de