

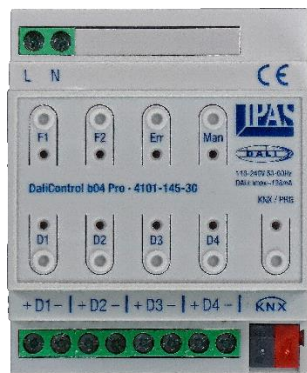
Operating and mounting instructions

DaliControl b04 Pro

Best. Nr. 4101-145-30

General usage

The IPAS DALI Gateway DaliControl b04 Pro is a 4-channel single-master application controller for controlling electronic ballasts with a DALI interface via the KNX installation bus. It supports ballasts according to IEC 62386-102 ed1 (DALI1) as well as devices according to IEC 62386-102 ed2 (DALI2).



The device converts switching and dimming commands from the connected KNX system into corresponding DALI telegrams, or status and event information from the DALI bus into KNX telegrams.

The DaliControl b04 Pro has four DALI outputs. Up to 32 ECGs can be connected to each output. The ECGs connected to a channel are controlled simultaneously via broadcast telegrams.

The power supply required for the connected ECGs comes directly from the device. Additional DALI power supplies are not required.

The device is available in a 4TE wide DIN-rail housing for direct installation in an electrical distribution board. The bus connection is made via a bus terminal. Mains and DALI cables are connected via screw terminals on the device

Product features

- 4 independent DALI channels for broadcast control
- Simultaneous control of up to 32 ECGs per channel
- No DALI commissioning or identification of the DALI luminaires required
- Extensive control of the channels via various KNX communication objects
- Colored light control with support for Device Type 8 (DT-8) ballasts and control via communication objects
- Colored light control depending on ballast sub-type:
 - - Color temperature (DT-8 Sub-Type Tc)
 - - RGB (DT-8 Sub-Type RGBWAF)
 - - HSV (DT-8 Sub-Type RGBWAF)
 - - RGBW (DT-8 Sub-Type RGBWAF)
- Automatic change of the color temperature depending on the light value (Dimm-To-Cold)
- Broadcast objects for controlling all connected ECGs simultaneously
- Various operating modes for groups such as continuous operation, night operation, staircase operation

- Timer for switch-on and switch-off delays
- Integrated operating hours counter for each channel with alarm when the service life is reached
- Individual fault detection of lamps and ECG faults for each channel with alarm via communication objects
- Scene module for up to 16 scenes, which can be assigned to KNX scenes 1..64 as required
- "Energy-saving function" allows the ECG power supply to be switched off when the light is switched off via additional switching actuators
- Manual operation via operating buttons on the device
- Signaling of error states and status diagnostics via LEDs on the device

Device types and accessories

The following device types from the DaliControl product group are currently available:

DaliControl b04	Best.Nr.: 4101-145-30
DaliControl gc16	Best.Nr.: 4101-145-11
DaliControl gc16-2	Best.Nr.: 4101-145-21
DaliControl e64 Pro	Best.Nr.: 4101-145-02

Scope of delivery

The scope of delivery of the DaliControl b04 device includes the following individual components:

- Complete device with plugged-in bus terminal
- 1x KNX protective cap to cover the bus terminal
- Operating and mounting instructions
- Delivered in break-proof individual packaging

Application programs

The following application programs are currently available for the DaliControl b04 Pro device:

DaliControl b04 Pro

Function of the application program see application program description

Installation advices



Risk of death by electric shock

- The device is intended for fixed installation in dry indoor areas.
- The appliance may only be installed and put into operation by an authorized electrician.
- When planning and installing systems, the guidelines, regulations and provisions, as well as the valid KNX guidelines of the respective country must be observed.
- When planning and installing systems, the guidelines and regulations of the respective country must be taken into account, particularly with regard to emergency lighting systems.
- The device must be disconnected from the power supply when connecting.
- The appliance must not be opened.
- A defective device must be returned to the manufacturer with a return delivery bill.

Technical data

Power supplies

- Operating voltage 100 to 240 V, 50 to 60 Hz AC or DC
- Maximum power consumption 8W
- Bus voltage via KNX bus line, SELV 30V, approx. 8mA

Connections

- Mains supply L N:
Screw terminal 2x 0.5-4mm² solid and stranded

- DALI bus D+, D- :
Screw terminal 2x 0.5-4 mm² solid and stranded
- KNX bus line:
Bus terminal KNX, screwless 0.6...0.8mm solid wire

Control elements

- Programming button for switching between normal/addressing mode KNX
- 8x buttons for operation in manual mode and for executing broadcast and service functions

Display elements

- 1x LED red: to indicate normal/addressing mode
- 8x LED red: for status display of device status and error status

KNX bus

- KNX Medium: Twisted Pair (TP)
- Security: KNX Data Secure

DALI bus

- Number of outputs: 4x DALI output
- Type of output:
Single-master application controller in accordance with EN 62386-103 ed 2
- Number of ballasts:
max. 32 ECGs in accordance with IEC 62386-101 ed1 and ed 2 per channel, 128 ECGs in total
- DALI voltage: typically 18 VDC, short-circuit-proof max. 250mA, basic insulation (no SELV)
- Recommended cable cross-section: min. 1.5 mm²
- Guaranteed supply current: 64mA / Channel
- Maximum DALI current: 250mA
- Shutdown delay: 600ms after DALI short circuit shutdown occurs
- Start-up attempt after shutdown: 5s after short-circuit detection

Mechanical data

- DaliControl b04 Pro housing: ABS plastic - V0
- Dimensions REG housing 4TE:
Width: 72mm
Height: 58mm
Length: 86mm
- Weight: approx. 140 g
- Mounting: on DIN standard rail 35mm

Electrical safety

- Protection class (according to EN 60529):
IP20
- Protection class (according to IEC 1140) II
- Overvoltage category: III
- Degree of soiling: 2
- KNX bus: SELV DC 30 V
- DALI bus: typically 18V DC, 250mA basic insulation (no SELV)

EMC requirements

- Complies with EMC directive 2014 / 30 / EU

Environmental conditions

- Ambient conditions during operation: -5°C to +45°C
- Storage temperature: -25°C to +55°C
- Transportation: -25°C to +70°C
- Rel. humidity (non-condensing): 5 % to 93 %

Approval

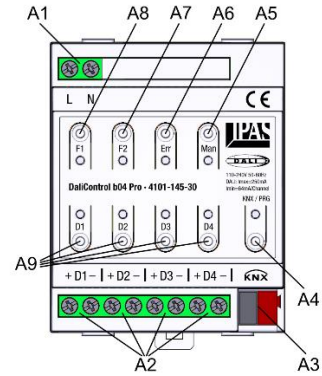
- KNX certified
- DIIA certified according to IEC 62386-101 ed 2 and IEC 62386-103 ed 2

CE marking

In accordance with the EMC guidelines (residential and commercial buildings), Low Voltage Directive



The pin assignment marked on the housing must be observed!



- A1: Mains connection L and N
- A2: Connections for the 4 DALI channels D1-D4
- A3: Connection for KNX bus terminal
- A4: Programming button and LED for normal/addressing mode
- A5: Button for activating manual operation
- A6: Button for activating the error analysis
- A7: Function key F2 (post installation)
- A8: Function key F1 (new installation)

Mounting and wiring

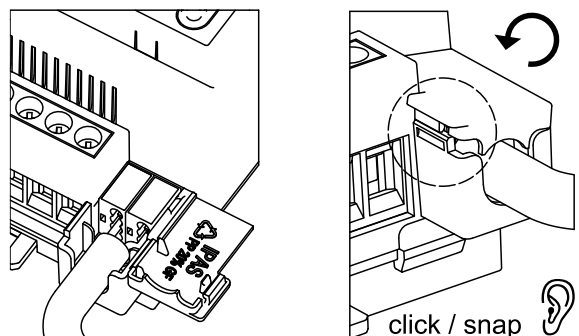
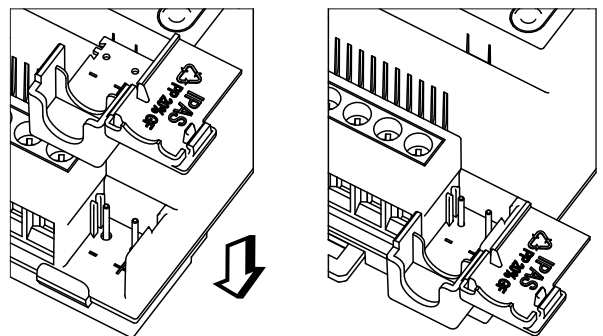
The DaliControl b04 Pro is a REG device suitable for direct installation in distribution boards on 35 mm standard rails. For installation, the device is first placed on the standard rail at an angle from above and then snapped downwards. Ensure that the safety lock on the underside of the device engages and that the device is firmly connected to the rail.

To remove the appliance from the rail, the safety lock can be pulled out downwards using a suitable tool.

After inserting the device, the cables for the mains connection, DALI and KNX can be connected. All cables must be de-energized during connection.

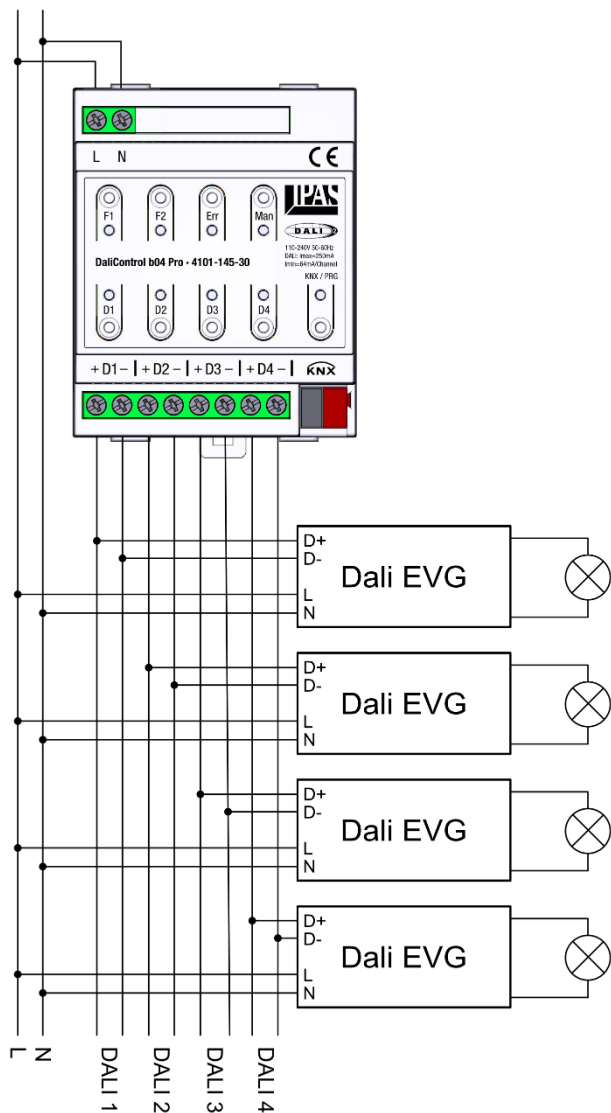
A standard bus connector is used to connect the KNX cable. To ensure a sufficient insulation distance between the KNX and DALI installation, the enclosed protective cap must be used.

Please ensure that the KNX cable is installed with the protective cap as shown in the drawing below.



Location and function of display and control elements

The device connections and the KNX bus terminal are only accessible in the distributor when the cover is removed. The buttons for manual operation or service functions and the KNX programming button can also be operated without removing the cover.



In accordance with IEC 62386, the DALI control cables can be routed together with the power supply in a 5-core cable (simple basic insulation is sufficient). However, make sure that these are clearly labeled.

A maximum cable length of 300m must not be exceeded for the entire DALI installation of a segment. (Recommended cross-section 1.5mm²).