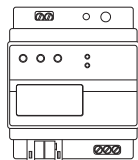


KNX DALI gateway REG-K/1/16(64)/64/ IP1

Operating instructions



Art. no. MTN6725-0001

For your safety



DANGER

Risk of fatal injury from electric shock.

All work on the device must only be carried out by trained and skilled electricians. Note:

- The country-specific regulations
- The valid KNX guidelines
- The valid guidelines of the DALI standard
- The regulations for emergency lighting systems

Getting to know the Gateway

The KNX DALI gateway REG-K/1/16(64)/64/IP1 (referred to below as the **gateway**) connects the KNX bus with the DALI bus. Lights with DALI ECGs (electronic ballasts) can therefore be integrated into an overall KNX architecture and operated via the multitude of existing KNX devices.

The device transforms switch and dim commands from the connected KNX system into DALI telegrams and status information from the DALI bus into KNX telegrams.

ECGs can be switched, dimmed and set to a defined value in 16 groups per gateway. In addition to group control, the gateway offers the possibility to individually control up to 64 ECGs.



Note

- The gateway is a Category-1 control unit. This means the device must only be used in DALI lines with connected ECGs and not with other DALI control units within the line (no multi-master function).
- Power supply for the up to 64 connected ECGs comes directly from the gateway. An additional DALI power supply is not required and not permitted.
- Note that once ECGs have been assigned to a group, they can no longer be controlled individually. An ECG can only be allocated to one DALI group. The gateway does not support multi-group allocations. If multi-group allocation is required, it must be performed via KNX communication objects

Numerous communication objects are available for the visualisation of status and error information on an ECG as well as group and gate-way level (current application: 11 communication objects per ECG and 8 communication objects per group, numerous individual objects).

In addition to all standard operating devices, the gateway also allows the control of individual battery emergency lights (EN 62386-202). For individual battery emergency lights, a distinction is made between devices with switchable ECGs (usually emergency lights with one ECG) and devices with non-switchable ECGs (converters), which are usually used in connection with another "normal" ECG (2 ECGs per light). The gateway allows for the mixed control of different ECG types within a DALI line. Emergency lighting systems with a central battery are also supported.

A scene module for the extensive programming of up to 16 scenes from groups and individual ECGs as well as an effect module for the control of processes and light effects are also available on the device.

The gateway enables different forms of DALI commissioning (allocation of DALI ECGs to individual groups and changes in configuration):

1. Commissioning on the device
2. Commissioning via integrated web server

The ETS with the data base entry of the current application program is also required for the final commissioning of the KNX communication.

Functions of the web server

The web server is accessed via the LAN network using a PC, PDA or web panel. The internal websites can be used to start up the device, and to configure, operate and display all important functions.



For more details regarding the commissioning of a DALI line, please see the current application description.

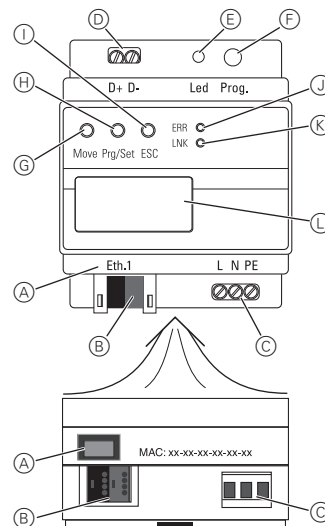
It is installed on a DIN-rail TH 35 according to EN 60715, with the bus connection made via a bus connecting terminal.

Mains connection and DALI lines are connected using screw terminals on the device.

Connections, displays and operating elements

The device connectors as well as the programming button and programming LED that are required for commissioning are only accessible in the distribution box when the cover is removed.

The buttons (Move, Prg/Set, ESC) that are required to commission and configure the DALI and the 2-line display and control LEDs (ERR and LNK) are accessible when the cover is closed.



- (A) RJ-45 plug for Ethernet connection
- (B) KNX bus connection terminal
- (C) Power supply connector
- (D) DALI output connector
- (E) Programming LED, normal/addressing mode
- (F) Programming button, normal/addressing mode
- (G) Move button, commission the device and set parameters
- (H) Prg/Set button, commission the device and set parameters
- (I) ESC button, commission the device and set parameters
- (J) ERR-LED, signals fault status
- (K) LNK-LED, signals Ethernet operational readiness
- (L) Display 2x12 characters for DALI configuration

Mounting the Gateway

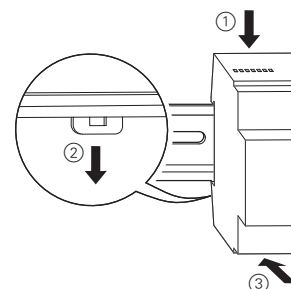


CAUTION

The device can become damaged!

The DALI output (D+, D-) does not have surge protection. Connection AC 220/230 V will destroy the device.

- 1 Set the gateway onto the DIN rail.



- 2 Attach the cable for DALI bus to the upper left terminal.

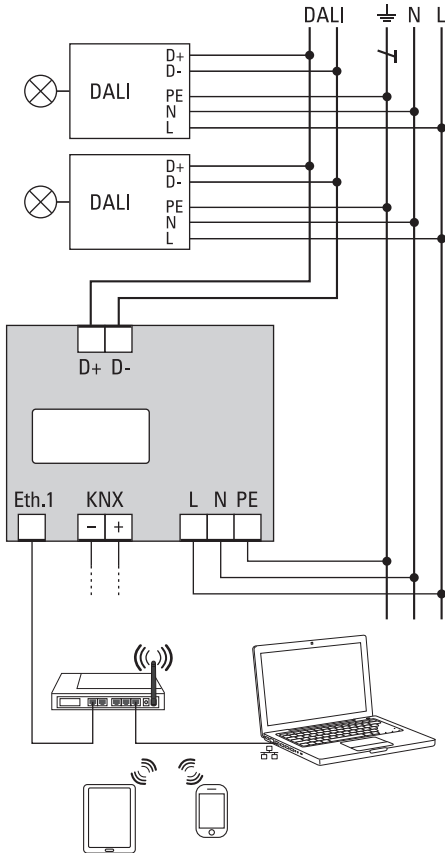
In accordance with IEC90929, the DALI control lines can be carried in a 5-wired cable together with the power supply (simple basic insulation is sufficient). However, please make sure that these are labelled clearly. For the entire DALI installation of a line, a maximum length of 300 m must not be exceeded (recommended cross-sectional area 1.5 mm²).

- ③ Connect the power supply.
- ④ Connect KNX.

Please make sure that there is double basic insulation between the KNX installation and the power supply. To do so, please insulate the wires of the KNX cable up to the bus connector with the enclosed shrinkable tubing.

- ⑤ Plug the RJ-45 Ethernet connector into the respective socket.

Use a standard patch cable to connect the device with a switch or router of the IP network (Ethernet). When connecting the network, please make sure that the cables are laid in a way that ensures sufficient distance between the IP cable and the power cable.



After all the connections have been completed and the power supply is turned on, the product name and firm ware version appear on the display. You can now start the commissioning of the DALI line and programming with ETS.

i For these processes, please see the application description.

Technical data

Supply voltage: AC/DC 100-240 V, 50/60 Hz
 Power consumption: max. 7 W
 Supply from KNX: DC 24 V (SELV), approx. 5 mA

Operating elements:
 Programming button: normal/addressing mode
 Buttons Move, Prg/Set, ESC: commission the device and set parameters

Display elements:
 Programming LED, red: indicates normal/addressing mode
 LNK-LED, yellow: signals Ethernet operational readiness
 ERR-LED, red: signals fault status
 LC-Display: 2x12 characters: for the commissioning and configuration menu

DALI:
 Outputs: D+, D-
 Number of ECGs: connection of up to 64 ECGs
 Output voltage: DC 16–20 V, short circuit proof (base isolation, no SELV)
 Output current: max. 128 mA
 Type: Category-1 control unit
 Ethernet: 100 Mbit/s
 IP address allocation via DHCP service or fixed IP address.

Connections:
 Mains connector: screw terminal 3x1,5 mm² single or threaded core
 DALI bus: screw terminal 2x1,5 mm² single or threaded core
 KNX: bus connecting terminal
 Ethernet: RJ-45 plug connector for standard patch cables

Ambient temperature operation: -5 °C to +45 °C
 Relative humidity (not condensing): 5 % to 93 %
 Protection type: IP 20
 Overvoltage category: III
 Device width: 4 modules = approx. 72 mm

Schneider Electric Industries SAS

If you have technical questions, please contact the Customer Care Center in your country.

www.schneider-electric.com => "Select your country"